

# Computer Algebra Independent Integration Tests

Summer 2023 edition

1-Algebraic-functions/1.2-Trinomial-products/1.2.3-General/49-  
1.2.3.5-P-x-d-x-<sup>m</sup>-a+b-x<sup>n</sup>+c-x<sup>-2-n</sup>-<sup>p</sup>

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# CHAPTER 1

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## INTRODUCTION

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This report gives the result of running the computer algebra independent integration test. The download section in on the main webpage contains links to download the problems in plain text format used for all CAS systems. The number of integrals in this report is [ 17 ]. This is test number [ 49 ].

## 1.1 Listing of CAS systems tested

The following are the CAS systems tested:

1. Mathematica 13.3.1 (August 16, 2023) on windows 10.
2. Rubi 4.16.1 (Dec 19, 2018) on Mathematica 13.3 on windows 10
3. Maple 2023.1 (July, 12, 2023) on windows 10.
4. Maxima 5.47 (June 1, 2023) using Lisp SBCL 2.3.0 on Linux via sagemath 10.1 (Aug 20, 2023).
5. FriCAS 1.3.9 (July 8, 2023) based on sbcl 2.3.0 on Linux via sagemath 10.1 (Aug 20, 2023).
6. Giac/Xcas 1.9.0-57 (June 26, 2023) on Linux via sagemath 10.1 (Aug 20, 2023).
7. Sympy 1.12 (May 10, 2023) Using Python 3.11.3 on Linux.
8. Mupad using Matlab 2021a with Symbolic Math Toolbox Version 8.7 on windows 10.

Maxima and Fricas and Giac are called using Sagemath. This was done using Sagemath `integrate` command by changing the name of the algorithm to use the different CAS systems.

Sympy was run directly in Python not via sagemath.

## 1.2 Results

Important note: A number of problems in this test suite have no antiderivative in closed form. This means the antiderivative of these integrals can not be expressed in terms of elementary, special functions or `Hypergeometric2F1` functions. `RootSum` and `RootOf` are not allowed. If a CAS returns the above integral unevaluated within the time limit, then the result is counted as passed and assigned an A grade.

However, if CAS times out, then it is assigned an F grade even if the integral is not integrable, as this implies CAS could not determine that the integral is not integrable in the time limit.

If a CAS returns an antiderivative to such an integral, it is assigned an A grade automatically and this special result is listed in the introduction section of each individual test report to make it easy to identify as this can be important result to investigate.

The results given in in the table below reflects the above.

System	% solved	% Failed
Rubi	100.00 ( 17 )	0.00 ( 0 )
Mathematica	100.00 ( 17 )	0.00 ( 0 )
Fricas	41.18 ( 7 )	58.82 ( 10 )
Mupad	29.41 ( 5 )	70.59 ( 12 )
Giac	23.53 ( 4 )	76.47 ( 13 )
Maple	17.65 ( 3 )	82.35 ( 14 )
Maxima	11.76 ( 2 )	88.24 ( 15 )
Sympy	11.76 ( 2 )	88.24 ( 15 )

Table 1.1: Percentage solved for each CAS

The table below gives additional break down of the grading of quality of the antiderivatives generated by each CAS. The grading is given using the letters A,B,C and F with A being the best quality. The grading is accomplished by comparing the antiderivative generated with the optimal antiderivatives included in the test suite. The following table describes the meaning of these grades.

grade	description
A	Integral was solved and antiderivative is optimal in quality and leaf size.
B	Integral was solved and antiderivative is optimal in quality but leaf size is larger than twice the optimal antiderivatives leaf size.
C	Integral was solved and antiderivative is non-optimal in quality. This can be due to one or more of the following reasons <ol style="list-style-type: none"> <li>1. antiderivative contains a hypergeometric function and the optimal antiderivative does not.</li> <li>2. antiderivative contains a special function and the optimal antiderivative does not.</li> <li>3. antiderivative contains the imaginary unit and the optimal antiderivative does not.</li> </ol>
F	Integral was not solved. Either the integral was returned unevaluated within the time limit, or it timed out, or CAS hanged or crashed or an exception was raised.

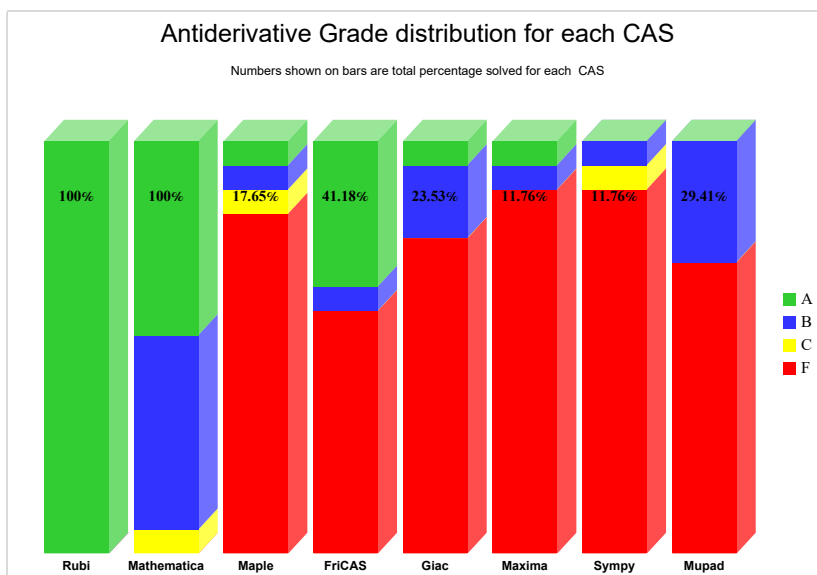
Table 1.2: Description of grading applied to integration result

Grading is implemented for all CAS systems. Based on the above, the following table summarizes the grading for this test suite.

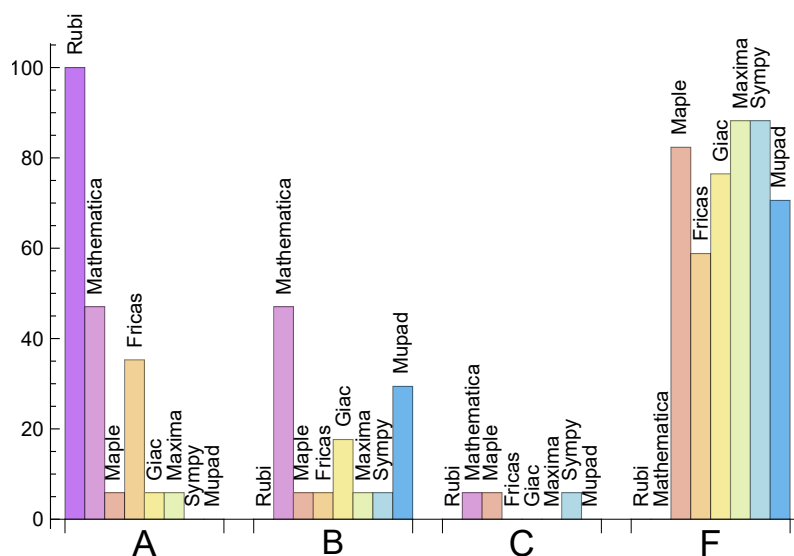
System	% A grade	% B grade	% C grade	% F grade
Rubi	100.000	0.000	0.000	0.000
Mathematica	47.059	47.059	5.882	0.000
Fricas	35.294	5.882	0.000	58.824
Maple	5.882	5.882	5.882	82.353
Giac	5.882	17.647	0.000	76.471
Maxima	5.882	5.882	0.000	88.235
Mupad	0.000	29.412	0.000	70.588
Sympy	0.000	5.882	5.882	88.235

Table 1.3: Antiderivative Grade distribution of each CAS

The following is a Bar chart illustration of the data in the above table.



The figure below compares the grades of the CAS systems.



The following table shows the distribution of the different types of failures for each CAS. There are 3 types failures. The first is when CAS returns the input within the time limit, which means it could not solve it. This is the typical failure and given as **F**.

The second failure is due to time out. CAS could not solve the integral within the 3 minutes time limit which is assigned. This is assigned **F(-1)**.

The third is due to an exception generated, indicated as **F(-2)**. This most likely indicates an interface problem between sagemath and the CAS (applicable only to FriCAS, Maxima and Giac) or it could be an indication of an internal error in the CAS itself. This type of error requires more investigation to determine the cause.

System	Number failed	Percentage normal failure	Percentage time-out failure	Percentage exception failure
Rubi	0	0.00	0.00	0.00
Mathematica	0	0.00	0.00	0.00
Fricas	10	90.00	10.00	0.00
Mupad	12	0.00	100.00	0.00
Giac	13	92.31	7.69	0.00
Maple	14	100.00	0.00	0.00
Maxima	15	100.00	0.00	0.00
Sympy	15	20.00	80.00	0.00

Table 1.4: Failure statistics for each CAS

### 1.3 Time and leaf size Performance

The table below summarizes the performance of each CAS system in terms of time used and leaf size of results.

Mean size is the average leaf size produced by the CAS (before any normalization). The Normalized mean is relative to the mean size of the optimal anti-derivative given in the input files.

For example, if CAS has **Normalized mean** of 3, then the mean size of its leaf size is 3 times as large as the mean size of the optimal leaf size.

Median size is value of leaf size where half the values are larger than this and half are smaller (before any normalization). i.e. The Middle value.

Similarly the **Normalized median** is relative to the median leaf size of the optimal.

For example, if a CAS has Normalized median of 1.2, then its median is 1.2 as large as the median leaf size of the optimal.



System	Mean time (sec)
Maxima	0.25
Fricas	0.26
Rubi	0.55
Giac	1.74
Mathematica	2.63
Mupad	17.59
Maple	45.52
Sympy	73.58

Table 1.5: Time performance for each CAS

System	Mean size	Normalized mean	Median size	Normalized median
Maxima	47.50	1.91	47.50	1.91
Maple	84.33	1.61	90.00	1.65
Fricas	85.00	1.54	69.00	1.45
Giac	97.00	2.49	81.00	2.90
Sympy	111.50	2.81	111.50	2.81
Rubi	457.12	1.00	263.00	1.00
Mathematica	1695.12	2.70	261.00	2.00
Mupad	71874.60	44.15	50.00	1.72

Table 1.6: Leaf size performance for each CAS

## 1.4 Performance based on number of rules Rubi used

This section shows how each CAS performed based on the number of rules Rubi needed to solve the same integral. One diagram is given for each CAS.

On the  $y$  axis is the percentage solved which Rubi itself needed the number of rules given the  $x$  axis. These plots show that as more rules are needed then most CAS system percentage of solving decreases which indicates the integral is becoming more complicated to solve.

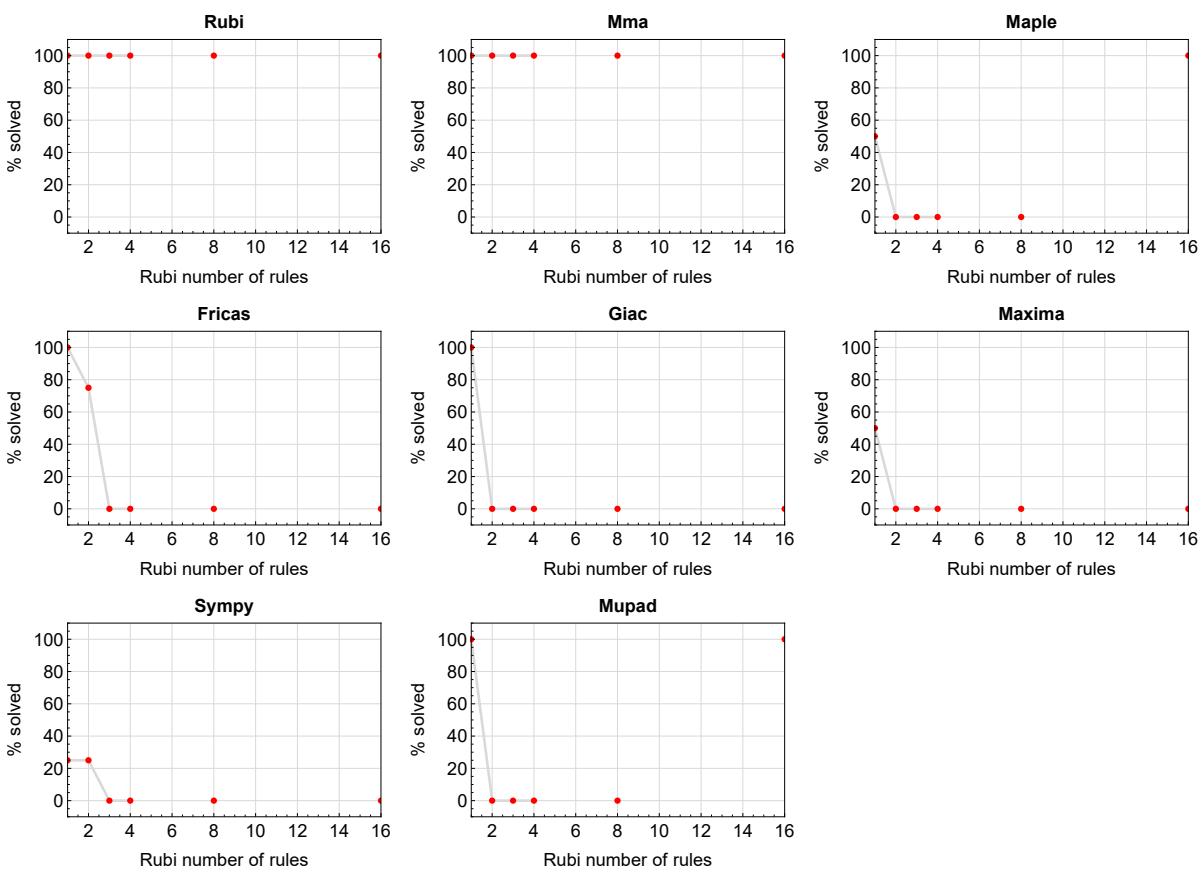


Figure 1.1: Solving statistics per number of Rubi rules used

## 1.5 Performance based on number of steps Rubi used

This section shows how each CAS performed based on the number of steps Rubi needed to solve the same integral. Note that the number of steps Rubi needed can be much higher than the number of rules, as the same rule could be used more than once.

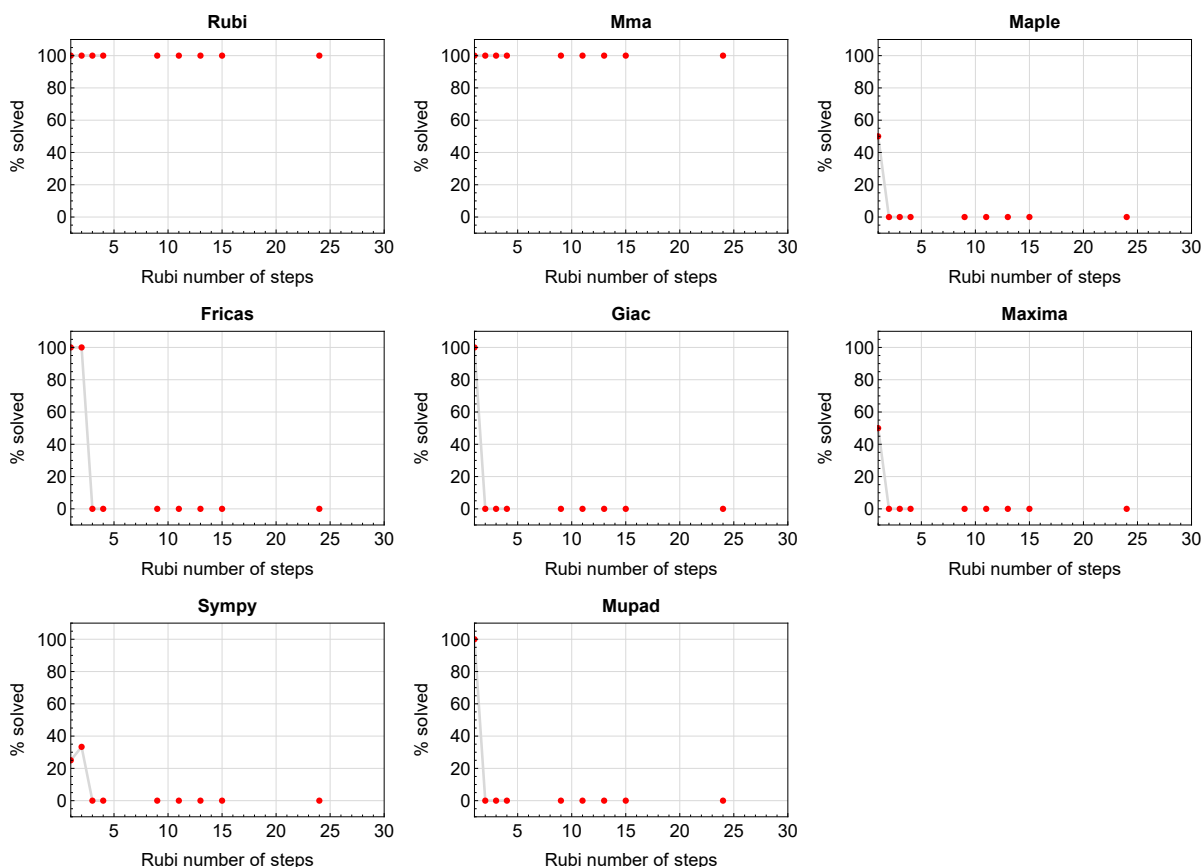


Figure 1.2: Solving statistics per number of Rubi steps used

The above diagram show that the percentage of solved integrals decreases for most CAS systems as the number of steps increases. As expected, for integrals that required less steps by Rubi, CAS systems had more success which indicates the integral was not as hard to solve. As Rubi needed more steps to solve the integral, the solved percentage decreased for most CAS systems which indicates the integral is becoming harder to solve.

## 1.6 Solved integrals histogram based on leaf size of result

The following shows the distribution of solved integrals for each CAS system based on leaf size of the antiderivatives produced by each CAS. It shows that most integrals solved produced leaf size less than about 100 to 150. The bin size used is 40.

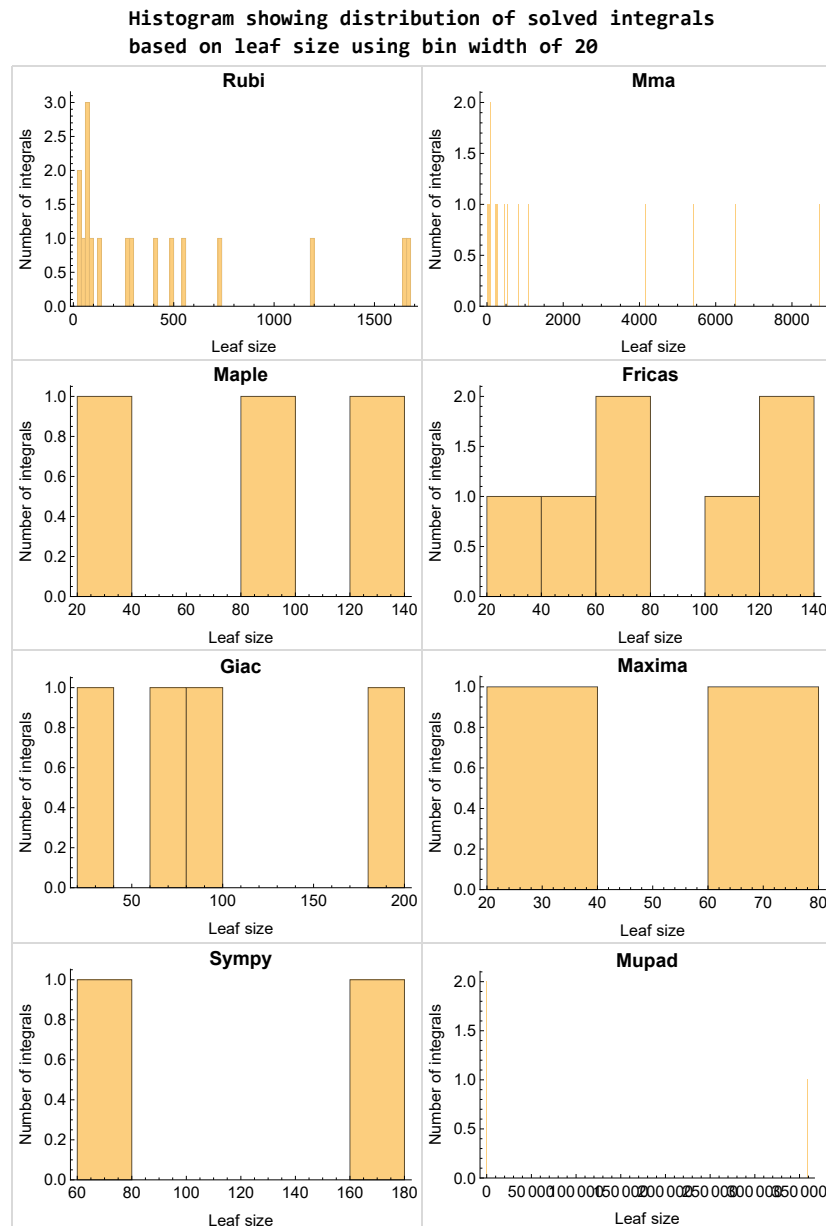


Figure 1.3: Solved integrals based on leaf size distribution

## 1.7 Solved integrals histogram based on CPU time used

The following shows the distribution of solved integrals for each CAS system based on CPU time used in seconds. The bin size used is 0.1 second.

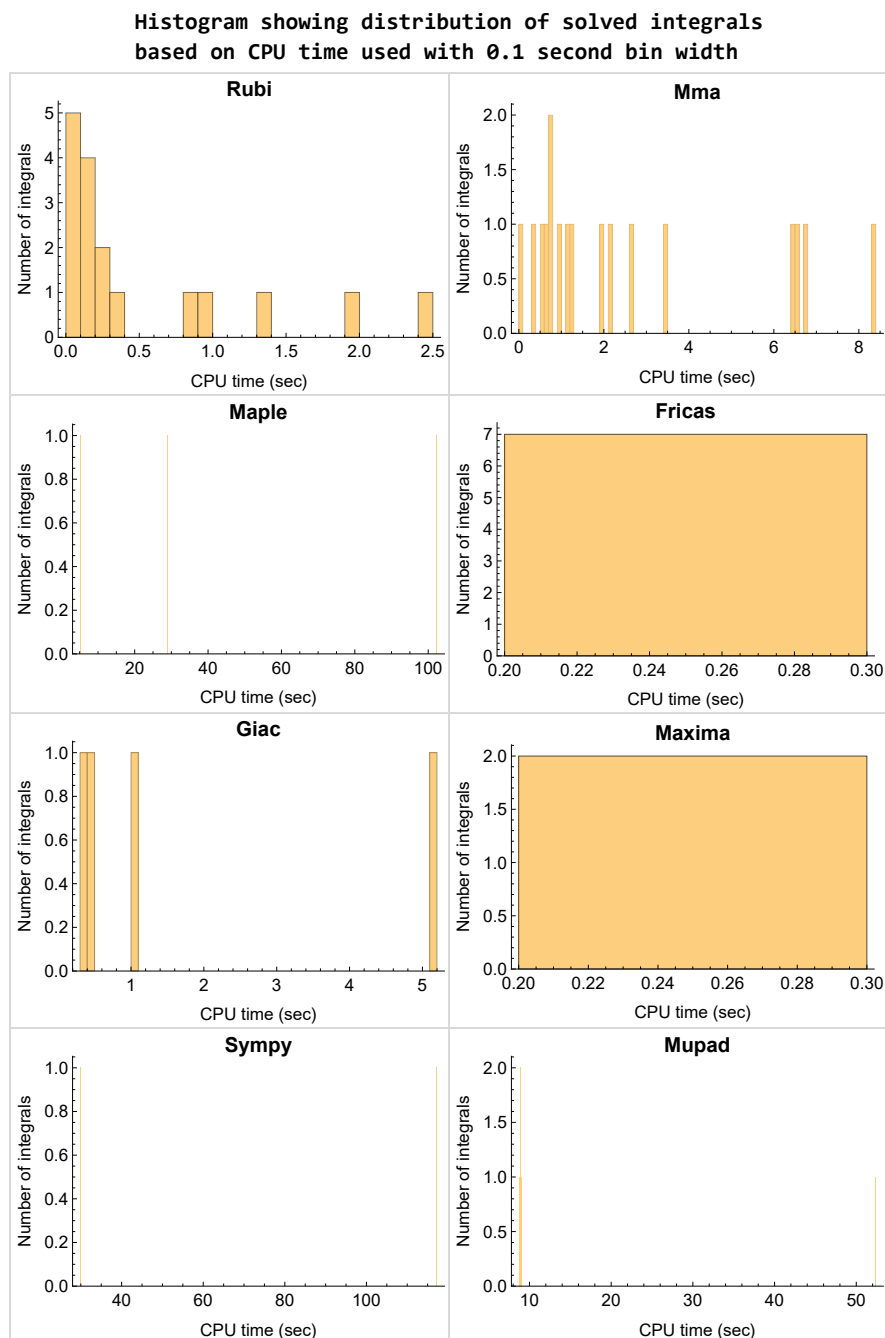


Figure 1.4: Solved integrals histogram based on CPU time used

## 1.8 Leaf size vs. CPU time used

The following shows the relation between the CPU time used to solve an integral and the leaf size of the antiderivative.

The result for Fracas, Maxima and Giac is shifted more to the right than the other CAS system due to the use of sagemath to call them, which causes an initial slight delay in the timing to start the integration due to overhead of starting a new process each time. This should also be taken into account when looking at the timing of these three CAS systems. Direct calls not using sagemath would result in faster timings, but current implementation uses sagemath as this makes testing much easier to do.

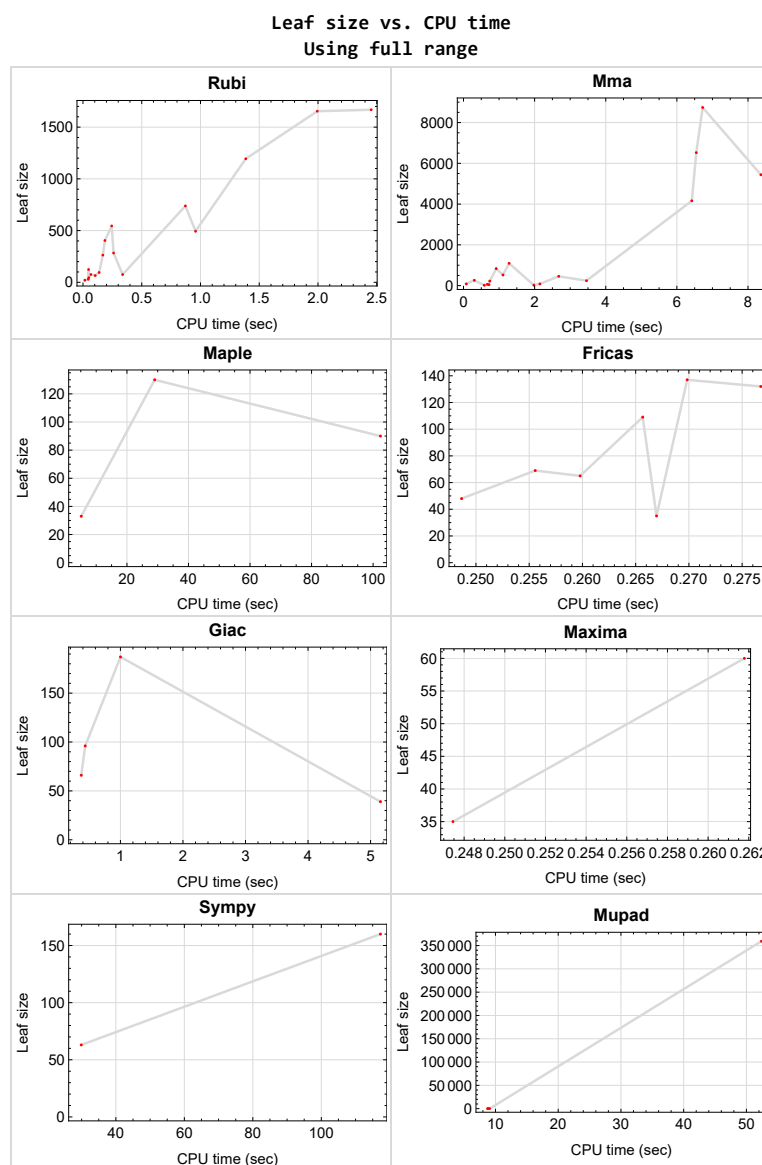


Figure 1.5: Leaf size vs. CPU time. Full range

## 1.9 list of integrals with no known antiderivative

{}

## 1.10 List of integrals solved by CAS but has no known antiderivative

**Rubi** {}

**Mathematica** {}

**Maple** {}

**Maxima** {}

**Fricas** {}

**Sympy** {}

**Giac** {}

**Mupad** {}

## 1.11 list of integrals solved by CAS but failed verification

The following are integrals solved by CAS but the verification phase failed to verify the anti-derivative produced is correct. This does not necessarily mean that the anti-derivative is wrong as additional methods of verification might be needed, or more time is needed (3 minutes time limit was used). These integrals are listed here to make it possible to do further investigation to determine why the result could not be verified.

**Rubi** {}

**Mathematica** {8,9}

**Maple** {}

**Maxima** Verification phase not currently implemented.

**Fricas** Verification phase not currently implemented.

**Sympy** Verification phase not currently implemented.

**Giac** Verification phase not currently implemented.

**Mupad** Verification phase not currently implemented.

## 1.12 Timing

The command `AbsoluteTiming[]` was used in Mathematica to obtain the elapsed time for each integrate call. In Maple, the command `Usage` was used as in the following example

```
cpu_time := Usage(assign ('result_of_int',int(expr,x)),output='realtime')
```

For all other CAS systems, the elapsed time to complete each integral was found by taking the difference between the time after the call completed from the time before the call was made. This was done using Python's `time.time()` call.

All elapsed times shown are in seconds. A time limit of 3 CPU minutes was used for each integral. If the integrate command did not complete within this time limit, the integral was aborted and considered to have failed and assigned an F grade. The time used by failed integrals due to time out was not counted in the final statistics.

## 1.13 Verification

A verification phase was applied on the result of integration for Rubi and Mathematica.

Future version of this report will implement verification for the other CAS systems. For the integrals whose result was not run through a verification phase, it is assumed that the antiderivative was correct.

Verification phase also had 3 minutes time out. An integral whose result was not verified could still be correct, but further investigation is needed on those integrals. These integrals were marked in the summary table below and also in each integral separate section so they are easy to identify and locate.

## 1.14 Important notes about some of the results

### Important note about Maxima results

Since tests were run in a batch mode, and using an automated script, then any integral where Maxima needed an interactive response from the user to answer a question during the evaluation of the integral will fail.

The exception raised is `ValueError`. Therefore Maxima results is lower than what would result if Maxima was run directly and each question was answered correctly.

The percentage of such failures were not counted for each test file, but for an example, for the `Timofeev` test file, there were about 14 such integrals out of total 705, or about 2 percent. This percentage can be higher or lower depending on the specific input test file.

Such integrals can be identified by looking at the output of the integration in each section for Maxima. The exception message will indicate the cause of error.



Maxima integrate was run using SageMath with the following settings set by default

```
'besselexpand : true'
'display2d : false'
'domain : complex'
'keepfloat : true'
'load(to_poly_solve)'
'load(simplify_sum)'
'load(abs_integrate)' 'load(diag)'
```

SageMath automatic loading of Maxima `abs_integrate` was found to cause some problems. So the following code was added to disable this effect.

```
from sage.interfaces.maxima_lib import maxima_lib
maxima_lib.set('extra_definite_integration_methods', '[]')
maxima_lib.set('extra_integration_methods', '[]')
```

See <https://ask.sagemath.org/question/43088/integrate-results-that-are-different-from-using-maxima/> for reference.

## Important note about FriCAS result

There were few integrals which failed due to SageMath interface and not because FriCAS system could not do the integration.

These will fail With error `Exception raised: NotImplementedError`.

The number of such cases seems to be very small. About 1 or 2 percent of all integrals. These can be identified by looking at the exception message given in the result.

## Important note about finding leaf size of antiderivative

For Mathematica, Rubi, and Maple, the builtin system function `LeafSize` was used to find the leaf size of each antiderivative.

The other CAS systems (SageMath and Sympy) do not have special builtin function for this purpose at this time. Therefore the leaf size for Fricas and Sympy antiderivative was determined using the following function, thanks to user `slelievre` at [https://ask.sagemath.org/question/57123/could-we-have-a-leaf\\_count-function-in-base-sagemath/](https://ask.sagemath.org/question/57123/could-we-have-a-leaf_count-function-in-base-sagemath/)

```
def tree_size(expr):
    r"""
    Return the tree size of this expression.
    """
    if expr not in SR:
        # deal with lists, tuples, vectors
        return 1 + sum(tree_size(a) for a in expr)
    expr = SR(expr)
```

```
x, aa = expr.operator(), expr.operands()
if x is None:
    return 1
else:
    return 1 + sum(tree_size(a) for a in aa)
```

For Sympy, which was called directly from Python, the following code was used to obtain the leafsize of its result

```
try:
    # 1.7 is a fudge factor since it is low side from actual leaf count
    leafCount = round(1.7*count_ops(anti))

except Exception as ee:
    leafCount =1
```

## Important note about Mupad results

Matlab's symbolic toolbox does not have a leaf count function to measure the size of the antiderivative. Maple was used to determine the leaf size of Mupad output by post processing Mupad result.

Currently no grading of the antiderivative for Mupad is implemented. If it can integrate the problem, it was assigned a B grade automatically as a placeholder. In the future, when grading function is implemented for Mupad, the tests will be rerun again.

The following is an example of using Matlab's symbolic toolbox (Mupad) to solve an integral

```
integrand = evalin(symengine, 'cos(x)*sin(x)')
the_variable = evalin(symengine, 'x')
anti = int(integrand, the_variable)
```

Which gives  $\sin(x)^2/2$

## 1.15 Design of the test system

The following diagram gives a high level view of the current test build system.



### High level overview of the CAS independent integration test build system

One record (line) per one integral result. The line is CSV comma separated. This is description of each record

1. integer. the problem number.
2. integer. 0 for failed, 1 for passed, -1 for timeout, -2 for CAS specific exception. (this is not the grade field)
3. integer. Leaf size of result.
4. integer. Leaf size of the optimal antiderivative.
5. number. CPU time used to solve this integral. 0 if failed.
6. string. The integral in Latex format
7. string. The input used in CAS own syntax.
8. string. The result (antiderivative) produced by CAS in Latex format
9. string. The optimal antiderivative in Latex format.
10. integer. 0 or 1. Indicates if problem has known antiderivative or not
11. String. The result (antiderivative) in CAS own syntax.
12. String. The grade of the antiderivative. Can be "A", "B", "C", or "F"
13. String. Small string description of why the grade was given.
14. integer. 1 if result was verified or 0 if not verified. (For mma, rubi and maple only)

The following fields are present only in *Rubi Table file*

15. integer. Number of steps used.
16. integer. Number of rules used.
17. integer. Integrand leaf size.
18. real number. Ratio. Field 16 over field 17
19. String of form "{n,n,...}" which is list of the rules used by Rubi
20. String. The optimal antiderivative in Mathematica syntax

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Design v1.0a



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## CHAPTER 2

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### DETAILED SUMMARY TABLES OF RESULTS

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2.2	Detailed conclusion table per each integral for all CAS systems . . . . .	25
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## 2.1 List of integrals sorted by grade for each CAS

Rubi . . . . .	22
Mma . . . . .	22
Maple . . . . .	23
Fricas . . . . .	23
Maxima . . . . .	23
Giac . . . . .	23
Mupad . . . . .	24
Sympy . . . . .	24

### Rubi

**A grade** { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 }

**B grade** { }

**C grade** { }

**F normal fail** { }

**F(-1) timedout fail** { }

**F(-2) exception fail** { }

### Mma

**A grade** { 3, 6, 10, 11, 12, 13, 14, 16 }

**B grade** { 2, 4, 5, 7, 8, 9, 15, 17 }

**C grade** { 1 }

**F normal fail** { }

**F(-1) timedout fail** { }

**F(-2) exception fail** { }

## Maple

A grade { 11 }

B grade { 16 }

C grade { 1 }

F normal fail { 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17 }

F(-1) timeout fail { }

F(-2) exception fail { }

## Fricas

A grade { 10, 11, 12, 13, 14, 15 }

B grade { 16 }

C grade { }

F normal fail { 2, 3, 4, 5, 6, 7, 8, 9, 17 }

F(-1) timeout fail { 1 }

F(-2) exception fail { }

## Maxima

A grade { 11 }

B grade { 16 }

C grade { }

F normal fail { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17 }

F(-1) timeout fail { }

F(-2) exception fail { }

## Giac

A grade { 12 }

B grade { 11, 14, 16 }

C grade { }

F normal fail { 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 17 }

F(-1) timeout fail { 1 }

F(-2) exception fail { }

## Mupad

A grade { }

B grade { 1, 11, 12, 14, 16 }

C grade { }

F normal fail { }

F(-1) timeout fail { 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 17 }

F(-2) exception fail { }

## Sympy

A grade { }

B grade { 11 }

C grade { 13 }

F normal fail { 2, 3, 4 }

F(-1) timeout fail { 1, 5, 6, 7, 8, 9, 10, 12, 14, 15, 16, 17 }

F(-2) exception fail { }







Problem 9	Optimal	Rubi	MMA	Maple	Maxima	Fricas	Sympy	Giac	Mupad
grade	N/A	A	B	<b>F</b>	<b>F</b>	<b>F</b>	<b>F(-1)</b>	<b>F</b>	<b>F(-1)</b>
verified	N/A	Yes	<b>No</b>	N/A	TBD	TBD	TBD	TBD	TBD
size	1654	1654	8737	0	0	0	0	0	0
N.S.	1	1.00	5.28	0.00	0.00	0.00	0.00	0.00	0.00
time (sec)	N/A	1.994	6.725	0.000	0.000	0.000	0.000	0.000	0.000

Problem 10	Optimal	Rubi	MMA	Maple	Maxima	Fricas	Sympy	Giac	Mupad
grade	N/A	A	A	<b>F</b>	<b>F</b>	A	<b>F(-1)</b>	<b>F</b>	<b>F(-1)</b>
verified	N/A	Yes	Yes	N/A	TBD	TBD	TBD	TBD	TBD
size	75	75	84	0	0	137	0	0	0
N.S.	1	1.00	1.12	0.00	0.00	1.83	0.00	0.00	0.00
time (sec)	N/A	0.338	2.147	0.000	0.000	0.270	0.000	0.000	0.000

Problem 11	Optimal	Rubi	MMA	Maple	Maxima	Fricas	Sympy	Giac	Mupad
grade	N/A	A	A	A	A	A	B	B	B
verified	N/A	Yes	Yes	Yes	TBD	TBD	TBD	TBD	TBD
size	20	20	19	33	35	35	63	66	35
N.S.	1	1.00	0.95	1.65	1.75	1.75	3.15	3.30	1.75
time (sec)	N/A	0.016	0.584	5.155	0.247	0.267	29.898	0.374	8.880

Problem 12	Optimal	Rubi	MMA	Maple	Maxima	Fricas	Sympy	Giac	Mupad
grade	N/A	A	A	<b>F</b>	<b>F</b>	A	<b>F(-1)</b>	A	B
verified	N/A	Yes	Yes	N/A	TBD	TBD	TBD	TBD	TBD
size	45	45	45	0	0	48	0	39	39
N.S.	1	1.00	1.00	0.00	0.00	1.07	0.00	0.87	0.87
time (sec)	N/A	0.049	0.715	0.000	0.000	0.249	0.000	5.158	9.081

Problem 13	Optimal	Rubi	MMA	Maple	Maxima	Fricas	Sympy	Giac	Mupad
grade	N/A	A	A	<b>F</b>	<b>F</b>	A	C	<b>F</b>	<b>F(-1)</b>
verified	N/A	Yes	Yes	N/A	TBD	TBD	TBD	TBD	TBD
size	65	65	64	0	0	69	160	0	0
N.S.	1	1.00	0.98	0.00	0.00	1.06	2.46	0.00	0.00
time (sec)	N/A	0.104	0.673	0.000	0.000	0.256	117.269	0.000	0.000



## 2.3 Detailed conclusion table specific for Rubi results

The following table is specific to Rubi only. It gives additional statistics for each integral. the column **steps** is the number of steps used by Rubi to obtain the antiderivative. The **rules** column is the number of unique rules used. The **integrand size** column is the leaf size of the integrand. Finally the ratio  $\frac{\text{number of rules}}{\text{integrand size}}$  is also given. The larger this ratio is, the harder the integral is to solve. In this test file, problem number [7] had the largest ratio of [.363599999999999979]

Table 2.1: Rubi specific breakdown of results for each integral

#	grade	number of steps used	number of unique rules	normalized antiderivative leaf size	integrand leaf size	$\frac{\text{number of rules}}{\text{integrand leaf size}}$
1	A	37	16	1.00	55	0.291
2	A	3	2	1.00	16	0.125
3	A	9	4	1.00	22	0.182
4	A	11	4	1.00	27	0.148
5	A	13	4	1.00	32	0.125
6	A	4	3	1.00	16	0.188
7	A	15	8	1.00	22	0.364
8	A	24	8	1.00	27	0.296
9	A	33	8	1.00	32	0.250
10	A	2	2	1.00	63	0.032
11	A	1	1	1.00	45	0.022
12	A	1	1	1.00	52	0.019
13	A	2	2	1.00	54	0.037
14	A	1	1	1.00	61	0.016
15	A	2	2	1.00	63	0.032
16	A	1	1	1.00	56	0.018
17	A	4	3	1.00	38	0.079



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# CHAPTER 3

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## LISTING OF INTEGRALS

3.1	$\int \frac{d+ex+fx^2+gx^3+hx^4+jx^5+kx^6+lx^7+mx^8}{a+bx^3+cx^6} dx$	32
3.2	$\int \frac{1}{a+bx^n+cx^{2n}} dx$	213
3.3	$\int \frac{d+ex}{a+bx^n+cx^{2n}} dx$	217
3.4	$\int \frac{d+ex+fx^2}{a+bx^n+cx^{2n}} dx$	222
3.5	$\int \frac{d+ex+fx^2+gx^3}{a+bx^n+cx^{2n}} dx$	228
3.6	$\int \frac{1}{(a+bx^n+cx^{2n})^2} dx$	234
3.7	$\int \frac{d+ex}{(a+bx^n+cx^{2n})^2} dx$	239
3.8	$\int \frac{d+ex+fx^2}{(a+bx^n+cx^{2n})^2} dx$	248
3.9	$\int \frac{d+ex+fx^2+gx^3}{(a+bx^n+cx^{2n})^2} dx$	259
3.10	$\int \frac{-ahx^{-1+\frac{n}{2}}+cfx^{-1+n}+cgx^{-1+2n}+chx^{-1+\frac{5n}{2}}}{(a+bx^n+cx^{2n})^{3/2}} dx$	270
3.11	$\int (a+bx^n+cx^{2n})^p (a+b(1+n+np)x^n+c(1+2n(1+p))x^{2n}) dx$	274
3.12	$\int \frac{x^{-1+\frac{n}{4}}(-ah+cfx^{n/4}+cgx^{3n/4}+chx^n)}{(a+cx^n)^{3/2}} dx$	278
3.13	$\int \frac{(dx)^{-1+\frac{n}{4}}(-ah+cfx^{n/4}+cgx^{3n/4}+chx^n)}{(a+cx^n)^{3/2}} dx$	282
3.14	$\int \frac{x^{-1+\frac{n}{2}}(-ah+cfx^{n/2}+cgx^{3n/2}+chx^{2n})}{(a+bx^n+cx^{2n})^{3/2}} dx$	286
3.15	$\int \frac{(dx)^{-1+\frac{n}{2}}(-ah+cfx^{n/2}+cgx^{3n/2}+chx^{2n})}{(a+bx^n+cx^{2n})^{3/2}} dx$	290
3.16	$\int (gx)^m (a+bx^n+cx^{2n})^p (a(1+m)+b(1+m+n+np)x^n+c(1+m+2n(1+p))x^{2n}) dx$	294
3.17	$\int \frac{A+Bx^n+Cx^{2n}+Dx^{3n}}{(a+bx^n+cx^{2n})^2} dx$	298

**3.1**      
$$\int \frac{d+ex+fx^2+gx^3+hx^4+jx^5+kx^6+lx^7+mx^8}{a+bx^3+cx^6} dx$$

Optimal result . . . . .	33
Rubi [A] (verified) . . . . .	34
Mathematica [C] (verified) . . . . .	41
Maple [C] (verified) . . . . .	41
Fricas [ <b>F(-1)</b> ] . . . . .	42
Sympy [ <b>F(-1)</b> ] . . . . .	42
Maxima [ <b>F</b> ] . . . . .	42
Giac [ <b>F(-1)</b> ] . . . . .	43
Mupad [B] (verification not implemented) . . . . .	43



## Optimal result

Integrand size = 55, antiderivative size = 1668

$$\begin{aligned}
 & \int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx \\
 &= \frac{kx}{c} + \frac{lx^2}{2c} + \frac{mx^3}{3c} - \frac{\left(g - \frac{bk}{c} + \frac{2c^2d + b^2k - c(bg + 2ak)}{c\sqrt{b^2 - 4ac}}\right) \arctan\left(\frac{1 - \frac{2\sqrt[3]{2}\sqrt[3]{cx}}{\sqrt[3]{b - \sqrt{b^2 - 4ac}}}}{\sqrt{3}}\right)}{\sqrt[3]{2}\sqrt{3}\sqrt[3]{c}(b - \sqrt{b^2 - 4ac})^{2/3}} \\
 & \quad - \frac{\left(h - \frac{bl}{c} + \frac{2c^2e + b^2l - c(bh + 2al)}{c\sqrt{b^2 - 4ac}}\right) \arctan\left(\frac{1 - \frac{2\sqrt[3]{2}\sqrt[3]{cx}}{\sqrt[3]{b - \sqrt{b^2 - 4ac}}}}{\sqrt{3}}\right)}{2^{2/3}\sqrt{3}c^{2/3}\sqrt[3]{b - \sqrt{b^2 - 4ac}}} \\
 & \quad - \frac{\left(g - \frac{bk}{c} - \frac{2c^2d - bcg + b^2k - 2ack}{c\sqrt{b^2 - 4ac}}\right) \arctan\left(\frac{1 - \frac{2\sqrt[3]{2}\sqrt[3]{cx}}{\sqrt[3]{b + \sqrt{b^2 - 4ac}}}}{\sqrt{3}}\right)}{\sqrt[3]{2}\sqrt{3}\sqrt[3]{c}(b + \sqrt{b^2 - 4ac})^{2/3}} \\
 & \quad - \frac{\left(h - \frac{bl}{c} - \frac{2c^2e - bch + b^2l - 2acl}{c\sqrt{b^2 - 4ac}}\right) \arctan\left(\frac{1 - \frac{2\sqrt[3]{2}\sqrt[3]{cx}}{\sqrt[3]{b + \sqrt{b^2 - 4ac}}}}{\sqrt{3}}\right)}{2^{2/3}\sqrt{3}c^{2/3}\sqrt[3]{b + \sqrt{b^2 - 4ac}}} \\
 & \quad - \frac{(2c^2f - bcj + b^2m - 2acm) \operatorname{arctanh}\left(\frac{b + 2cx^3}{\sqrt{b^2 - 4ac}}\right)}{3c^2\sqrt{b^2 - 4ac}} \\
 & \quad + \frac{\left(g - \frac{bk}{c} + \frac{2c^2d + b^2k - c(bg + 2ak)}{c\sqrt{b^2 - 4ac}}\right) \log\left(\sqrt[3]{b - \sqrt{b^2 - 4ac}} + \sqrt[3]{2}\sqrt[3]{cx}\right)}{3\sqrt[3]{2}\sqrt[3]{c}(b - \sqrt{b^2 - 4ac})^{2/3}} \\
 & \quad - \frac{\left(h - \frac{bl}{c} + \frac{2c^2e + b^2l - c(bh + 2al)}{c\sqrt{b^2 - 4ac}}\right) \log\left(\sqrt[3]{b - \sqrt{b^2 - 4ac}} + \sqrt[3]{2}\sqrt[3]{cx}\right)}{3 \cdot 2^{2/3}c^{2/3}\sqrt[3]{b - \sqrt{b^2 - 4ac}}} \\
 & \quad + \frac{\left(g - \frac{bk}{c} - \frac{2c^2d - bcg + b^2k - 2ack}{c\sqrt{b^2 - 4ac}}\right) \log\left(\sqrt[3]{b + \sqrt{b^2 - 4ac}} + \sqrt[3]{2}\sqrt[3]{cx}\right)}{3\sqrt[3]{2}\sqrt[3]{c}(b + \sqrt{b^2 - 4ac})^{2/3}} \\
 & \quad - \frac{\left(h - \frac{bl}{c} - \frac{2c^2e - bch + b^2l - 2acl}{c\sqrt{b^2 - 4ac}}\right) \log\left(\sqrt[3]{b + \sqrt{b^2 - 4ac}} + \sqrt[3]{2}\sqrt[3]{cx}\right)}{3 \cdot 2^{2/3}c^{2/3}\sqrt[3]{b + \sqrt{b^2 - 4ac}}}
 \end{aligned}$$

```
[Out] k*x/c+1/2*1*x^2/c+1/3*m*x^3/c+1/6*(-b*m+c*j)*ln(c*x^6+b*x^3+a)/c^2+1/6*ln(2
^(1/3)*c^(1/3)*x+(b-(-4*a*c+b^2)^(1/2))^(1/3))*(g-b*k/c+(2*c^2*d+b^2*k-c*(2
*a*k+b*g))/c/(-4*a*c+b^2)^(1/2))*2^(2/3)/c^(1/3)/(b-(-4*a*c+b^2)^(1/2))^(2/
3)-1/12*ln(2^(2/3)*c^(2/3)*x^2-2^(1/3)*c^(1/3)*x*(b-(-4*a*c+b^2)^(1/2))^(1/
3)+(b-(-4*a*c+b^2)^(1/2))^(2/3))*(g-b*k/c+(2*c^2*d+b^2*k-c*(2*a*k+b*g))/c/(
-4*a*c+b^2)^(1/2))*2^(2/3)/c^(1/3)/(b-(-4*a*c+b^2)^(1/2))^(2/3)-1/6*arctan(
1/3*(1-2*2^(1/3)*c^(1/3)*x/(b-(-4*a*c+b^2)^(1/2))^(1/3))*3^(1/2))*(g-b*k/c+
(2*c^2*d+b^2*k-c*(2*a*k+b*g))/c/(-4*a*c+b^2)^(1/2))*2^(2/3)/c^(1/3)*3^(1/2)
/(b-(-4*a*c+b^2)^(1/2))^(2/3)-1/6*ln(2^(1/3)*c^(1/3)*x+(b-(-4*a*c+b^2)^(1/2)
))^(1/3))*(h-b*l/c+(2*c^2*e+b^2*l-c*(2*a*l+b*h))/c/(-4*a*c+b^2)^(1/2))*2^(1
/3)/c^(2/3)/(b-(-4*a*c+b^2)^(1/2))^(1/3)+1/12*ln(2^(2/3)*c^(2/3)*x^2-2^(1/3)
)*c^(1/3)*x*(b-(-4*a*c+b^2)^(1/2))^(1/3)+(b-(-4*a*c+b^2)^(1/2))^(2/3))*(h-b
*l/c+(2*c^2*e+b^2*l-c*(2*a*l+b*h))/c/(-4*a*c+b^2)^(1/2))*2^(1/3)/c^(2/3)/(b
-(-4*a*c+b^2)^(1/2))^(1/3)-1/6*arctan(1/3*(1-2*2^(1/3)*c^(1/3)*x/(b-(-4*a*c
+b^2)^(1/2))^(1/3))*3^(1/2))*(h-b*l/c+(2*c^2*e+b^2*l-c*(2*a*l+b*h))/c/(-4*a
*c+b^2)^(1/2))*2^(1/3)/c^(2/3)*3^(1/2)/(b-(-4*a*c+b^2)^(1/2))^(1/3)-1/3*(-2
*a*c*m+b^2*m-b*c*j+2*c^2*f)*arctanh((2*c*x^3+b)/(-4*a*c+b^2)^(1/2))/c^2/(-4
*a*c+b^2)^(1/2)+1/6*ln(2^(1/3)*c^(1/3)*x+(b+(-4*a*c+b^2)^(1/2))^(1/3))*(g-b
*k/c+(2*a*c*k-b^2*k+b*c*g-2*c^2*d)/c/(-4*a*c+b^2)^(1/2))*2^(2/3)/c^(1/3)/(b
+(-4*a*c+b^2)^(1/2))^(2/3)-1/12*ln(2^(2/3)*c^(2/3)*x^2-2^(1/3)*c^(1/3)*x*(b
+(-4*a*c+b^2)^(1/2))^(1/3)+(b+(-4*a*c+b^2)^(1/2))^(2/3))*(g-b*k/c+(2*a*c*k-
b^2*k+b*c*g-2*c^2*d)/c/(-4*a*c+b^2)^(1/2))*2^(2/3)/c^(1/3)/(b+(-4*a*c+b^2)^(
1/2))^(2/3)-1/6*arctan(1/3*(1-2*2^(1/3)*c^(1/3)*x/(b+(-4*a*c+b^2)^(1/2))^(
1/3))*3^(1/2))*(g-b*k/c+(2*a*c*k-b^2*k+b*c*g-2*c^2*d)/c/(-4*a*c+b^2)^(1/2)
)*2^(2/3)/c^(1/3)*3^(1/2)/(b+(-4*a*c+b^2)^(1/2))^(2/3)-1/6*ln(2^(1/3)*c^(1/3)
)*x+(b+(-4*a*c+b^2)^(1/2))^(1/3))*(h-b*l/c+(2*a*c*l-b^2*l+b*c*h-2*c^2*e)/c/
(-4*a*c+b^2)^(1/2))*2^(1/3)/c^(2/3)/(b+(-4*a*c+b^2)^(1/2))^(1/3)+1/12*ln(2^(
2/3)*c^(2/3)*x^2-2^(1/3)*c^(1/3)*x*(b+(-4*a*c+b^2)^(1/2))^(1/3)+(b+(-4*a*c
+b^2)^(1/2))^(2/3))*(h-b*l/c+(2*a*c*l-b^2*l+b*c*h-2*c^2*e)/c/(-4*a*c+b^2)^(
1/2))*2^(1/3)/c^(2/3)/(b+(-4*a*c+b^2)^(1/2))^(1/3)-1/6*arctan(1/3*(1-2*2^(1
/3)*c^(1/3)*x/(b+(-4*a*c+b^2)^(1/2))^(1/3))*3^(1/2))*(h-b*l/c+(2*a*c*l-b^2*
l+b*c*h-2*c^2*e)/c/(-4*a*c+b^2)^(1/2))*2^(1/3)/c^(2/3)*3^(1/2)/(b+(-4*a*c+b
^2)^(1/2))^(1/3)
```

## Rubi [A] (verified)

Time = 2.45 (sec) , antiderivative size = 1668, normalized size of antiderivative = 1.00,  
 number of steps used = 37, number of rules used = 16,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.291$ , Rules  
 used = {1804, 1803, 1436, 206, 31, 648, 631, 210, 642, 1772, 1524, 298, 1759, 1671, 632,

212}

$$\begin{aligned}
& \int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx \\
&= \frac{mx^3}{3c} + \frac{lx^2}{2c} + \frac{kx}{c} - \frac{\left( g - \frac{bk}{c} + \frac{kb^2 + 2c^2d - c(bg + 2ak)}{c\sqrt{b^2 - 4ac}} \right) \arctan \left( \frac{1 - \frac{{}^2\sqrt[3]{2^3\sqrt{c_x}}}{\sqrt[3]{b - \sqrt{b^2 - 4ac}}}}{\sqrt{3}} \right)}{\sqrt[3]{2}\sqrt{3}\sqrt[3]{c} (b - \sqrt{b^2 - 4ac})^{2/3}} \\
&\quad - \frac{\left( h - \frac{bl}{c} + \frac{lb^2 + 2c^2e - c(bh + 2al)}{c\sqrt{b^2 - 4ac}} \right) \arctan \left( \frac{1 - \frac{{}^2\sqrt[3]{2^3\sqrt{c_x}}}{\sqrt[3]{b - \sqrt{b^2 - 4ac}}}}{\sqrt{3}} \right)}{2^{2/3}\sqrt{3}c^{2/3}\sqrt[3]{b - \sqrt{b^2 - 4ac}}} \\
&\quad - \frac{\left( g - \frac{bk}{c} - \frac{kb^2 - cgb + 2c^2d - 2ack}{c\sqrt{b^2 - 4ac}} \right) \arctan \left( \frac{1 - \frac{{}^2\sqrt[3]{2^3\sqrt{c_x}}}{\sqrt[3]{b + \sqrt{b^2 - 4ac}}}}{\sqrt{3}} \right)}{\sqrt[3]{2}\sqrt{3}\sqrt[3]{c} (b + \sqrt{b^2 - 4ac})^{2/3}} \\
&\quad - \frac{\left( h - \frac{bl}{c} - \frac{lb^2 - chb + 2c^2e - 2acl}{c\sqrt{b^2 - 4ac}} \right) \arctan \left( \frac{1 - \frac{{}^2\sqrt[3]{2^3\sqrt{c_x}}}{\sqrt[3]{b + \sqrt{b^2 - 4ac}}}}{\sqrt{3}} \right)}{2^{2/3}\sqrt{3}c^{2/3}\sqrt[3]{b + \sqrt{b^2 - 4ac}}} \\
&\quad - \frac{(mb^2 - cjb + 2c^2f - 2acm) \operatorname{arctanh} \left( \frac{2cx^3 + b}{\sqrt{b^2 - 4ac}} \right)}{3c^2\sqrt{b^2 - 4ac}} \\
&+ \frac{\left( g - \frac{bk}{c} + \frac{kb^2 + 2c^2d - c(bg + 2ak)}{c\sqrt{b^2 - 4ac}} \right) \log \left( \sqrt[3]{2}\sqrt[3]{cx} + \sqrt[3]{b - \sqrt{b^2 - 4ac}} \right)}{3\sqrt[3]{2}\sqrt[3]{c} (b - \sqrt{b^2 - 4ac})^{2/3}} \\
&\quad - \frac{\left( h - \frac{bl}{c} + \frac{lb^2 + 2c^2e - c(bh + 2al)}{c\sqrt{b^2 - 4ac}} \right) \log \left( \sqrt[3]{2}\sqrt[3]{cx} + \sqrt[3]{b - \sqrt{b^2 - 4ac}} \right)}{3 \cdot 2^{2/3}c^{2/3}\sqrt[3]{b - \sqrt{b^2 - 4ac}}} \\
&+ \frac{\left( g - \frac{bk}{c} - \frac{kb^2 - cgb + 2c^2d - 2ack}{c\sqrt{b^2 - 4ac}} \right) \log \left( \sqrt[3]{2}\sqrt[3]{cx} + \sqrt[3]{b + \sqrt{b^2 - 4ac}} \right)}{3\sqrt[3]{2}\sqrt[3]{c} (b + \sqrt{b^2 - 4ac})^{2/3}} \\
&\quad - \frac{\left( h - \frac{bl}{c} - \frac{lb^2 - chb + 2c^2e - 2acl}{c\sqrt{b^2 - 4ac}} \right) \log \left( \sqrt[3]{2}\sqrt[3]{cx} + \sqrt[3]{b + \sqrt{b^2 - 4ac}} \right)}{3 \cdot 2^{2/3}c^{2/3}\sqrt[3]{b + \sqrt{b^2 - 4ac}}}
\end{aligned}$$

[In] Int[(d + e\*x + f\*x^2 + g\*x^3 + h\*x^4 + j\*x^5 + k\*x^6 + l\*x^7 + m\*x^8)/(a + b\*x^3 + c\*x^6), x]

[Out] (k\*x)/c + (1\*x^2)/(2\*c) + (m\*x^3)/(3\*c) - ((g - (b\*k)/c + (2\*c^2\*d + b^2\*k - c\*(b\*g + 2\*a\*k))/(c\*Sqrt[b^2 - 4\*a\*c]))\*ArcTan[(1 - (2\*2^(1/3)\*c^(1/3)\*x)/(b - Sqrt[b^2 - 4\*a\*c])^(1/3))/Sqrt[3]])/(2^(1/3)\*Sqrt[3]\*c^(1/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(2/3)) - ((h - (b\*1)/c + (2\*c^2\*e + b^2\*1 - c\*(b\*h + 2\*a\*1))/(c\*Sqrt[b^2 - 4\*a\*c]))\*ArcTan[(1 - (2\*2^(1/3)\*c^(1/3)\*x)/(b - Sqrt[b^2 - 4\*a\*c])^(1/3))/Sqrt[3]])/(2^(2/3)\*Sqrt[3]\*c^(2/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(1/3)) - ((g - (b\*k)/c - (2\*c^2\*d - b\*c\*g + b^2\*k - 2\*a\*c\*k)/(c\*Sqrt[b^2 - 4\*a\*c]))\*ArcTan[(1 - (2\*2^(1/3)\*c^(1/3)\*x)/(b + Sqrt[b^2 - 4\*a\*c])^(1/3))/Sqrt[3]])/(2^(1/3)\*Sqrt[3]\*c^(1/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(2/3)) - ((h - (b\*1)/c - (2\*c^2\*e - b\*c\*h + b^2\*1 - 2\*a\*c\*1)/(c\*Sqrt[b^2 - 4\*a\*c]))\*ArcTan[(1 - (2\*2^(1/3)\*c^(1/3)\*x)/(b + Sqrt[b^2 - 4\*a\*c])^(1/3))/Sqrt[3]])/(2^(2/3)\*Sqrt[3]\*c^(2/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(1/3)) - ((2\*c^2\*f - b\*c\*j + b^2\*m - 2\*a\*c\*m)\*ArcTanh[(b + 2\*c\*x^3)/Sqrt[b^2 - 4\*a\*c]])/(3\*c^2\*Sqrt[b^2 - 4\*a\*c]) + ((g - (b\*k)/c + (2\*c^2\*d + b^2\*k - c\*(b\*g + 2\*a\*k))/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b - Sqrt[b^2 - 4\*a\*c])^(1/3) + 2^(1/3)\*c^(1/3)\*x]/(3\*2^(1/3)\*c^(1/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(2/3)) - ((h - (b\*1)/c + (2\*c^2\*e + b^2\*1 - c\*(b\*h + 2\*a\*1))/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b - Sqrt[b^2 - 4\*a\*c])^(1/3) + 2^(1/3)\*c^(1/3)\*x]/(3\*2^(2/3)\*c^(2/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(1/3)) + ((g - (b\*k)/c - (2\*c^2\*d - b\*c\*g + b^2\*k - 2\*a\*c\*k)/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b + Sqrt[b^2 - 4\*a\*c])^(1/3) + 2^(1/3)\*c^(1/3)\*x]/(3\*2^(1/3)\*c^(1/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(2/3)) - ((h - (b\*1)/c - (2\*c^2\*e - b\*c\*h + b^2\*1 - 2\*a\*c\*1)/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b + Sqrt[b^2 - 4\*a\*c])^(1/3) + 2^(1/3)\*c^(1/3)\*x]/(3\*2^(2/3)\*c^(2/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(1/3)) - ((g - (b\*k)/c + (2\*c^2\*d + b^2\*k - c\*(b\*g + 2\*a\*k))/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b - Sqrt[b^2 - 4\*a\*c])^(2/3) - 2^(1/3)\*c^(1/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(1/3)\*x + 2^(2/3)\*c^(2/3)\*x^2]/(6\*2^(1/3)\*c^(1/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(2/3)) + ((h - (b\*1)/c + (2\*c^2\*e + b^2\*1 - c\*(b\*h + 2\*a\*1))/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b - Sqrt[b^2 - 4\*a\*c])^(2/3) - 2^(1/3)\*c^(1/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(1/3)\*x + 2^(2/3)\*c^(2/3)\*x^2]/(6\*2^(2/3)\*c^(2/3)\*(b - Sqrt[b^2 - 4\*a\*c])^(1/3)) - ((g - (b\*k)/c - (2\*c^2\*d - b\*c\*g + b^2\*k - 2\*a\*c\*k)/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b + Sqrt[b^2 - 4\*a\*c])^(2/3) - 2^(1/3)\*c^(1/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(1/3)\*x + 2^(2/3)\*c^(2/3)\*x^2]/(6\*2^(1/3)\*c^(1/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(2/3)) + ((h - (b\*1)/c - (2\*c^2\*e - b\*c\*h + b^2\*1 - 2\*a\*c\*1)/(c\*Sqrt[b^2 - 4\*a\*c]))\*Log[(b + Sqrt[b^2 - 4\*a\*c])^(2/3) - 2^(1/3)\*c^(1/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(1/3)\*x + 2^(2/3)\*c^(2/3)\*x^2]/(6\*2^(2/3)\*c^(2/3)\*(b + Sqrt[b^2 - 4\*a\*c])^(1/3)) + ((c\*j - b\*m)\*Log[a + b\*x^3 + c\*x^6])/(6\*c^2)

### Rule 31

Int[((a\_) + (b\_.)\*(x\_))^(n\_), x\_Symbol] := Simp[Log[RemoveContent[a + b\*x, x]]/b, x] /; FreeQ[{a, b}, x]

### Rule 206

Int[((a\_) + (b\_)\*(x\_)^3)^(-1), x\_Symbol] := Dist[1/(3\*Rt[a, 3]^2), Int[1/(Rt[a, 3] + Rt[b, 3]\*x), x], x] + Dist[1/(3\*Rt[a, 3]^2), Int[(2\*Rt[a, 3] - Rt[b, 3]\*x)/(Rt[a, 3]^2 - Rt[a, 3]\*Rt[b, 3]\*x + Rt[b, 3]^2\*x^2), x], x] /; FreeQ[{a, b}, x]

#### Rule 210

Int[((a\_) + (b\_)\*(x\_)^2)^(-1), x\_Symbol] := Simp[(-Rt[-a, 2]\*Rt[-b, 2])^(-1)\*ArcTan[Rt[-b, 2]\*(x/Rt[-a, 2])], x] /; FreeQ[{a, b}, x] && PosQ[a/b] && (LtQ[a, 0] || LtQ[b, 0])

#### Rule 212

Int[((a\_) + (b\_)\*(x\_)^2)^(-1), x\_Symbol] := Simp[(1/(Rt[a, 2]\*Rt[-b, 2]))\*ArcTanh[Rt[-b, 2]\*(x/Rt[a, 2])], x] /; FreeQ[{a, b}, x] && NegQ[a/b] && (GtQ[a, 0] || LtQ[b, 0])

#### Rule 298

Int[(x\_)/((a\_) + (b\_)\*(x\_)^3), x\_Symbol] := Dist[-(3\*Rt[a, 3]\*Rt[b, 3])^(-1), Int[1/(Rt[a, 3] + Rt[b, 3]\*x), x], x] + Dist[1/(3\*Rt[a, 3]\*Rt[b, 3]), Int[(Rt[a, 3] + Rt[b, 3]\*x)/(Rt[a, 3]^2 - Rt[a, 3]\*Rt[b, 3]\*x + Rt[b, 3]^2\*x^2), x], x] /; FreeQ[{a, b}, x]

#### Rule 631

Int[((a\_) + (b\_)\*(x\_) + (c\_)\*(x\_)^2)^(-1), x\_Symbol] := With[{q = 1 - 4\*Simplify[a\*(c/b^2)]}, Dist[-2/b, Subst[Int[1/(q - x^2), x], x, 1 + 2\*c\*(x/b)], x] /; RationalQ[q] && (EqQ[q^2, 1] || !RationalQ[b^2 - 4\*a\*c])] /; FreeQ[{a, b, c}, x] && NeQ[b^2 - 4\*a\*c, 0]

#### Rule 632

Int[((a\_) + (b\_)\*(x\_) + (c\_)\*(x\_)^2)^(-1), x\_Symbol] := Dist[-2, Subst[Int[1/Simp[b^2 - 4\*a\*c - x^2, x], x], x, b + 2\*c\*x], x] /; FreeQ[{a, b, c}, x] && NeQ[b^2 - 4\*a\*c, 0]

#### Rule 642

Int[((d\_) + (e\_)\*(x\_))/((a\_) + (b\_)\*(x\_) + (c\_)\*(x\_)^2), x\_Symbol] := Simp[d\*(Log[RemoveContent[a + b\*x + c\*x^2, x]]/b), x] /; FreeQ[{a, b, c, d, e}, x] && EqQ[2\*c\*d - b\*e, 0]

#### Rule 648

Int[((d\_) + (e\_)\*(x\_))/((a\_) + (b\_)\*(x\_) + (c\_)\*(x\_)^2), x\_Symbol] := Dist[(2\*c\*d - b\*e)/(2\*c), Int[1/(a + b\*x + c\*x^2), x], x] + Dist[e/(2\*c), In

$t[(b + 2cx)/(a + bx + cx^2), x], x] /; \text{FreeQ}\{a, b, c, d, e, x\} \ \&\& \ \text{NeQ}[2cd - be, 0] \ \&\& \ \text{NeQ}[b^2 - 4ac, 0] \ \&\& \ !\text{NiceSqrtQ}[b^2 - 4ac]$

#### Rule 1436

$\text{Int}[\frac{(d_.) + (e_.)x^{(n_.)}}{(a_.) + (b_.)x^{(n_.)} + (c_.)x^{(n2_.)}}, x\_Symbol] \rightarrow \text{With}\{q = \text{Rt}[b^2 - 4ac, 2]\}, \text{Dist}[e/2 + (2cd - be)/(2q), \text{Int}[1/(b/2 - q/2 + cx^n), x], x] + \text{Dist}[e/2 - (2cd - be)/(2q), \text{Int}[1/(b/2 + q/2 + cx^n), x], x]] /; \text{FreeQ}\{a, b, c, d, e, n, x\} \ \&\& \ \text{EqQ}[n2, 2n] \ \&\& \ \text{NeQ}[b^2 - 4ac, 0] \ \&\& \ \text{NeQ}[cd^2 - bde + ae^2, 0] \ \&\& \ (\text{PosQ}[b^2 - 4ac] \ || \ !\text{IGtQ}[n/2, 0])$

#### Rule 1524

$\text{Int}[\frac{((f_.)x^{(m_.)})((d_.) + (e_.)x^{(n_.)}))}{(a_.) + (b_.)x^{(n_.)} + (c_.)x^{(n2_.)}}, x\_Symbol] \rightarrow \text{With}\{q = \text{Rt}[b^2 - 4ac, 2]\}, \text{Dist}[e/2 + (2cd - be)/(2q), \text{Int}[(fx)^m/(b/2 - q/2 + cx^n), x], x] + \text{Dist}[e/2 - (2cd - be)/(2q), \text{Int}[(fx)^m/(b/2 + q/2 + cx^n), x], x]] /; \text{FreeQ}\{a, b, c, d, e, f, m, x\} \ \&\& \ \text{EqQ}[n2, 2n] \ \&\& \ \text{NeQ}[b^2 - 4ac, 0] \ \&\& \ \text{IGtQ}[n, 0]$

#### Rule 1671

$\text{Int}[(Pq_.)((a_.) + (b_.)x + (c_.)x^2)^{(p_.)}, x\_Symbol] \rightarrow \text{Int}[\text{ExpandIntegrand}[Pq(a + bx + cx^2)^p, x], x] /; \text{FreeQ}\{a, b, c, x\} \ \&\& \ \text{PolyQ}[Pq, x] \ \&\& \ \text{IGtQ}[p, -2]$

#### Rule 1759

$\text{Int}[(Pq_.)x^{(m_.)}((a_.) + (c_.)x^{(n2_.)} + (b_.)x^{(n_.)})^{(p_.)}, x\_Symbol] \rightarrow \text{Dist}[1/n, \text{Subst}[\text{Int}[\text{SubstFor}[x^n, Pq, x](a + bx + cx^2)^p, x], x, x^n], x] /; \text{FreeQ}\{a, b, c, m, n, p, x\} \ \&\& \ \text{EqQ}[n2, 2n] \ \&\& \ \text{PolyQ}[Pq, x^n] \ \&\& \ \text{EqQ}[\text{Simplify}[m - n + 1], 0]$

#### Rule 1772

$\text{Int}[(Pq_.)((d_.)x^{(m_.)})((a_.) + (b_.)x^{(n_.)} + (c_.)x^{(n2_.)})^{(p_.)}, x\_Symbol] \rightarrow \text{With}\{q = \text{Expon}[Pq, x]\}, \text{With}\{Pqq = \text{Coeff}[Pq, x, q]\}, \text{Int}[(dx)^m \text{ExpandToSum}[Pq - Pqqx^q - Pqq((a(m + q - 2n + 1)x^{(q - 2n)} + b(m + q + n(p - 1) + 1)x^{(q - n)})/(c(m + q + 2n*p + 1))), x](a + bx^n + cx^{(2n)})^p, x] + \text{Simp}[Pqq(dx)^{(m + q - 2n + 1)}((a + bx^n + cx^{(2n)})^{(p + 1)})/(cd^{(q - 2n + 1)}(m + q + 2n*p + 1)), x]] /; \text{GeQ}[q, 2n] \ \&\& \ \text{NeQ}[m + q + 2n*p + 1, 0] \ \&\& \ (\text{IntegerQ}[2*p] \ || \ (\text{EqQ}[n, 1] \ \&\& \ \text{IntegerQ}[4*p]) \ || \ \text{IntegerQ}[p + (q + 1)/(2n)])] /; \text{FreeQ}\{a, b, c, d, m, p, x\} \ \&\& \ \text{EqQ}[n2, 2n] \ \&\& \ \text{PolyQ}[Pq, x^n] \ \&\& \ \text{NeQ}[b^2 - 4ac, 0] \ \&\& \ \text{IGtQ}[n, 0]$

#### Rule 1803

```

Int[(Pq_)*((a_) + (b_)*(x_)^(n_) + (c_)*(x_)^(n2_))^(p_), x_Symbol] := W
ith[{q = Expon[Pq, x]}, With[{Pqq = Coeff[Pq, x, q]}, Int[ExpandToSum[Pq -
Pqq*x^q - Pqq*((a*(q - 2*n + 1)*x^(q - 2*n) + b*(q + n*(p - 1) + 1)*x^(q -
n))/(c*(q + 2*n*p + 1))], x]*(a + b*x^n + c*x^(2*n))^p, x] + Simp[Pqq*x^(q
- 2*n + 1)*((a + b*x^n + c*x^(2*n))^(p + 1)/(c*(q + 2*n*p + 1))), x]] /; Ge
Q[q, 2*n] && NeQ[q + 2*n*p + 1, 0] && (IntegerQ[2*p] || (EqQ[n, 1] && Integ
erQ[4*p]) || IntegerQ[p + (q + 1)/(2*n)])] /; FreeQ[{a, b, c, p}, x] && EqQ
[n2, 2*n] && PolyQ[Pq, x^n] && NeQ[b^2 - 4*a*c, 0] && IGtQ[n, 0]

```

### Rule 1804

```

Int[(Pq_)*((a_) + (b_)*(x_)^(n_) + (c_)*(x_)^(n2_))^(p_), x_Symbol] := Mo
dule[{q = Expon[Pq, x], j, k}, Int[Sum[x^j*Sum[Coeff[Pq, x, j + k*n]*x^(k*n
), {k, 0, (q - j)/n + 1}]*(a + b*x^n + c*x^(2*n))^p, {j, 0, n - 1}], x]] /;
FreeQ[{a, b, c, p}, x] && EqQ[n2, 2*n] && PolyQ[Pq, x] && NeQ[b^2 - 4*a*c,
0] && IGtQ[n, 0] && !PolyQ[Pq, x^n]

```

### Rubi steps

$$\begin{aligned}
\text{integral} &= \int \left( \frac{d + gx^3 + kx^6}{a + bx^3 + cx^6} + \frac{x(e + hx^3 + lx^6)}{a + bx^3 + cx^6} + \frac{x^2(f + jx^3 + mx^6)}{a + bx^3 + cx^6} \right) dx \\
&= \int \frac{d + gx^3 + kx^6}{a + bx^3 + cx^6} dx + \int \frac{x(e + hx^3 + lx^6)}{a + bx^3 + cx^6} dx + \int \frac{x^2(f + jx^3 + mx^6)}{a + bx^3 + cx^6} dx \\
&= \frac{kx}{c} + \frac{lx^2}{2c} + \frac{1}{3} \text{Subst} \left( \int \frac{f + jx + mx^2}{a + bx + cx^2} dx, x, x^3 \right) \\
&\quad + \int \frac{d - \frac{ak}{c} + (g - \frac{bk}{c})x^3}{a + bx^3 + cx^6} dx + \int \frac{x(e - \frac{al}{c} + (h - \frac{bl}{c})x^3)}{a + bx^3 + cx^6} dx \\
&= \frac{kx}{c} + \frac{lx^2}{2c} + \frac{1}{3} \text{Subst} \left( \int \left( \frac{m}{c} + \frac{cf - am + (cj - bm)x}{c(a + bx + cx^2)} \right) dx, x, x^3 \right) \\
&\quad + \frac{1}{2} \left( g - \frac{bk}{c} - \frac{2c^2d - bcg + b^2k - 2ack}{c\sqrt{b^2 - 4ac}} \right) \int \frac{1}{\frac{b}{2} + \frac{1}{2}\sqrt{b^2 - 4ac} + cx^3} dx \\
&\quad + \frac{1}{2} \left( g - \frac{bk}{c} + \frac{2c^2d + b^2k - c(bg + 2ak)}{c\sqrt{b^2 - 4ac}} \right) \int \frac{1}{\frac{b}{2} - \frac{1}{2}\sqrt{b^2 - 4ac} + cx^3} dx \\
&\quad + \frac{1}{2} \left( h - \frac{bl}{c} - \frac{2c^2e - bch + b^2l - 2acl}{c\sqrt{b^2 - 4ac}} \right) \int \frac{x}{\frac{b}{2} + \frac{1}{2}\sqrt{b^2 - 4ac} + cx^3} dx \\
&\quad + \frac{1}{2} \left( h - \frac{bl}{c} + \frac{2c^2e + b^2l - c(bh + 2al)}{c\sqrt{b^2 - 4ac}} \right) \int \frac{x}{\frac{b}{2} - \frac{1}{2}\sqrt{b^2 - 4ac} + cx^3} dx
\end{aligned}$$

$$\begin{aligned}
&= \frac{kx}{c} + \frac{lx^2}{2c} + \frac{mx^3}{3c} + \frac{\text{Subst}\left(\int \frac{cf-am+(cj-bm)x}{a+bx+cx^2} dx, x, x^3\right)}{3c} \\
&\quad \left(g - \frac{bk}{c} - \frac{2c^2d-bcg+b^2k-2ack}{c\sqrt{b^2-4ac}}\right) \int \frac{1}{\frac{\sqrt[3]{b+\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + \sqrt[3]{cx}} dx \\
&+ \frac{\left(g - \frac{bk}{c} - \frac{2c^2d-bcg+b^2k-2ack}{c\sqrt{b^2-4ac}}\right) \int \frac{2^{2/3} \sqrt[3]{b+\sqrt{b^2-4ac}} - \sqrt[3]{cx}}{\frac{(b+\sqrt{b^2-4ac})^{2/3}}{2^{2/3}} - \frac{\sqrt[3]{c} \sqrt[3]{b+\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + c^{2/3}x^2}}{3\sqrt[3]{2} (b+\sqrt{b^2-4ac})^{2/3}} dx \\
&\quad \left(g - \frac{bk}{c} + \frac{2c^2d+b^2k-c(bg+2ak)}{c\sqrt{b^2-4ac}}\right) \int \frac{1}{\frac{\sqrt[3]{b-\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + \sqrt[3]{cx}} dx \\
&+ \frac{\left(g - \frac{bk}{c} + \frac{2c^2d+b^2k-c(bg+2ak)}{c\sqrt{b^2-4ac}}\right) \int \frac{2^{2/3} \sqrt[3]{b-\sqrt{b^2-4ac}} - \sqrt[3]{cx}}{\frac{(b-\sqrt{b^2-4ac})^{2/3}}{2^{2/3}} - \frac{\sqrt[3]{c} \sqrt[3]{b-\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + c^{2/3}x^2}}{3\sqrt[3]{2} (b-\sqrt{b^2-4ac})^{2/3}} dx \\
&\quad \left(h - \frac{bl}{c} - \frac{2c^2e-bch+b^2l-2acl}{c\sqrt{b^2-4ac}}\right) \int \frac{1}{\frac{\sqrt[3]{b+\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + \sqrt[3]{cx}} dx \\
&+ \frac{\left(h - \frac{bl}{c} - \frac{2c^2e-bch+b^2l-2acl}{c\sqrt{b^2-4ac}}\right) \int \frac{2^{2/3} \sqrt[3]{b+\sqrt{b^2-4ac}} - \sqrt[3]{cx}}{\frac{(b+\sqrt{b^2-4ac})^{2/3}}{2^{2/3}} - \frac{\sqrt[3]{c} \sqrt[3]{b+\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + c^{2/3}x^2}}{3 \cdot 2^{2/3} \sqrt[3]{c} \sqrt[3]{b+\sqrt{b^2-4ac}}} dx \\
&\quad \left(-h + \frac{bl}{c} + \frac{2c^2e-bch+b^2l-2acl}{c\sqrt{b^2-4ac}}\right) \int \frac{1}{\frac{\sqrt[3]{b+\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + \sqrt[3]{cx}} dx \\
&+ \frac{\left(-h + \frac{bl}{c} + \frac{2c^2e-bch+b^2l-2acl}{c\sqrt{b^2-4ac}}\right) \int \frac{2^{2/3} \sqrt[3]{b+\sqrt{b^2-4ac}} - \sqrt[3]{cx}}{\frac{(b+\sqrt{b^2-4ac})^{2/3}}{2^{2/3}} - \frac{\sqrt[3]{c} \sqrt[3]{b+\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + c^{2/3}x^2}}{3 \cdot 2^{2/3} \sqrt[3]{c} \sqrt[3]{b+\sqrt{b^2-4ac}}} dx \\
&\quad \left(-h + \frac{bl}{c} - \frac{2c^2e+b^2l-c(bh+2al)}{c\sqrt{b^2-4ac}}\right) \int \frac{1}{\frac{\sqrt[3]{b-\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + \sqrt[3]{cx}} dx \\
&+ \frac{\left(-h + \frac{bl}{c} - \frac{2c^2e+b^2l-c(bh+2al)}{c\sqrt{b^2-4ac}}\right) \int \frac{2^{2/3} \sqrt[3]{b-\sqrt{b^2-4ac}} - \sqrt[3]{cx}}{\frac{(b-\sqrt{b^2-4ac})^{2/3}}{2^{2/3}} - \frac{\sqrt[3]{c} \sqrt[3]{b-\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + c^{2/3}x^2}}{3 \cdot 2^{2/3} \sqrt[3]{c} \sqrt[3]{b-\sqrt{b^2-4ac}}} dx \\
&\quad \left(h - \frac{bl}{c} + \frac{2c^2e+b^2l-c(bh+2al)}{c\sqrt{b^2-4ac}}\right) \int \frac{1}{\frac{\sqrt[3]{b-\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + \sqrt[3]{cx}} dx \\
&+ \frac{\left(h - \frac{bl}{c} + \frac{2c^2e+b^2l-c(bh+2al)}{c\sqrt{b^2-4ac}}\right) \int \frac{2^{2/3} \sqrt[3]{b-\sqrt{b^2-4ac}} - \sqrt[3]{cx}}{\frac{(b-\sqrt{b^2-4ac})^{2/3}}{2^{2/3}} - \frac{\sqrt[3]{c} \sqrt[3]{b-\sqrt{b^2-4ac}}}{\sqrt[3]{2}} + c^{2/3}x^2}}{3 \cdot 2^{2/3} \sqrt[3]{c} \sqrt[3]{b-\sqrt{b^2-4ac}}} dx
\end{aligned}$$



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## Mathematica [C] (verified)

Result contains higher order function than in optimal. Order 9 vs. order 3 in optimal.

Time = 0.74 (sec) , antiderivative size = 223, normalized size of antiderivative = 0.13

$$\int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx$$

$$= \frac{6kx + 3lx^2 + 2mx^3 - 2\text{RootSum}\left[a + b\#1^3 + c\#1^6 \&, \frac{-cd \log(x - \#1) + ak \log(x - \#1) - ce \log(x - \#1) \#1 + al \log(x - \#1)}{\#1}\right]}{6c}$$

[In] Integrate[(d + e\*x + f\*x^2 + g\*x^3 + h\*x^4 + j\*x^5 + k\*x^6 + l\*x^7 + m\*x^8)/(a + b\*x^3 + c\*x^6),x]

[Out] (6\*k\*x + 3\*l\*x^2 + 2\*m\*x^3 - 2\*RootSum[a + b\*#1^3 + c\*#1^6 & , (- (c\*d\*Log[x - #1]) + a\*k\*Log[x - #1] - c\*e\*Log[x - #1]\*#1 + a\*l\*Log[x - #1]\*#1 - c\*f\*Log[x - #1]\*#1^2 + a\*m\*Log[x - #1]\*#1^2 - c\*g\*Log[x - #1]\*#1^3 + b\*k\*Log[x - #1]\*#1^3 - c\*h\*Log[x - #1]\*#1^4 + b\*l\*Log[x - #1]\*#1^4 - c\*j\*Log[x - #1]\*#1^5 + b\*m\*Log[x - #1]\*#1^5)/(b\*#1^2 + 2\*c\*#1^5) & ])/(6\*c)

## Maple [C] (verified)

Result contains higher order function than in optimal. Order 9 vs. order 3.

Time = 29.02 (sec) , antiderivative size = 130, normalized size of antiderivative = 0.08

method	result
default	$\frac{\frac{1}{3}mx^3 + \frac{1}{2}lx^2 + kx}{c} + \frac{\sum_{R=\text{RootOf}(\_Z^6c + \_Z^3b+a)} \left( \frac{(-bm+cj)\_R^5 + (-bl+ch)\_R^4 + (-bk+gc)\_R^3 + (-am+cf)\_R^2 + (-al+ec)\_R}{2\_R^5c + \_R^2b} \right)}{3c}$
risch	$\frac{mx^3}{3c} + \frac{lx^2}{2c} + \frac{kx}{c} + \frac{\sum_{R=\text{RootOf}(\_Z^6c + \_Z^3b+a)} \left( \frac{(-bm+cj)\_R^5 + (-bl+ch)\_R^4 + (-bk+gc)\_R^3 + (-am+cf)\_R^2 + (-al+ec)\_R}{2\_R^5c + \_R^2b} \right)}{3c}$

[In] int((m\*x^8+l\*x^7+k\*x^6+j\*x^5+h\*x^4+g\*x^3+f\*x^2+e\*x+d)/(c\*x^6+b\*x^3+a),x,method=\_RETURNVERBOSE)

[Out] 1/c\*(1/3\*m\*x^3+1/2\*l\*x^2+k\*x)+1/3/c\*sum((((-b\*m+c\*j)\*\_R^5+(-b\*l+c\*h)\*\_R^4+(-b\*k+c\*g)\*\_R^3+(-a\*m+c\*f)\*\_R^2+(-a\*l+c\*e)\*\_R-a\*k+c\*d)/(2\*\_R^5\*c+\_R^2\*b)\*ln(x-\_R),\_R=RootOf(\_Z^6\*c+\_Z^3\*b+a))

**Fricas [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx = \text{Timed out}$$

[In] integrate((m\*x^8+l\*x^7+k\*x^6+j\*x^5+h\*x^4+g\*x^3+f\*x^2+e\*x+d)/(c\*x^6+b\*x^3+a),x, algorithm="fricas")

[Out] Timed out

**Sympy [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx = \text{Timed out}$$

[In] integrate((m\*x\*\*8+l\*x\*\*7+k\*x\*\*6+j\*x\*\*5+h\*x\*\*4+g\*x\*\*3+f\*x\*\*2+e\*x+d)/(c\*x\*\*6+b\*x\*\*3+a),x)

[Out] Timed out

**Maxima [F]**

$$\begin{aligned} & \int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx \\ &= \int \frac{mx^8 + lx^7 + kx^6 + jx^5 + hx^4 + gx^3 + fx^2 + ex + d}{cx^6 + bx^3 + a} dx \end{aligned}$$

[In] integrate((m\*x^8+l\*x^7+k\*x^6+j\*x^5+h\*x^4+g\*x^3+f\*x^2+e\*x+d)/(c\*x^6+b\*x^3+a),x, algorithm="maxima")

[Out] 1/6\*(2\*m\*x^3 + 3\*l\*x^2 + 6\*k\*x)/c - integrate(-((c\*j - b\*m)\*x^5 + (c\*h - b\*1)\*x^4 + (c\*g - b\*k)\*x^3 + (c\*f - a\*m)\*x^2 + c\*d - a\*k + (c\*e - a\*1)\*x)/(c\*x^6 + b\*x^3 + a), x)/c

**Giac [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx = \text{Timed out}$$

```
[In] integrate((m*x^8+l*x^7+k*x^6+j*x^5+h*x^4+g*x^3+f*x^2+e*x+d)/(c*x^6+b*x^3+a),x, algorithm="giac")
```

```
[Out] Timed out
```

**Mupad [B] (verification not implemented)**

Time = 52.38 (sec) , antiderivative size = 359169, normalized size of antiderivative = 215.33

$$\int \frac{d + ex + fx^2 + gx^3 + hx^4 + jx^5 + kx^6 + lx^7 + mx^8}{a + bx^3 + cx^6} dx = \text{Too large to display}$$

```
[In] int((d + e*x + f*x^2 + g*x^3 + h*x^4 + j*x^5 + k*x^6 + l*x^7 + m*x^8)/(a + b*x^3 + c*x^6),x)
```

```
[Out] symsum(log((x*(c^7*e^5 + c^7*d^4*j - a^5*c^2*l^5 - b^7*e^2*m^3 - a^2*b*c^4*m^5 - a*c^6*e^2*g^3 - b*c^6*e^2*f^3 + 2*a*c^6*e^3*h^2 + b*c^6*d^3*h^2 + a^2*c^5*e*h^4 + a^4*b^2*c*l^5 + 3*c^7*d^2*e*f^2 + 3*c^7*d^2*e^2*g + a^2*b^5*d*m^4 - a^2*c^5*g^4*j + a^3*c^4*g*j^4 + 5*a^4*c^3*e*l^4 + 3*b^2*c^5*e^4*l + b^6*c*e^2*l^3 - a^3*b^4*g*m^4 - a^3*c^4*h^4*l - a^5*c^2*g*m^4 + a^4*c^3*j*k^4 + a^4*b^3*k*m^4 + b^2*c^5*e^2*g^3 + 3*b^2*c^5*e^3*h^2 - b^3*c^4*e^2*h^3 + a^2*c^5*e^2*j^3 + a^2*c^5*g^3*h^2 + b^4*c^3*e^2*j^3 + 10*a^2*c^5*e^3*l^2 - 10*a^3*c^4*e^2*l^3 + b^3*c^4*d^3*l^2 - b^5*c^2*e^2*k^3 - a^3*c^4*h^2*j^3 + 3*b^4*c^3*e^3*l^2 - a^3*c^4*g^3*l^2 - a^2*b^5*h^2*m^3 - 2*a^4*c^3*h^2*l^3 + a^4*c^3*j^3*l^2 - a^4*b^3*l^2*m^3 + b*c^6*d*f^4 - a*c^6*f^4*g - 3*b*c^6*e^4*h - 4*c^7*d*e^3*f - 2*c^7*d^3*e*h - 2*c^7*d^3*f*g - 5*a*c^6*e^4*l - b*c^6*d^4*m + b^7*d*f*m^3 + a*b*c^5*f*g^4 - 2*a*c^6*d*f*g^3 + 2*a*c^6*e*f^3*h + 3*b*c^6*e^3*f*g + 2*a*c^6*d*f^3*j + 3*b*c^6*d*e^3*j + 4*a*c^6*d*e^3*m + 4*a*c^6*e^3*f*k + 4*a*c^6*e^3*g*j + 2*b*c^6*d^3*e*l + 2*b*c^6*d^3*f*k - b*c^6*d^3*g*j - b^6*c*d*f*l^3 + 2*a*c^6*d^3*g*m + 2*a*c^6*d^3*h*l + 2*a*b^6*e*h*m^3 - a*b^6*f*g*m^3 - 4*a*c^6*d^3*j*k - a*b^6*d*j*m^3 - 2*a^5*b*c*k*m^4 + 12*a^2*b^2*c^3*e^2*l^3 + a^2*b^2*c^3*h^2*j^3 - 10*a^2*b^3*c^2*e^2*m^3 - a^2*b^3*c^2*h^2*k^3 - 3*a^2*b^3*c^2*h^3*l^2 + 3*a^3*b^2*c^2*h^2*l^3 - 4*a*b*c^5*e^2*h^3 + 2*a*b^2*c^4*e*h^4 + a*b^3*c^3*d*j^4 - 2*a^2*b*c^4*d*j^4 - 3*b*c^6*d^2*g^2 - 2*a*b*c^5*d^3*l^2 + 3*a*c^6*e*f^2*g^2 + 3*b*c^6*d^2*f*g^2 - b^2*c^5*d*f*g^3 + 3*a*c^6*d^2*e*j^2 - 3*a*c^6*d^2*g*h^2 - 3*b*c^6*d^2*f^2*h + 2*a^2*b^4*c*e*l^4 - 2*a^3*b*c^3*f*k^4 - 4*a^3*b^3*c*d*m^4 + 3*a^4*b*c^2*d*m^4 + b^3*c^4*d*f*h^3 + 6*a*b^5*c*e^2*m^3 + 2*a^2*c^5*d*f*j^3 - 3*a*c^6*e^2*f^2*j - 3*b*c^6*d^2*e^2*k - 2*a^2*c^5*f*g*h^3 - 3*b^2*c^5*d*f^3*j - b^4*c
```

$$\begin{aligned}
& ^3*d*f*j^3 - 3*a*c^6*d^2*f^2*1 - 2*a^2*c^5*d*h^3*j - 2*a^3*b^3*c*h*1^4 + 4* \\
& a^3*c^4*d*f*1^3 + a^4*b*c^2*h*1^4 + 3*a^4*b^2*c*g*m^4 + b^5*c^2*d*f*k^3 + a \\
& ^3*b*c^3*j^4*k - 3*b^2*c^5*d*e^3*m - 3*b^2*c^5*e^3*f*k - 3*b^2*c^5*e^3*g*j \\
& + 2*a^2*c^5*d*g^3*m + 2*a^2*c^5*e*g^3*1 + 2*a^2*c^5*f*g^3*k + 2*a^3*c^4*e*h \\
& *k^3 + 2*a^3*c^4*f*g*k^3 + 3*b^3*c^4*d*f^3*m - 4*a^3*c^4*d*j*k^3 + b^2*c^5* \\
& d^3*g*m - 2*b^2*c^5*d^3*h*1 + 4*a^2*c^5*f^3*g*m - 2*a^2*c^5*f^3*h*1 + a^4*b \\
& *c^2*k^4*m - 2*a^4*c^3*e*h*m^3 + 4*a^4*c^3*f*g*m^3 + b^2*c^5*d^3*j*k + 3*b^ \\
& 3*c^4*e^3*g*m - 6*b^3*c^4*e^3*h*1 - 2*a^2*c^5*f^3*j*k - 2*a^3*c^4*d*j^3*m - \\
& 2*a^3*c^4*e*j^3*1 - 2*a^3*c^4*f*j^3*k - 2*a^4*c^3*d*j*m^3 + 2*a^5*b*c*1^2* \\
& m^3 + 3*b^3*c^4*e^3*j*k + 2*a^3*c^4*g*h^3*m - 2*a^2*b^5*e*1*m^3 + a^2*b^5*f \\
& *k*m^3 + a^2*b^5*g*j*m^3 - 4*a^2*c^5*e^3*k*m + 2*a^3*c^4*h^3*j*k - 4*a^4*c^ \\
& 3*d*1^3*m - 4*a^4*c^3*f*k*1^3 - 4*a^4*c^3*g*j*1^3 - b^3*c^4*d^3*k*m + 3*b^ \\
& 6*c*e^2*j*m^2 - 3*b^4*c^3*e^3*k*m - 2*a^3*c^4*g^3*k*m - 2*a^4*c^3*g*k^3*m - \\
& 2*a^4*c^3*h*k^3*1 + 2*a^3*b^4*h*1*m^3 - a^3*b^4*j*k*m^3 + 2*a^5*c^2*h*1*m^3 \\
& + 2*a^4*c^3*j^3*k*m + 2*a^5*c^2*j*k*m^3 + 4*a^5*c^2*k*1^3*m - 3*a*b^2*c^4* \\
& e^2*j^3 + 4*a*b^3*c^3*e^2*k^3 - 3*a^2*b*c^4*e^2*k^3 - 10*a*b^2*c^4*e^3*1^2 \\
& - 5*a*b^4*c^2*e^2*1^3 - a^2*b^2*c^3*g*j^4 + a^2*b^3*c^2*f*k^4 - 6*a^3*b^2*c \\
& ^2*e*1^4 + a^2*b*c^4*f^3*1^2 + 4*a^3*b*c^3*e^2*m^3 + 2*a^3*b*c^3*h^2*k^3 - \\
& 3*b^3*c^4*d*e^2*k^2 + 3*b^3*c^4*d*f^2*j^2 + 3*a^2*b^2*c^3*h^4*1 + a^2*b^4*c \\
& *h^2*1^3 + 3*a^2*c^5*e*f^2*k^2 + 3*a^2*c^5*e*g^2*j^2 + 3*a^2*c^5*d^2*e*m^2 \\
& + 3*b^2*c^5*e^2*f^2*j + 3*b^3*c^4*d^2*f*k^2 - 3*b^3*c^4*e^2*f*j^2 + 3*a^2*c \\
& ^5*d^2*g*1^2 + 3*a^2*c^5*e^2*g*k^2 - a^3*b^2*c^2*j*k^4 + 4*a^3*b^3*c*h^2*m^ \\
& 3 - 3*a^4*b*c^2*h^2*m^3 + 3*b^2*c^5*d^2*f^2*1 + 3*a^2*c^5*f^2*h^2*j - 3*b^3 \\
& *c^4*e^2*g^2*k + 3*b^4*c^3*e^2*g*k^2 + 3*b^5*c^2*d*f^2*m^2 + 6*a^2*c^5*d^2* \\
& j*k^2 - 6*a^2*c^5*e^2*h^2*1 - 3*a^2*c^5*f^2*g^2*1 + 3*a^3*c^4*e*g^2*m^2 + 6 \\
& *a^3*c^4*e*h^2*1^2 - a^4*b*c^2*k^3*1^2 - 3*b^3*c^4*e^2*f^2*m - 3*b^5*c^2*e^ \\
& 2*f*m^2 - 3*a^2*c^5*d^2*j^2*1 + 3*a^3*c^4*e*j^2*k^2 - 3*a^3*c^4*g*h^2*k^2 - \\
& 6*a^3*c^4*f^2*g*m^2 + 3*b^4*c^3*e^2*h^2*1 - 3*b^5*c^2*e^2*h*1^2 - 3*a^3*c^ \\
& 4*e^2*j*m^2 - 3*a^3*c^4*f^2*j*1^2 - 3*a^3*c^4*d^2*1*m^2 - 3*a^3*c^4*f^2*k^2 \\
& *1 - 3*a^3*c^4*g^2*j^2*1 + 3*a^4*c^3*e*k^2*m^2 - 3*b^5*c^2*e^2*j^2*m + 3*a^ \\
& 4*c^3*g*k^2*1^2 + 3*a^4*c^3*h^2*j*m^2 - 3*a^4*c^3*g^2*1*m^2 - 3*a^4*c^3*j^2 \\
& *k^2*1 - 3*a^5*c^2*j*1^2*m^2 - 3*a^5*c^2*k^2*1*m^2 - 6*a^2*b^2*c^3*d*f*1^3 \\
& - 3*a*b^2*c^4*d^2*g*1^2 - 9*a*b^2*c^4*e^2*g*k^2 - 3*a*b^2*c^4*f^2*g*j^2 - 1 \\
& 2*a*b^3*c^3*d*f^2*m^2 + 12*a^2*b*c^4*d*f^2*m^2 + 3*a^2*b*c^4*d*g^2*1^2 - 3* \\
& a^2*b*c^4*d*h^2*k^2 + 13*a^2*b^3*c^2*d*f*m^3 + 3*a*b^3*c^3*f*g^2*k^2 + 12*a \\
& *b^3*c^3*e^2*f*m^2 - 3*a^2*b*c^4*f*g^2*k^2 - 3*a^2*b*c^4*f*h^2*j^2 - 9*a^2* \\
& b*c^4*e^2*f*m^2 - 6*a^2*b^2*c^3*e*h*k^3 - 3*a*b^2*c^4*d^2*j*k^2 + 3*a*b^2*c \\
& ^4*e^2*h^2*1 + 3*a*b^2*c^4*f^2*g^2*1 + 6*a*b^3*c^3*e^2*h*1^2 + 6*a*b^4*c^2* \\
& e*h^2*1^2 - 3*a^2*b*c^4*d^2*h*m^2 - 6*a^2*b*c^4*e^2*h*1^2 - 3*a^2*b*c^4*f^2 \\
& *h*k^2 - 3*a^2*b*c^4*g^2*h*j^2 + 3*a^2*b^2*c^3*d*j*k^3 + 2*a^2*b^3*c^2*e*h* \\
& 1^3 - 4*a^2*b^3*c^2*f*g*1^3 + 3*a*b^2*c^4*d^2*j^2*1 - 3*a*b^4*c^2*f^2*g*m^2 \\
& - 3*a^2*b*c^4*g^2*h^2*k - 4*a^2*b^3*c^2*d*j*1^3 + 12*a^3*b^2*c^2*e*h*m^3 - \\
& 9*a^3*b^2*c^2*f*g*m^3 + 3*a^2*b*c^4*d^2*k*1^2 - 3*a^2*b*c^4*f^2*h^2*m + 3* \\
& a^2*b*c^4*f^2*j^2*k + 8*a^2*b^2*c^3*d*j^3*m + 2*a^2*b^2*c^3*e*j^3*1 - a^2*b \\
& ^2*c^3*f*j^3*k + 3*a^3*b*c^3*d*j^2*m^2 + 6*a^3*b*c^3*f*h^2*m^2 + 3*a^3*b^2*
\end{aligned}$$

$$\begin{aligned}
& c^2*d*j*m^3 + 12*a*b^3*c^3*e^2*j^2*m - 15*a*b^4*c^2*e^2*j*m^2 - 9*a^2*b*c^4 \\
& *e^2*j^2*m - 3*a^2*b^2*c^3*g*h^3*m + a^2*b^3*c^2*d*k^3*m - 2*a^2*b^3*c^2*e* \\
& k^3*1 + a^2*b^3*c^2*g*j*k^3 - 3*a^3*b*c^3*g^2*h*m^2 - 3*a^2*b^2*c^3*h^3*j*k \\
& - 3*a^3*b*c^3*h*j^2*k^2 + 3*a^3*b^2*c^2*d*1^3*m + 3*a^3*b^2*c^2*f*k*1^3 + \\
& 3*a^3*b^2*c^2*g*j*1^3 + 3*a^2*b^3*c^2*g*j^3*m - 3*a^2*b^4*c*g*j^2*m^2 - 6*a \\
& ^3*b*c^3*f^2*k*m^2 + 3*a^2*b^4*c*h^2*j*m^2 + 3*a^3*b*c^3*g^2*k^2*m + 6*a^3* \\
& b*c^3*h^2*j^2*m - a^3*b^2*c^2*g*k^3*m + 2*a^3*b^2*c^2*h*k^3*1 - 3*a^4*b*c^2 \\
& *f*1^2*m^2 + 3*a^2*b^3*c^2*h^3*k*m - 3*a^4*b*c^2*h*k^2*m^2 - 3*a^3*b^2*c^2* \\
& j^3*k*m + 3*a^3*b^3*c*j^2*k*m^2 - 3*a^4*b*c^2*j^2*k*m^2 - 3*a^4*b*c^2*j^2*1 \\
& ^2*m + 3*a^4*b^2*c*j*1^2*m^2 + 3*a^4*b^2*c*k^2*1*m^2 - 2*a*b*c^5*d*f*h^3 - \\
& 2*a*b*c^5*e*g^3*h + a*b*c^5*d*g^3*j - 3*b*c^6*d*e*f^2*g + 6*a*c^6*d*e*g^2*h \\
& + 6*b*c^6*d*e^2*f*h - 6*a*b*c^5*d*f^3*m + 3*a*b*c^5*f^3*g*j - 6*a*b^5*c*d* \\
& f*m^3 - 6*a*c^6*d*e*f^2*k - 6*a*c^6*e^2*f*g*h - 3*b*c^6*d^2*e*f*j - 7*a*b*c \\
& ^5*e^3*g*m + 8*a*b*c^5*e^3*h*1 - 2*a*b^5*c*e*h*1^3 + a*b^5*c*f*g*1^3 + 12*a \\
& *c^6*d*e^2*f*1 - 6*a*c^6*d*e^2*g*k - 6*a*c^6*d*e^2*h*j - 7*a*b*c^5*e^3*j*k \\
& + a*b^5*c*d*j*1^3 - 6*a*c^6*d^2*e*f*m - 6*a*c^6*d^2*e*g*1 + 6*a*c^6*d^2*e*h \\
& *k + 6*a*c^6*d^2*f*g*k + 2*a*b*c^5*d^3*k*m - 3*b^6*c*d*f*j*m^2 - 3*b^6*c*e^ \\
& ^2*k*1*m - 9*a^2*b^2*c^3*e*h^2*1^2 + 3*a^2*b^2*c^3*g*h^2*k^2 + 9*a^2*b^2*c^3 \\
& *f^2*g*m^2 - 9*a^2*b^3*c^2*d*j^2*m^2 - 3*a^2*b^3*c^2*f*h^2*m^2 + 18*a^2*b^2 \\
& *c^3*e^2*j*m^2 - 3*a^2*b^2*c^3*g^2*j*k^2 + 3*a^2*b^2*c^3*d^2*1*m^2 + 3*a^2* \\
& b^2*c^3*f^2*k^2*1 + 3*a^2*b^2*c^3*g^2*j^2*1 + 3*a^2*b^3*c^2*f^2*k*m^2 + 6*a \\
& ^3*b^2*c^2*g*j^2*m^2 - 3*a^2*b^3*c^2*h^2*j^2*m - 9*a^3*b^2*c^2*h^2*j*m^2 + \\
& 3*a^3*b^2*c^2*g^2*1*m^2 + 3*a^3*b^2*c^2*j^2*k^2*1 + 6*a*b*c^5*d*e^2*k^2 - 3 \\
& *a*b*c^5*d*f^2*j^2 - 6*a*b*c^5*d^2*f*k^2 + 6*a*b*c^5*e^2*f*j^2 - 3*a*b*c^5* \\
& f^2*g^2*h - a*b^2*c^4*f*g*h^3 - 4*a*b^3*c^3*d*f*k^3 + 6*a^2*b*c^4*d*f*k^3 - \\
& 3*a*b*c^5*d^2*h*j^2 - a*b^2*c^4*d*h^3*j + 5*a*b^4*c^2*d*f*1^3 - 3*b^2*c^5* \\
& d*e*f*h^2 + 6*a*b*c^5*e^2*g^2*k - 2*a*b^3*c^3*e*h*j^3 + a*b^3*c^3*f*g*j^3 + \\
& 4*a^2*b*c^4*e*h*j^3 + a^2*b*c^4*f*g*j^3 - 10*a^3*b*c^3*d*f*m^3 - 3*a*b*c^5 \\
& *d^2*g^2*m + 6*a*b*c^5*e^2*f^2*m - 3*a*b^2*c^4*f*g^3*k + 2*a*b^4*c^2*e*h*k^ \\
& ^3 - a*b^4*c^2*f*g*k^3 + 3*b^2*c^5*d*f^2*g*h - 6*a*b^3*c^3*e*h^3*1 - a*b^4*c \\
& ^2*d*j*k^3 + 4*a^2*b*c^4*d*h^3*m + 4*a^2*b*c^4*e*h^3*1 + 4*a^2*b*c^4*f*h^3* \\
& k + 4*a^2*b*c^4*g*h^3*j - 12*a^2*c^5*d*e*f*1^2 + 3*a^3*b*c^3*f*g*1^3 + 3*b^ \\
& ^2*c^5*d*e*f^2*k - 3*b^2*c^5*e^2*f*g*h - 3*a*b^2*c^4*f^3*g*m - 10*a^2*b^4*c* \\
& e*h*m^3 + 5*a^2*b^4*c*f*g*m^3 - 6*a^2*c^5*d*e*h*k^2 - 6*a^2*c^5*d*f*g*k^2 + \\
& 3*a^3*b*c^3*d*j*1^3 - 6*b^2*c^5*d*e^2*f*1 + 6*b^2*c^5*d*e^2*g*k - 3*b^2*c^ \\
& 5*d*e^2*h*j - 3*b^4*c^3*d*e*f*1^2 - 3*a*b^4*c^2*d*j^3*m + 3*a*b^5*c*d*j^2*m \\
& ^2 + 2*a^2*b^4*c*d*j*m^3 - 6*a^2*c^5*e*f*h*j^2 + 3*b^2*c^5*d^2*e*f*m - 6*b^ \\
& ^2*c^5*d^2*f*g*k + 3*b^2*c^5*d^2*f*h*j + 3*b^3*c^4*d*f*g^2*k - 3*b^4*c^3*d*f \\
& *g*k^2 + 3*a^2*b*c^4*g^3*j*k - 6*a^2*c^5*d*e*j^2*k + 6*a^2*c^5*d*g*h^2*k - \\
& 2*a^3*b*c^3*d*k^3*m + 4*a^3*b*c^3*e*k^3*1 + a^3*b*c^3*g*j*k^3 - 3*b^3*c^4*d \\
& *f^2*g*1 - 3*b^3*c^4*d*f^2*h*k + 10*a*b^2*c^4*e^3*k*m - a^2*b^4*c*d*1^3*m - \\
& a^2*b^4*c*f*k*1^3 - a^2*b^4*c*g*j*1^3 - 6*a^2*c^5*d*g^2*h*1 - 6*a^2*c^5*e* \\
& f*g^2*m - 6*a^2*c^5*e*g^2*h*k + 3*b^3*c^4*d*e^2*h*m + 3*b^3*c^4*e^2*f*g*1 + \\
& 3*b^3*c^4*e^2*f*h*k + 3*b^3*c^4*e^2*g*h*j - 3*b^4*c^3*d*f*h^2*1 + 3*b^5*c^ \\
& ^2*d*f*h*1^2 + 2*a^2*b*c^4*f^3*k*m - 6*a^2*c^5*e*f^2*h*m - 5*a^3*b*c^3*g*j^3
\end{aligned}$$

$$\begin{aligned}
& *m - 2*a^3*b*c^3*h*j^3*1 + 8*a^3*b^3*c*e*1*m^3 - 4*a^3*b^3*c*f*k*m^3 - a^3*b^3*c*g*j*m^3 + 6*a^3*c^4*e*f*h*m^2 - 6*a^4*b*c^2*e*1*m^3 + 6*a^4*b*c^2*f*k*m^3 - 3*a^4*b*c^2*g*j*m^3 + 3*b^3*c^4*d*e^2*j*1 - 3*b^3*c^4*d^2*f*h*m - 6*a^2*c^5*d*f^2*j*m + 6*a^2*c^5*d*f^2*k*1 + 6*a^2*c^5*e*f^2*j*1 + 6*a^2*c^5*e^2*g*h*m - 6*a^3*c^4*d*e*k*m^2 + 6*a^3*c^4*d*f*j*m^2 - 6*a^3*c^4*f*g*h*1^2 - 3*b^3*c^4*d^2*f*j*1 - 12*a^2*c^5*d*e^2*1*m + 6*a^2*c^5*e^2*f*j*m - 12*a^2*c^5*e^2*f*k*1 - 12*a^2*c^5*e^2*g*j*1 + 6*a^2*c^5*e^2*h*j*k - 6*a^3*b*c^3*h^3*k*m + a^3*b^3*c*g*1^3*m + 12*a^3*c^4*d*e*1^2*m - 6*a^3*c^4*d*g*k*1^2 - 6*a^3*c^4*d*h*j*1^2 + 12*a^3*c^4*e*f*k*1^2 + 12*a^3*c^4*e*g*j*1^2 + a^4*b*c^2*g*1^3*m - 6*b^4*c^3*d*f^2*j*m + 3*b^4*c^3*d*f^2*k*1 - 3*b^4*c^3*e^2*g*h*m + 3*b^5*c^2*d*f*j^2*m + 6*a^2*c^5*d^2*f*1*m - 6*a^2*c^5*d^2*g*k*m - 6*a^2*c^5*d^2*h*k*1 + a^3*b^3*c*j*k*1^3 + 6*a^3*c^4*d*g*k^2*m + 6*a^3*c^4*d*h*k^2*1 - 6*a^3*c^4*e*f*k^2*m - 6*a^3*c^4*e*g*k^2*1 + a^4*b*c^2*j*k*1^3 - 6*a^4*b^2*c*h*1*m^3 - 3*b^4*c^3*d*e^2*1*m + 6*b^4*c^3*e^2*f*j*m - 3*b^4*c^3*e^2*f*k*1 - 3*b^4*c^3*e^2*g*j*1 - 3*b^4*c^3*e^2*h*j*k + 6*a^3*c^4*e*h*j^2*m + 6*a^3*c^4*f*h*j^2*1 + 3*b^4*c^3*d^2*f*1*m + 6*a^3*c^4*d*j^2*k*1 - 6*a^3*c^4*f*h^2*j*m + 6*a^3*c^4*f*g^2*1*m + 6*a^3*c^4*g^2*h*k*1 - 4*a^4*b^2*c*k*1^3*m + 3*b^5*c^2*e^2*g*1*m + 3*b^5*c^2*e^2*h*k*m + 6*a^3*c^4*f^2*h*1*m - 6*a^4*c^3*f*h*1*m^2 + 3*b^5*c^2*e^2*j*k*1 + 6*a^3*c^4*f^2*j*k*m + 6*a^4*c^3*d*k*1*m^2 + 6*a^4*c^3*e*j*1*m^2 - 6*a^4*c^3*f*j*k*m^2 + 6*a^4*c^3*g*h*1^2*m + 12*a^3*c^4*e^2*k*1*m - 12*a^4*c^3*e*k*1^2*m + 6*a^4*c^3*f*j*1^2*m + 6*a^4*c^3*h*j*k*1^2 + 6*a^4*c^3*f*k^2*1*m - 6*a^4*c^3*h*j^2*1*m + 12*a*b^2*c^4*d*e*f*1^2 + 6*a*b^2*c^4*d*e*h*k^2 + 6*a*b^2*c^4*d*f*g*k^2 + 3*a*b^2*c^4*d*g*h*j^2 + 6*a*b^2*c^4*e*f*h*j^2 - 3*a^2*b*c^4*d*e*g*m^2 - 6*a*b^2*c^4*d*e*h^2*m + 3*a*b^2*c^4*d*e*j^2*k + 9*a*b^2*c^4*d*f*h^2*1 - 6*a*b^2*c^4*e*f*h^2*k - 6*a*b^2*c^4*e*g*h^2*j - 12*a*b^3*c^3*d*f*h*1^2 + 3*a*b^3*c^3*e*f*g*1^2 + 6*a^2*b*c^4*d*f*h*1^2 - 3*a^2*b*c^4*e*f*g*1^2 + 3*a*b^2*c^4*e*f*g^2*m + 6*a*b^2*c^4*e*g^2*h*k + 3*a*b^2*c^4*f*g^2*h*j + 3*a*b^3*c^3*d*e*j*1^2 - 6*a*b^3*c^3*e*g*h*k^2 - 3*a^2*b*c^4*d*e*j*1^2 + 12*a^2*b*c^4*e*g*h*k^2 - 3*a*b^2*c^4*d*g^2*j*k + 6*a*b^2*c^4*e*f^2*h*m + 3*a*b^2*c^4*f^2*g*h*k + 3*a*b^3*c^3*d*g*j*k^2 + 6*a*b^4*c^2*e*f*h*m^2 - 6*a^2*b*c^4*d*e*k^2*1 - 3*a^2*b*c^4*d*g*j*k^2 - 3*a^2*b*c^4*e*f*j*k^2 + 15*a*b^2*c^4*d*f^2*j*m - 9*a*b^2*c^4*d*f^2*k*1 + 3*a*b^2*c^4*e^2*g*h*m - 6*a*b^3*c^3*d*f*j^2*m - 3*a*b^3*c^3*d*g*j^2*1 - 3*a*b^3*c^3*d*h*j^2*k + 6*a*b^3*c^3*e*g*h^2*m + 3*a*b^3*c^3*f*g*h^2*1 + 12*a*b^4*c^2*d*f*j*m^2 - 3*a*b^4*c^2*f*g*h*1^2 + 3*a^2*b*c^4*d*g*j^2*1 + 6*a^2*b*c^4*d*h*j^2*k - 6*a^2*b*c^4*e*f*j^2*1 - 9*a^2*b*c^4*e*g*h^2*m - 3*a^2*b*c^4*e*g*j^2*k - 3*a^2*b*c^4*f*g*h^2*1 + 9*a*b^2*c^4*d*e^2*1*m - 18*a*b^2*c^4*e^2*f*j*m + 9*a*b^2*c^4*e^2*f*k*1 + 9*a*b^2*c^4*e^2*g*j*1 + 3*a*b^2*c^4*e^2*h*j*k + 3*a*b^3*c^3*d*h^2*j*1 + 6*a*b^3*c^3*e*h^2*j*k - 3*a*b^3*c^3*f*g^2*h*m - 3*a*b^4*c^2*d*h*j*1^2 - 3*a^2*b*c^4*d*h^2*j*1 - 9*a^2*b*c^4*e*h^2*j*k + 6*a^2*b*c^4*f*g^2*h*m - 9*a*b^2*c^4*d^2*f*1*m + 3*a*b^2*c^4*d^2*g*k*m + 3*a*b^2*c^4*d^2*h*j*m - 3*a*b^3*c^3*f*g^2*j*1 - 3*a^2*b*c^4*e*g^2*j*m - 6*a^2*b*c^4*e*g^2*k*1 + 3*a^2*b*c^4*f*g^2*j*1 + 6*a*b^3*c^3*f^2*g*j*m - 3*a*b^3*c^3*f^2*g*k*1 + 6*a*b^4*c^2*e*h*j^2*m - 3*a*b^4*c^2*f*g*j^2*m - 6*a^2*b*c^4*e*f^2*1*m - 9*a^2*b*c^4*f^2*g*j*m + 3*a^2*b*c^4*f^2*g*k*1 + 3*a^3*b*c^
\end{aligned}$$

$$\begin{aligned}
& 3*d*g*1*m^2 + 6*a^3*b*c^3*d*h*k*m^2 + 12*a^3*b*c^3*e*f*1*m^2 - 3*a^3*b*c^3* \\
& e*g*k*m^2 - 18*a^3*b*c^3*e*h*j*m^2 + 9*a^3*b*c^3*f*g*j*m^2 - 12*a*b^3*c^3*e \\
& ^2*g*1*m - 6*a*b^3*c^3*e^2*h*k*m + 3*a*b^4*c^2*d*j^2*k*1 - 6*a*b^4*c^2*e*h^ \\
& 2*k*m + 15*a^2*b*c^4*e^2*g*1*m - 6*a^2*b*c^4*e^2*h*k*m - 9*a^3*b*c^3*e*g*1^ \\
& 2*m - 12*a*b^3*c^3*e^2*j*k*1 + 3*a*b^4*c^2*f*g^2*1*m + 15*a^2*b*c^4*e^2*j*k \\
& *1 - 9*a^3*b*c^3*e*j*k*1^2 + 6*a^3*b*c^3*f*h*k^2*m - 6*a^3*b*c^3*g*h*k^2*1 \\
& - 3*a*b^3*c^3*d^2*j*1*m + 3*a^2*b*c^4*d^2*j*1*m - 3*a^3*b*c^3*e*j*k^2*m + 3 \\
& *a^3*b*c^3*f*j*k^2*1 + 3*a^2*b^4*c*d*k*1*m^2 + 6*a^2*b^4*c*e*j*1*m^2 - 3*a^ \\
& 2*b^4*c*f*j*k*m^2 + 12*a^3*b*c^3*e*j^2*1*m + 3*a^3*b*c^3*g*h^2*1*m + 3*a^3* \\
& b*c^3*g*j^2*k*1 + 15*a*b^4*c^2*e^2*k*1*m - 6*a^2*b^4*c*e*k*1^2*m + 3*a^3*b* \\
& c^3*h^2*j*k*1 + 3*a^2*b^4*c*f*k^2*1*m + 3*a^3*b*c^3*g^2*j*1*m - 3*a^3*b^3*c \\
& *g*k*1*m^2 - 6*a^3*b^3*c*h*j*1*m^2 + 3*a^4*b*c^2*g*k*1*m^2 + 12*a^4*b*c^2*h \\
& *j*1*m^2 - 3*a^2*b^4*c*h^2*k*1*m + 6*a^3*b^3*c*h*k*1^2*m - 6*a^4*b*c^2*h*k* \\
& 1^2*m - 3*a^3*b^3*c*j*k^2*1*m + 3*a^4*b*c^2*j*k^2*1*m + 3*b^6*c*d*f*k*1*m + \\
& 3*a^2*b^2*c^3*d*g*h*m^2 - 18*a^2*b^2*c^3*e*f*h*m^2 + 3*a^2*b^2*c^3*d*e*k*m \\
& ^2 - 15*a^2*b^2*c^3*d*f*j*m^2 + 9*a^2*b^2*c^3*f*g*h*1^2 - 9*a^2*b^2*c^3*d*e \\
& *1^2*m + 9*a^2*b^2*c^3*d*h*j*1^2 - 9*a^2*b^2*c^3*e*f*k*1^2 - 9*a^2*b^2*c^3* \\
& e*g*j*1^2 - 3*a^2*b^2*c^3*d*g*k^2*m + 3*a^2*b^2*c^3*e*f*k^2*m + 6*a^2*b^2*c \\
& ^3*e*g*k^2*1 + 3*a^2*b^2*c^3*f*h*j*k^2 - 18*a^2*b^2*c^3*e*h*j^2*m + 3*a^2*b \\
& ^2*c^3*f*g*j^2*m + 3*a^2*b^2*c^3*g*h*j^2*k - 3*a^2*b^3*c^2*d*g*1*m^2 - 3*a^ \\
& 2*b^3*c^2*d*h*k*m^2 - 6*a^2*b^3*c^2*e*f*1*m^2 + 24*a^2*b^3*c^2*e*h*j*m^2 - \\
& 9*a^2*b^3*c^2*f*g*j*m^2 - 6*a^2*b^2*c^3*d*h^2*1*m - 9*a^2*b^2*c^3*d*j^2*k*1 \\
& + 15*a^2*b^2*c^3*e*h^2*k*m + 6*a^2*b^2*c^3*f*h^2*j*m - 6*a^2*b^2*c^3*f*h^2 \\
& *k*1 - 6*a^2*b^2*c^3*g*h^2*j*1 + 3*a^2*b^3*c^2*d*h*1^2*m + 6*a^2*b^3*c^2*e* \\
& g*1^2*m + 3*a^2*b^3*c^2*f*h*k*1^2 + 3*a^2*b^3*c^2*g*h*j*1^2 - 9*a^2*b^2*c^3 \\
& *f*g^2*1*m + 3*a^2*b^2*c^3*g^2*h*j*m + 6*a^2*b^3*c^2*e*j*k*1^2 - 3*a^2*b^3* \\
& c^2*f*h*k^2*m - 3*a^2*b^3*c^2*f*j*k^2*1 + 6*a^3*b^2*c^2*f*h*1*m^2 + 3*a^3*b \\
& ^2*c^2*g*h*k*m^2 - 6*a^2*b^2*c^3*f^2*j*k*m - 6*a^2*b^3*c^2*e*j^2*1*m + 3*a^ \\
& 2*b^3*c^2*f*j^2*k*m + 3*a^2*b^3*c^2*g*h^2*1*m - 3*a^2*b^3*c^2*g*j^2*k*1 - 9 \\
& *a^3*b^2*c^2*d*k*1*m^2 - 18*a^3*b^2*c^2*e*j*1*m^2 + 6*a^3*b^2*c^2*f*j*k*m^2 \\
& - 9*a^3*b^2*c^2*g*h*1^2*m - 24*a^2*b^2*c^3*e^2*k*1*m + 3*a^2*b^3*c^2*h^2*j \\
& *k*1 + 18*a^3*b^2*c^2*e*k*1^2*m - 9*a^3*b^2*c^2*h*j*k*1^2 - 3*a^2*b^3*c^2*g \\
& ^2*j*1*m - 9*a^3*b^2*c^2*f*k^2*1*m + 3*a^3*b^2*c^2*h*j*k^2*m + 6*a^3*b^2*c^ \\
& 2*h*j^2*1*m + 3*a^3*b^2*c^2*h^2*k*1*m - 3*a*b*c^5*d*e*g*j^2 + 9*a*b*c^5*e*f \\
& *g*h^2 + 9*a*b*c^5*d*e*h^2*j - 3*a*b*c^5*e*f*g^2*j + 3*a*b*c^5*d*f^2*g*1 + \\
& 6*a*b*c^5*d*f^2*h*k - 3*a*b*c^5*e*f^2*g*k - 6*a*b*c^5*e*f^2*h*j - 3*a*b*c^5 \\
& *e^2*f*g*1 - 3*a*b*c^5*d*e^2*j*1 + 6*a*b*c^5*d^2*f*h*m + 6*a*b*c^5*d^2*g*h* \\
& 1 + 3*b^2*c^5*d*e*f*g*j - 3*a*b*c^5*d^2*e*j*m + 3*a*b*c^5*d^2*f*j*1 + 3*a*b \\
& *c^5*d^2*g*j*k - 3*b^3*c^4*d*e*f*g*m + 6*b^3*c^4*d*e*f*h*1 - 3*b^3*c^4*d*f* \\
& g*h*j - 3*b^3*c^4*d*e*f*j*k - 6*a*b^5*c*e*h*j*m^2 + 3*a*b^5*c*f*g*j*m^2 + 1 \\
& 2*a^2*c^5*e*f*g*h*1 + 12*a^2*c^5*d*e*f*k*m + 12*a^2*c^5*d*e*g*k*1 + 12*a^2* \\
& c^5*d*e*h*j*1 + 3*b^4*c^3*d*f*g*h*m + 3*b^4*c^3*d*e*f*k*m + 3*b^4*c^3*d*f*g \\
& *j*1 + 3*b^4*c^3*d*f*h*j*k - 3*b^5*c^2*d*f*g*1*m - 3*b^5*c^2*d*f*h*k*m - 3* \\
& b^5*c^2*d*f*j*k*1 - 12*a^3*c^4*e*g*h*1*m - 12*a^3*c^4*d*f*k*1*m - 12*a^3*c^ \\
& 4*e*f*j*1*m - 12*a^3*c^4*e*h*j*k*1 - 6*a*b^2*c^4*d*f*g*h*m - 12*a*b^2*c^4*e
\end{aligned}$$

$$\begin{aligned}
& *f*g*h*1 - 12*a*b^2*c^4*d*e*f*k*m + 3*a*b^2*c^4*d*e*g*j*m - 12*a*b^2*c^4*d* \\
& e*h*j*1 - 3*a*b^2*c^4*d*f*g*j*1 - 6*a*b^2*c^4*d*f*h*j*k + 3*a*b^2*c^4*e*f*g \\
& *j*k + 6*a*b^3*c^3*d*e*h*1*m + 9*a*b^3*c^3*d*f*g*1*m + 12*a*b^3*c^3*d*f*h*k \\
& *m - 3*a*b^3*c^3*d*g*h*j*m - 3*a*b^3*c^3*e*f*g*k*m - 12*a*b^3*c^3*e*f*h*j*m \\
& + 6*a*b^3*c^3*e*f*h*k*1 + 6*a*b^3*c^3*e*g*h*j*1 - 3*a*b^3*c^3*f*g*h*j*k - \\
& 6*a^2*b*c^4*d*f*g*1*m - 12*a^2*b*c^4*d*f*h*k*m + 6*a^2*b*c^4*e*f*g*k*m + 24 \\
& *a^2*b*c^4*e*f*h*j*m - 3*a*b^3*c^3*d*e*j*k*m + 9*a*b^3*c^3*d*f*j*k*1 + 6*a^ \\
& 2*b*c^4*d*e*j*k*m - 6*a^2*b*c^4*d*f*j*k*1 - 6*a*b^4*c^2*e*g*h*1*m + 3*a*b^4 \\
& *c^2*f*g*h*k*m - 15*a*b^4*c^2*d*f*k*1*m + 3*a*b^4*c^2*d*g*j*1*m + 3*a*b^4*c \\
& ^2*d*h*j*k*m - 6*a*b^4*c^2*e*h*j*k*1 + 3*a*b^4*c^2*f*g*j*k*1 + 12*a^3*b*c^3 \\
& *e*h*k*1*m - 6*a^3*b*c^3*f*g*k*1*m - 12*a^3*b*c^3*f*h*j*1*m - 6*a^3*b*c^3*d \\
& *j*k*1*m + 3*a^2*b^4*c*g*j*k*1*m + 12*a^2*b^2*c^3*e*g*h*1*m - 6*a^2*b^2*c^3 \\
& *f*g*h*k*m + 24*a^2*b^2*c^3*d*f*k*1*m - 3*a^2*b^2*c^3*d*g*j*1*m - 6*a^2*b^2 \\
& *c^3*d*h*j*k*m + 12*a^2*b^2*c^3*e*f*j*1*m + 3*a^2*b^2*c^3*e*g*j*k*m + 12*a^ \\
& 2*b^2*c^3*e*h*j*k*1 - 3*a^2*b^2*c^3*f*g*j*k*1 - 18*a^2*b^3*c^2*e*h*k*1*m + \\
& 9*a^2*b^3*c^2*f*g*k*1*m - 3*a^2*b^3*c^2*g*h*j*k*m + 9*a^2*b^3*c^2*d*j*k*1*m \\
& - 3*a^3*b^2*c^2*g*j*k*1*m + 6*a*b*c^5*d*e*f*g*m - 12*a*b*c^5*d*e*f*h*1 - 1 \\
& 2*a*b*c^5*d*e*g*h*k + 6*a*b*c^5*d*e*f*j*k + 6*a*b^5*c*e*h*k*1*m - 3*a*b^5*c \\
& *f*g*k*1*m - 3*a*b^5*c*d*j*k*1*m))/c^3 - (a*c^6*f^5 - c^7*d*e^4 + c^7*d^4*h \\
& - a^6*c*m^5 - c^7*d^3*f^2 + a^5*b^2*m^5 + a^2*c^5*d*h^4 - a^3*b*c^3*j^5 + \\
& a*c^6*d^3*j^2 + 3*c^7*d^2*e^2*f - a^2*c^5*g^4*h + a^3*c^4*f*j^4 - a^4*c^3*d \\
& *1^4 + a*b^6*f^2*m^3 + 2*a^3*b^4*f*m^4 - 5*a^2*c^5*f^4*m - a^3*c^4*h^4*k + \\
& a^4*c^3*h*k^4 + 5*a^5*c^2*f*m^4 - 2*a^4*b^3*j*m^4 - a^4*c^3*j^4*m + a^5*c^2 \\
& *k*1^4 - a^2*c^5*f^2*h^3 - b^2*c^5*d^3*j^2 + 2*a^2*c^5*f^3*j^2 - a^2*c^5*d^ \\
& 3*m^2 + a^3*c^4*f^2*k^3 + a^3*c^4*h^3*j^2 - b^4*c^3*d^3*m^2 + 10*a^3*c^4*f^ \\
& 3*m^2 - 10*a^4*c^3*f^2*m^3 - a^4*c^3*h^3*m^2 - a^4*c^3*j^2*k^3 + a^3*b^4*j^ \\
& 2*m^3 - 2*a^5*c^2*j^2*m^3 + a^5*c^2*k^3*m^2 - 2*c^7*d^3*e*g + a*c^6*e^4*k - \\
& b*c^6*d^4*1 + b^7*d*e*m^3 + a*b*c^5*e*g^4 - 2*a*c^6*d*e*g^3 + b*c^6*d*e*f^ \\
& 3 - 3*a*b*c^5*f^4*j - 4*a*c^6*d*f^3*h - 4*a*c^6*e*f^3*g + 3*b*c^6*d*e^3*h - \\
& 2*a*c^6*e^3*g*h - b*c^6*d^3*g*h + 4*a*c^6*d*e^3*1 - 2*a*c^6*e^3*f*j + 2*b* \\
& c^6*d^3*e*k + 2*b*c^6*d^3*f*j - b^6*c*d*e*1^3 + 2*a*c^6*d^3*f*m + 2*a*c^6*d \\
& ^3*g*1 - 4*a*c^6*d^3*h*k - a*b^6*d*h*m^3 - a*b^6*e*g*m^3 + a^5*b*c*j*m^4 - \\
& 3*a^2*b^2*c^3*f^2*k^3 + 4*a^2*b^3*c^2*f^2*1^3 - 10*a^2*b^2*c^3*f^3*m^2 + 12 \\
& *a^3*b^2*c^2*f^2*m^3 + a^3*b^2*c^2*j^2*k^3 - a*b^2*c^4*d*h^4 - a*b*c^5*f^2* \\
& g^3 + a*b*c^5*e^3*j^2 + 3*a*c^6*d*f^2*g^2 + 3*b*c^6*d^2*e*g^2 + a^2*b*c^4*g \\
& *h^4 - b^2*c^5*d*e*g^3 + 3*a*c^6*d^2*f*h^2 + 3*a*c^6*e^2*f*g^2 - a^2*b^4*c* \\
& d*1^4 - 2*a^3*b*c^3*e*k^4 + b^3*c^4*d*e*h^3 + 3*a*c^6*e^2*f^2*h + 2*a^2*c^5 \\
& *d*e*j^3 - a*b^5*c*f^2*1^3 - 3*b*c^6*d^2*e^2*j - 2*a^2*c^5*e*g*h^3 - b^4*c^ \\
& 3*d*e*j^3 + 3*a*b^2*c^4*f^4*m + 3*a*c^6*d^2*f^2*k + a^3*b^3*c*g*1^4 + 4*a^3 \\
& *c^4*d*e*1^3 - 2*a^4*b*c^2*g*1^4 - 6*a^4*b^2*c*f*m^4 + b^5*c^2*d*e*k^3 - 3* \\
& a*c^6*d^2*e^2*m - 3*b^2*c^5*d*e^3*1 + 2*a^2*c^5*d*g^3*1 + 2*a^2*c^5*e*g^3*k \\
& + 2*a^2*c^5*f*g^3*j - 4*a^3*c^4*d*h*k^3 + 2*a^3*c^4*e*g*k^3 - 2*b^2*c^5*d^ \\
& 3*f*m + b^2*c^5*d^3*g*1 + b^2*c^5*d^3*h*k + 4*a^2*c^5*f^3*g*1 + 4*a^2*c^5*f \\
& ^3*h*k - 2*a^3*c^4*g*h*j^3 + a^4*b*c^2*k^4*1 - a^4*b^2*c*k*1^4 + 4*a^4*c^3* \\
& d*h*m^3 + 4*a^4*c^3*e*g*m^3 - 2*a^3*c^4*d*j^3*1 - 2*a^3*c^4*e*j^3*k + a^2*b
\end{aligned}$$



$$\begin{aligned}
& 5*g*h*m^3 + 2*a^3*c^4*f*h^3*m + 2*a^3*c^4*g*h^3*1 + 2*a^4*c^3*g*h*1^3 - a^5*b*c*1^3*m^2 + a^2*b^5*d*1*m^3 + a^2*b^5*e*k*m^3 - 2*a^2*b^5*f*j*m^3 + 2*a^2*c^5*e^3*j*m - 4*a^2*c^5*e^3*k*1 - 4*a^4*c^3*e*k*1^3 + 2*a^4*c^3*f*j*1^3 \\
& + 2*b^3*c^4*d^3*j*m - b^3*c^4*d^3*k*1 - 2*a^3*c^4*g^3*j*m - 2*a^3*c^4*g^3*k*1 - 2*a^4*c^3*f*k^3*m - 2*a^4*c^3*g*k^3*1 - a^3*b^4*g*1*m^3 - a^3*b^4*h*k*m^3 - 4*a^5*c^2*g*1*m^3 - 4*a^5*c^2*h*k*m^3 + 2*a^4*c^3*j^3*k*1 + a^4*b^3*k*1*m^3 - 2*a^5*c^2*j*1^3*m + a*b^2*c^4*f^2*h^3 + 3*a*b^2*c^4*f^3*j^2 - a*b^3*c^3*f^2*j^3 - 4*a^2*b*c^4*f^2*j^3 + 2*a^2*b^2*c^3*f*j^4 + a^2*b^3*c^2*e*k^4 + 3*a^3*b^2*c^2*d*1^4 - 3*b^2*c^5*d*e^2*h^2 + 3*a*b^2*c^4*d^3*m^2 + a*b^4*c^2*f^2*k^3 + a*b^3*c^3*e^3*m^2 - 2*a^2*b*c^4*e^3*m^2 - 3*a^3*b*c^3*f^2*1^3 + 3*a*b^4*c^2*f^3*m^2 - 5*a^2*b^4*c*f^2*m^3 - 6*a^2*c^5*d*e^2*1^2 - 3*a^2*c^5*d*f^2*k^2 - 3*a^2*c^5*d*g^2*j^2 + 3*a^2*c^5*f*g^2*h^2 - a^3*b^2*c^2*h*k^4 + 3*b^3*c^4*d^2*e*k^2 + 3*a^2*c^5*d^2*f*1^2 + 3*a^2*c^5*e^2*f*k^2 + a^3*b*c^3*g^3*m^2 - 3*b^4*c^3*d*e^2*1^2 + 6*a^2*c^5*d^2*h*k^2 - 3*a^2*c^5*e^2*h*j^2 + 3*b^2*c^5*d^2*e^2*m - 3*a^2*c^5*f^2*g^2*k - a^3*b^3*c*j^2*1^3 + 3*a^3*c^4*d*g^2*m^2 + 2*a^4*b*c^2*j^2*1^3 - 3*a^2*c^5*d^2*h^2*m - 3*a^2*c^5*d^2*j^2*k - 3*a^2*c^5*e^2*g^2*m + 3*a^3*b^2*c^2*j^4*m - 3*a^3*b^3*c*j^3*m^2 + 3*a^3*c^4*d*j^2*k^2 + 3*a^3*c^4*f*g^2*1^2 + 3*a^3*c^4*f*h^2*k^2 + 3*a^4*b^2*c*j^2*m^3 + 3*a^3*c^4*e^2*h*m^2 + 3*a^3*c^4*f^2*h*1^2 + 3*a^3*c^4*d^2*k*m^2 + 6*a^3*c^4*e^2*k*1^2 - 3*a^3*c^4*g^2*h^2*m + 3*a^3*c^4*g^2*j^2*k - 3*a^4*c^3*d*k^2*m^2 - 3*a^3*c^4*d^2*1^2*m - 3*a^3*c^4*e^2*k^2*m - 6*a^3*c^4*f^2*j^2*m + 6*a^4*c^3*f*j^2*m^2 + 3*a^4*c^3*f*k^2*1^2 - 3*a^4*c^3*h*j^2*1^2 - 3*a^4*c^3*g^2*k*m^2 - 3*a^4*c^3*g^2*1^2*m - 3*a^4*c^3*h^2*k^2*m + 3*a^5*c^2*h*1^2*m^2 - 3*a^5*c^2*k^2*1^2*m + 9*a*b^2*c^4*d*e^2*1^2 + 3*a*b^2*c^4*d*f^2*k^2 - 9*a^2*b^2*c^3*d*e*1^3 + 10*a^2*b^3*c^2*d*e*m^3 - 3*a*b^2*c^4*d^2*h*k^2 - 3*a*b^3*c^3*e*f^2*1^2 + 3*a*b^3*c^3*e*g^2*k^2 + 6*a^2*b*c^4*e*f^2*1^2 - 3*a^2*b*c^4*e*g^2*k^2 + 3*a^2*b^2*c^3*d*h*k^3 + 3*a*b^2*c^4*f^2*g^2*k + 3*a*b^3*c^3*d^2*g*m^2 + 3*a*b^3*c^3*e^2*g*1^2 - 3*a*b^3*c^3*f^2*g*k^2 - 3*a*b^4*c^2*d*h^2*1^2 - 6*a^2*b*c^4*d^2*g*m^2 - 6*a^2*b*c^4*e^2*g*1^2 + 6*a^2*b*c^4*f^2*g*k^2 - a^2*b^3*c^2*d*h*1^3 - 4*a^2*b^3*c^2*e*g*1^3 + 3*a*b^2*c^4*d^2*h^2*m + 3*a*b^2*c^4*e^2*g^2*m - 3*a^2*b*c^4*g^2*h^2*j - a^2*b^2*c^3*g*h*j^3 - 6*a^3*b^2*c^2*d*h*m^3 - 6*a^3*b^2*c^2*e*g*m^3 - 3*a*b^3*c^3*f^2*h^2*1 + 3*a*b^4*c^2*f^2*h*1^2 - 3*a^2*b*c^4*d^2*j*1^2 - 3*a^2*b*c^4*e^2*j*k^2 + 6*a^2*b*c^4*f^2*h^2*1 - a^2*b^2*c^3*d*j^3*1 - a^2*b^2*c^3*e*j^3*k + a^2*b^3*c^2*g*h*k^3 + 3*a^3*b*c^3*e*h^2*m^2 - 3*a^2*b^2*c^3*g*h^3*1 + a^2*b^3*c^2*d*k^3*1 - 2*a^2*b^3*c^2*f*j*k^3 - 3*a^3*b*c^3*e*j^2*1^2 - 3*a^3*b*c^3*g*h^2*1^2 - 3*a^3*b*c^3*g*j^2*k^2 + 3*a^3*b^2*c^2*e*k*1^3 - 6*a^3*b^2*c^2*f*j*1^3 + 3*a*b^4*c^2*f^2*j^2*m - 6*a^2*b^3*c^2*f*j^3*m + 6*a^2*b^4*c*f*j^2*m^2 - 6*a^3*b*c^3*f^2*j*m^2 - 3*a^3*b*c^3*g^2*j*1^2 - 3*a^3*b*c^3*h^2*j*k^2 + 3*a^3*b*c^3*e^2*1*m^2 + 3*a^3*b*c^3*g^2*k^2*1 - 3*a^3*b*c^3*h^2*j^2*1 + 2*a^3*b^2*c^2*f*k^3*m - a^3*b^2*c^2*g*k^3*1 - 3*a^3*b^2*c^2*j^3*k*1 - 3*a^4*b*c^2*j*k^2*1^2 + 3*a^4*b^2*c*k^2*1^2*m + a*b*c^5*d*e*h^3 + a*b*c^5*d*g^3*h + 3*a*b*c^5*f^3*g*h - 3*b*c^6*d*e^2*f*g + 3*a*b*c^5*d*f^3*1 + 3*a*b*c^5*e*f^3*k - 6*a*b^5*c*d*e*m^3 - 3*b*c^6*d^2*e*f*h + 6*a*c^6*d*e*f^2*j + 2*a*b*c^5*e^3*f*m + 2*a*b*c^5*e^3*g*1 - a*b*c^5*e^3*h*k + a*b^5*c*d*h*1^3 + a*b^5*c
\end{aligned}$$

$$\begin{aligned}
& *e*g*1^3 - 6*a*c^6*d*e^2*f*k - 6*a*c^6*d^2*e*f*1 + 6*a*c^6*d^2*e*g*k - 6*a*c^6*d^2*f*g*j - 4*a*b*c^5*d^3*j*m + 2*a*b*c^5*d^3*k*1 - 3*b^6*c*d*e*j*m^2 + \\
& a^5*b*c*k*1*m^3 - 3*a^2*b^2*c^3*d*g^2*m^2 + 6*a^2*b^2*c^3*d*h^2*1^2 - 3*a^2*b^2*c^3*e^2*h*m^2 - 9*a^2*b^2*c^3*f^2*h*1^2 - 3*a^2*b^2*c^3*g^2*h*k^2 + 3 \\
& *a^2*b^3*c^2*g*h^2*1^2 - 3*a^2*b^2*c^3*d^2*k*m^2 - 3*a^2*b^2*c^3*e^2*k*1^2 + 3*a^2*b^2*c^3*g^2*h^2*m + 3*a^2*b^2*c^3*d^2*1^2*m + 3*a^2*b^2*c^3*e^2*k^2 \\
& *m + 3*a^2*b^2*c^3*f^2*j^2*m + 6*a^2*b^3*c^2*f^2*j*m^2 - 9*a^3*b^2*c^2*f*j^2 \\
& *m^2 + 3*a^3*b^2*c^2*h*j^2*1^2 - 3*a^3*b^2*c^2*h^2*k*1^2 + 3*a^3*b^2*c^2*g^2*1^2*m + 3*a^3*b^2*c^2*h^2*k^2*m - 3*a*b*c^5*e*f^2*h^2 + 3*a*b^2*c^4*d*e* \\
& j^3 - 6*a*b*c^5*d^2*e*k^2 + 3*a*b*c^5*e^2*g*h^2 - a*b^2*c^4*e*g*h^3 - 4*a*b^3*c^3*d*e*k^3 + 6*a^2*b*c^4*d*e*k^3 + 3*a*b*c^5*d^2*g*j^2 + 5*a*b^4*c^2*d* \\
& e*1^3 - 3*a*b*c^5*d^2*h^2*j - 3*a*b*c^5*e^2*g^2*j + a*b^3*c^3*d*h*j^3 + a*b^3*c^3*e*g*j^3 - 2*a^2*b*c^4*d*h*j^3 - 2*a^2*b*c^4*e*g*j^3 - 7*a^3*b*c^3*d* \\
& e*m^3 - 3*a*b*c^5*d^2*g^2*1 - 3*a*b*c^5*e^2*f^2*1 - 3*a*b^2*c^4*e*g^3*k - a \\
& *b^4*c^2*d*h*k^3 - a*b^4*c^2*e*g*k^3 + 3*a*b^3*c^3*d*h^3*1 - 5*a^2*b*c^4*d* \\
& h^3*1 + a^2*b*c^4*e*h^3*k - 2*a^2*b*c^4*f*h^3*j - 3*a^3*b*c^3*d*h*1^3 + 6*a^3*b*c^3*e*g*1^3 - 3*b^2*c^5*d*e*f^2*j + 3*b^3*c^4*d*e*f*j^2 - 3*a*b^2*c^4* \\
& f^3*g*1 - 3*a*b^2*c^4*f^3*h*k + 5*a^2*b^4*c*d*h*m^3 + 5*a^2*b^4*c*e*g*m^3 - \\
& 6*a^2*c^5*d*e*g*k^2 + 3*b^2*c^5*d*e^2*f*k + 3*b^2*c^5*d*e^2*g*j + 3*a^2*b* \\
& c^4*g^3*h*k + a^3*b*c^3*g*h*k^3 + 3*b^2*c^5*d^2*e*f*1 - 6*b^2*c^5*d^2*e*g*k \\
& + 3*b^2*c^5*d^2*e*h*j + 3*b^3*c^4*d*e*g^2*k - 3*b^4*c^3*d*e*g*k^2 - a^2*b^4 \\
& *c*g*h*1^3 - 6*a^2*c^5*d*f*h^2*k + 6*a^2*c^5*e*f*h^2*j - 2*a^3*b*c^3*d*k^3 \\
& *1 + 4*a^3*b*c^3*f*j*k^3 + 3*b^3*c^4*d*e*f^2*m + 3*b^5*c^2*d*e*f*m^2 - 2*a* \\
& b^2*c^4*e^3*j*m + a*b^2*c^4*e^3*k*1 - a^2*b^4*c*e*k*1^3 + 2*a^2*b^4*c*f*j*1 \\
& ^3 - 6*a^2*c^5*d*f*g^2*m - 6*a^2*c^5*e*f*g^2*1 - 4*a^3*b^3*c*g*h*m^3 + 3*a^4 \\
& *b*c^2*g*h*m^3 - 3*b^3*c^4*d*e^2*g*m + 6*b^3*c^4*d*e^2*h*1 - 3*b^4*c^3*d*e \\
& *h^2*1 + 3*b^5*c^2*d*e*h*1^2 - 6*a*b^3*c^3*f^3*j*m + 3*a*b^3*c^3*f^3*k*1 - \\
& 3*a*b^5*c*f^2*j*m^2 + 8*a^2*b*c^4*f^3*j*m - 7*a^2*b*c^4*f^3*k*1 + 12*a^2*c^5 \\
& *d*f^2*h*m + 12*a^2*c^5*e*f^2*g*m - 6*a^2*c^5*e*f^2*h*1 - 6*a^2*c^5*f^2*g* \\
& h*j + 4*a^3*b*c^3*f*j^3*m + 4*a^3*b*c^3*g*j^3*1 + 4*a^3*b*c^3*h*j^3*k - 4*a^3 \\
& *b^3*c*d*1*m^3 - 4*a^3*b^3*c*e*k*m^3 + 2*a^3*b^3*c*f*j*m^3 - 12*a^3*c^4*d \\
& *f*h*m^2 - 12*a^3*c^4*e*f*g*m^2 + 3*a^4*b*c^2*d*1*m^3 + 3*a^4*b*c^2*e*k*m^3 \\
& - 3*b^3*c^4*d*e^2*j*k - 3*b^3*c^4*d^2*e*h*m - 6*a^2*c^5*d*f^2*j*1 - 6*a^2* \\
& c^5*e*f^2*j*k - 6*a^2*c^5*e^2*f*h*m + 6*a^2*c^5*e^2*g*h*1 + 6*a^3*c^4*d*e*j \\
& *m^2 - 6*a^3*c^4*e*g*h*1^2 - 3*b^3*c^4*d^2*e*j*1 + 6*a^2*c^5*d*e^2*k*m + 6* \\
& a^2*c^5*e^2*f*j*1 + 3*a^3*b*c^3*h^3*k*1 - 2*a^3*b^3*c*f*1^3*m + a^3*b^3*c*h \\
& *k*1^3 - 6*a^3*c^4*d*f*k*1^2 - 6*a^3*c^4*e*f*j*1^2 + 4*a^4*b*c^2*f*1^3*m + \\
& a^4*b*c^2*h*k*1^3 + 3*b^5*c^2*d*e*j^2*m + 6*a^2*c^5*d^2*e*1*m - 6*a^2*c^5*d^2 \\
& *f*k*m + 6*a^2*c^5*d^2*g*j*m - 6*a^2*c^5*d^2*g*k*1 + 6*a^3*c^4*d*f*k^2*m \\
& + 6*a^3*c^4*d*g*k^2*1 - 6*a^3*c^4*e*f*k^2*1 - 6*a^3*c^4*f*g*j*k^2 + 3*a^4*b \\
& ^2*c*g*1*m^3 + 3*a^4*b^2*c*h*k*m^3 + 3*b^4*c^3*d*e^2*k*m + 6*a^3*c^4*e*h*j^2 \\
& *1 + 3*b^4*c^3*d^2*e*1*m + 6*a^3*c^4*d*h^2*k*m - 6*a^3*c^4*e*h^2*j*m - 6*a^3 \\
& *c^4*f*h^2*j*1 - 2*a^4*b*c^2*j*k^3*m + 6*a^3*c^4*e*g^2*1*m + 6*a^3*c^4*f* \\
& g^2*k*m + 2*a^4*b^2*c*j*1^3*m - 12*a^3*c^4*f^2*g*1*m - 12*a^3*c^4*f^2*h*k*m \\
& - 6*a^4*c^3*e*h*1*m^2 + 12*a^4*c^3*f*g*1*m^2 + 12*a^4*c^3*f*h*k*m^2 - 6*a^4
\end{aligned}$$

$$\begin{aligned}
& 4c^3g^*h^*j^*m^2 + 6a^3c^4f^2j^*k^*l - 6a^4c^3d^*j^*l^*m^2 - 6a^4c^3e^*j^* \\
& *k^*m^2 - 6a^4c^3f^*h^*l^2m - 6a^3c^4e^2j^*l^*m + 6a^4c^3d^*k^*l^2m + \\
& 6a^4c^3e^*j^*l^2m + 6a^4c^3e^*k^2l^*m + 6a^4c^3g^*j^*k^2m + 6a^4c^3 \\
& *h^2j^*l^*m + 6a^5c^2j^*k^*l^*m^2 + 6a^*b^2c^4d^*e^*g^*k^2 - 3a^*b^2c^4d^*f^* \\
& h^*j^2 - 3a^*b^2c^4e^*f^*g^*j^2 - 15a^*b^3c^3d^*e^*f^*m^2 + 15a^2b^*c^4d^*e^*f^* \\
& *m^2 + 3a^*b^2c^4d^*e^*h^2l + 3a^*b^2c^4d^*f^*h^2k + 3a^*b^2c^4d^*g^*h^2* \\
& j - 9a^*b^3c^3d^*e^*h^l^2 + 9a^2b^*c^4d^*e^*h^l^2 - 3a^2b^*c^4d^*f^*g^*l^2 - \\
& 3a^*b^2c^4d^*g^2h^*k + 3a^*b^2c^4e^*f^*g^2l + 3a^*b^2c^4e^*g^2h^*j + 3a^* \\
& b^3c^3d^*g^*h^*k^2 - 3a^2b^*c^4d^*g^*h^*k^2 - 3a^2b^*c^4e^*f^*h^*k^2 - 6a^*b^ \\
& ^2c^4d^*f^2h^*m - 6a^*b^2c^4e^*f^2g^*m + 6a^*b^2c^4e^*f^2h^*l - 3a^*b^2c^ \\
& ^4f^2g^*h^*j - 3a^*b^4c^2d^*f^*h^*m^2 - 3a^*b^4c^2e^*f^*g^*m^2 - 6a^2b^*c^4 \\
& *d^*f^*j^*k^2 + 9a^2b^*c^4f^*g^*h^*j^2 - 3a^*b^2c^4d^*f^2j^*l - 3a^*b^2c^4e^* \\
& f^2j^*k - 6a^*b^2c^4e^2g^*h^*l - 12a^*b^3c^3d^*e^*j^2m - 3a^*b^3c^3d^*g^* \\
& h^2m + 3a^*b^3c^3e^*g^*h^2l + 15a^*b^4c^2d^*e^*j^*m^2 - 3a^*b^4c^2e^*g^*h^* \\
& l^2 + 3a^2b^*c^4d^*e^*j^2m + 9a^2b^*c^4d^*d^*f^*j^2l + 3a^2b^*c^4d^*g^*h^2m \\
& + 9a^2b^*c^4e^*f^*j^2k - 3a^2b^*c^4f^*g^*h^2k - 9a^*b^2c^4d^*e^2k^*m + \\
& 3a^*b^2c^4e^2g^*j^*k - 3a^*b^3c^3d^*h^2j^*k - 3a^*b^3c^3e^*g^2h^*m + 6a^ \\
& ^2b^*c^4d^*h^2j^*k + 3a^2b^*c^4e^*g^2h^*m - 3a^2b^*c^4f^*g^2h^*l - 9a^*b^ \\
& ^2c^4d^2e^*l^*m - 6a^*b^2c^4d^2g^*j^*m + 3a^*b^2c^4d^2g^*k^*l + 3a^*b^2c^ \\
& ^4d^2h^*j^*l - 3a^*b^3c^3e^*g^2j^*l + 3a^*b^3c^3f^2g^*h^*m + 6a^2b^*c^4d^ \\
& *g^2j^*m + 6a^2b^*c^4e^*g^2j^*l - 6a^2b^*c^4f^*g^2j^*k - 3a^2b^*c^4f^2 \\
& *g^*h^*m - 3a^3b^*c^3f^*g^*h^*m^2 + 3a^*b^3c^3d^*f^2l^*m + 3a^*b^3c^3e^*f^2* \\
& k^*m + 3a^*b^3c^3f^2g^*j^*l + 3a^*b^3c^3f^2h^*j^*k - 3a^*b^4c^2d^*h^*j^2m \\
& - 3a^*b^4c^2e^*g^*j^2m - 3a^2b^*c^4d^*d^*f^2l^*m - 3a^2b^*c^4e^*f^2k^*m - \\
& 3a^3b^*c^3d^*f^*l^*m^2 + 6a^3b^*c^3d^*g^*k^*m^2 + 6a^3b^*c^3d^*h^*j^*m^2 - 3a^ \\
& ^3b^*c^3e^*f^*k^*m^2 + 6a^3b^*c^3e^*g^*j^*m^2 - 3a^*b^3c^3e^2g^*k^*m + 3a^*b^ \\
& ^4c^2d^*h^2k^*m + 3a^2b^*c^4e^2g^*k^*m + 6a^2b^*c^4e^2h^*j^*m + 3a^2b^*c^ \\
& ^4e^2h^*k^*l + 3a^3b^*c^3d^*g^*l^2m - 6a^3b^*c^3e^*f^*l^2m - 3a^3b^*c^3e^ \\
& *h^*k^*l^2 - 3a^3b^*c^3f^*g^*k^*l^2 + 12a^3b^*c^3f^*h^*j^*l^2 - 3a^*b^3c^3d^ \\
& ^2h^*l^*m + 3a^*b^4c^2e^*g^2l^*m + 3a^2b^*c^4d^2h^*l^*m + 6a^3b^*c^3d^*j^*k^ \\
& *l^2 + 3a^3b^*c^3e^*h^*k^2m - 6a^3b^*c^3f^*g^*k^2m - 3a^3b^*c^3f^*h^*k^2* \\
& l - 3a^*b^4c^2f^2g^*l^*m - 3a^*b^4c^2f^2h^*k^*m + 6a^2b^*c^4d^2j^*k^*m - \\
& 3a^2b^4c^*g^*h^*j^*m^2 + 6a^3b^*c^3e^*j^*k^2l - 3a^3b^*c^3g^*h^*j^2m - 3a^ \\
& *b^4c^2f^2j^*k^*l - 3a^2b^4c^*d^*j^*l^*m^2 - 3a^2b^4c^*e^*j^*k^*m^2 - 3a^3 \\
& *b^*c^3d^*j^2l^*m - 3a^3b^*c^3e^*j^2k^*m - 6a^3b^*c^3f^*h^2l^*m - 9a^3b^* \\
& c^3f^*j^2k^*l + 3a^3b^*c^3g^*h^2k^*m + 3a^2b^4c^*d^*k^*l^2m + 3a^3b^*c^3 \\
& *g^2h^*l^*m + 3a^2b^4c^*e^*k^2l^*m + 15a^3b^*c^3f^2k^*l^*m + 6a^3b^3c^*f^ \\
& *k^*l^*m^2 + 3a^3b^3c^*g^*j^*l^*m^2 + 3a^3b^3c^*h^*j^*k^*m^2 - 9a^4b^*c^2f^*k^* \\
& l^*m^2 - 3a^3b^3c^*g^*k^*l^2m + 3a^4b^*c^2g^*k^*l^2m - 6a^4b^*c^2h^*j^*l^2 \\
& *m - 3a^3b^3c^*h^*k^2l^*m + 3a^4b^*c^2h^*k^2l^*m + 3a^3b^3c^*j^2k^*l^*m \\
& + 3a^4b^*c^2j^2k^*l^*m - 9a^4b^2c^*j^*k^*l^*m^2 + 3b^6c^*d^*e^*k^*l^*m + 12a^ \\
& ^2b^2c^3d^*f^*h^*m^2 + 12a^2b^2c^3e^*f^*g^*m^2 - 15a^2b^2c^3d^*e^*j^*m^2 + \\
& 6a^2b^2c^3e^*g^*h^*l^2 + 3a^2b^2c^3d^*f^*k^*l^2 + 3a^2b^2c^3d^*g^*j^*l^ \\
& ^2 + 6a^2b^2c^3e^*f^*j^*l^2 - 3a^2b^2c^3d^*g^*k^2l + 3a^2b^2c^3e^*f^*k^ \\
& ^2l + 3a^2b^2c^3e^*h^*j^*k^2 + 6a^2b^2c^3f^*g^*j^*k^2 + 3a^2b^3c^2f^*
\end{aligned}$$

$$\begin{aligned}
& g^h m^2 + 9a^2 b^2 c^3 d h^j m + 9a^2 b^2 c^3 e g^j m - 6a^2 b^2 c^3 \\
& f g^j m - 6a^2 b^2 c^3 f h^j m + 3a^2 b^3 c^2 d f m^2 - 12a^2 b^3 \\
& c^2 d h^j m^2 + 3a^2 b^3 c^2 e f k m^2 - 12a^2 b^3 c^2 e g^j m^2 - 9a^2 \\
& b^2 c^3 d h^2 k m - 3a^2 b^2 c^3 e h^2 k m + 6a^2 b^2 c^3 f h^2 j m + 3a \\
& a^2 b^2 c^3 g h^2 j k - 3a^2 b^3 c^2 d g m^2 + 3a^2 b^3 c^2 e h k m^2 - \\
& 6a^2 b^3 c^2 f h j m^2 - 9a^2 b^2 c^3 e g^2 m + 3a^2 b^2 c^3 g^2 h j m \\
& l - 3a^2 b^3 c^2 d j k m^2 - 3a^2 b^3 c^2 e h k^2 m + 9a^2 b^2 c^3 f^2 g \\
& m + 9a^2 b^2 c^3 f^2 h k m - 3a^2 b^3 c^2 e j k^2 m + 3a^2 b^3 c^2 g h \\
& h^j m - 9a^3 b^2 c^2 f g m^2 - 9a^3 b^2 c^2 f h k m^2 + 9a^3 b^2 c^2 \\
& g h^j m^2 + 3a^2 b^2 c^3 f^2 j k m + 3a^2 b^3 c^2 d j^2 m + 3a^2 b^3 c \\
& c^2 e j^2 k m + 6a^2 b^3 c^2 f j^2 k m - 3a^2 b^3 c^2 g h^2 k m + 9a^3 b \\
& ^2 c^2 d j m^2 + 9a^3 b^2 c^2 e j k m^2 + 6a^3 b^2 c^2 f h m^2 - 3a^ \\
& 2 b^3 c^2 g^2 h m - 9a^3 b^2 c^2 d k m^2 + 3a^3 b^2 c^2 g j k m^2 - 9 \\
& a^3 b^2 c^2 e k^2 m + 3a^3 b^2 c^2 h j k^2 m - 12a^2 b^3 c^2 f^2 k m \\
& - 6a^3 b^2 c^2 g j^2 m - 6a^3 b^2 c^2 h j^2 k m - 9a^3 b^2 c^2 d e f j^2 \\
& - 3a^3 b^2 c^2 d f g h^2 - 3a^3 b^2 c^2 e f g^2 h - 9a^3 b^2 c^2 d e f^2 m - 6a^3 b^2 c \\
& ^2 d f^2 g k + 6a^3 b^2 c^2 d f^2 h j + 6a^3 b^2 c^2 e f^2 g j + 3a^3 b^2 c^2 d e^2 \\
& g m - 9a^3 b^2 c^2 d e^2 h m - 3a^3 b^2 c^2 e^2 f g k + 3b^2 c^5 d e f g h + 6a \\
& ^3 b^2 c^5 d e^2 j k + 3a^3 b^2 c^5 d^2 e h m + 6a^3 b^2 c^5 d^2 f g m - 3a^3 b^2 c^5 d^ \\
& 2 f h m + 3a^3 b^2 c^5 d^2 g h k + 6a^3 b^2 c^5 d^2 e j m - 3b^3 c^4 d e f g m - \\
& 3b^3 c^4 d e f h k - 3b^3 c^4 d e g h j + 3a^3 b^5 c^4 d h j m^2 + 3a^3 b^5 c \\
& c e g^j m^2 - 12a^2 c^5 d e f j m + 12a^2 c^5 d e f k m + 12a^2 c^5 d f f \\
& g j k + 3b^4 c^3 d e g h m - 6b^4 c^3 d e f j m + 3b^4 c^3 d e f k m + 3 \\
& b^4 c^3 d e g j m + 3b^4 c^3 d e h j k - 3b^5 c^2 d e g m - 3b^5 c^2 d \\
& e h k m - 3b^5 c^2 d e j k m + 3a^3 b^5 c^2 f^2 k m + 12a^3 c^4 e f h m \\
& + 12a^3 c^4 f g h j m - 12a^3 c^4 d e k m + 12a^3 c^4 d f j m - 12 \\
& a^3 c^4 d g j k m + 12a^3 c^4 e f j k m - 12a^4 c^3 f j k m - 3a^3 b^2 c \\
& ^4 d e g h m + 3a^3 b^2 c^4 d f g h m + 3a^3 b^2 c^4 e f g h k + 24a^3 b^2 c^4 \\
& d e f j m - 12a^3 b^2 c^4 d e f k m - 6a^3 b^2 c^4 d e g j m - 6a^3 b^2 c^4 d \\
& e h j k + 9a^3 b^3 c^3 d e g m + 9a^3 b^3 c^3 d e h k m + 6a^3 b^3 c^3 d f \\
& h j m - 3a^3 b^3 c^3 d f h k m - 3a^3 b^3 c^3 d g h j m + 6a^3 b^3 c^3 e f g j \\
& m - 3a^3 b^3 c^3 e f g k m - 3a^3 b^3 c^3 e g h j k - 6a^2 b^3 c^4 d e g m \\
& - 6a^2 b^3 c^4 d e h k m - 12a^2 b^3 c^4 d f h j m + 6a^2 b^3 c^4 d f h k m - \\
& 12a^2 b^3 c^4 e f g j m + 6a^2 b^3 c^4 e f g k m - 12a^2 b^3 c^4 e f h j m + \\
& 12a^2 b^3 c^3 d e j k m - 12a^2 b^3 c^4 d e j k m + 3a^3 b^4 c^2 d g h m + 3 \\
& a^3 b^4 c^2 e g h k m - 15a^3 b^4 c^2 d e k m + 3a^3 b^4 c^2 d h j k m + 3a \\
& ^3 b^4 c^2 e g j k m - 6a^3 b^3 c^3 d h k m - 6a^3 b^3 c^3 e g k m + 3a^2 b \\
& ^4 c^3 g h k m - 6a^2 b^4 c^3 f j k m - 3a^2 b^2 c^3 d g h m - 3a^2 b \\
& ^2 c^3 e g h k m - 12a^2 b^2 c^3 f g h j m + 3a^2 b^2 c^3 f g h k m + 24a \\
& ^2 b^2 c^3 d e k m - 12a^2 b^2 c^3 d f j m - 6a^2 b^2 c^3 d h j k m \\
& - 12a^2 b^2 c^3 e f j k m - 6a^2 b^2 c^3 e g j k m + 9a^2 b^3 c^2 d h k m \\
& l m + 9a^2 b^3 c^2 e g k m + 6a^2 b^3 c^2 f g j m + 6a^2 b^3 c^2 f h \\
& j k m - 3a^2 b^3 c^2 g h j k m - 3a^3 b^2 c^2 g h k m + 12a^3 b^2 c^2 \\
& f j k m + 6a^3 b^2 c^2 d e f g m + 6a^3 b^2 c^2 d e f h k - 3a^3 b^5 c^4 d h k m \\
& m - 3a^3 b^5 c^4 e g k m) / c^3 - \text{root}(34992a^4 b^2 c^8 z^6 - 8748a^3 b^4 c^
\end{aligned}$$

$$\begin{aligned}
& 7z^6 + 729a^2b^6c^6z^6 - 46656a^5c^9z^6 + 34992a^4b^3c^6mz^5 - \\
& 8748a^3b^5c^5mz^5 + 729a^2b^7c^4mz^5 - 34992a^4b^2c^7jz^5 + \\
& 8748a^3b^4c^6jz^5 - 729a^2b^6c^5jz^5 - 46656a^5b^6c^7mz^5 + 4 \\
& 6656a^5c^8jz^5 + 34992a^5b^6c^6jmz^4 - 11664a^5b^6c^6k^1z^4 + 38 \\
& 88a^4b^6c^7f^1jz^4 + 3888a^4b^6c^7e^1k^1z^4 + 3888a^4b^6c^7d^1l^1z^4 + 38 \\
& 88a^4b^6c^7g^1h^1z^4 + 3888a^3b^6c^8d^1e^1z^4 + 243a^2b^5c^6d^1e^1z^4 - 252 \\
& 72a^4b^3c^5jmz^4 + 9720a^4b^3c^5k^1l^1z^4 + 6075a^3b^5c^4jmz^4 \\
& 4 - 2673a^3b^5c^4k^1l^1z^4 - 486a^2b^7c^3jmz^4 + 243a^2b^7c^3k^1 \\
& l^1z^4 - 7776a^4b^2c^6h^1k^1z^4 - 7776a^4b^2c^6g^1l^1z^4 - 7776a^4b^2c^6 \\
& f^1m^1z^4 + 2430a^3b^4c^5h^1k^1z^4 + 2430a^3b^4c^5g^1l^1z^4 + 2430a^3 \\
& b^4c^5f^1m^1z^4 - 243a^2b^6c^4h^1k^1z^4 - 243a^2b^6c^4g^1l^1z^4 - 243 \\
& a^2b^6c^4f^1m^1z^4 - 1944a^3b^3c^6f^1jz^4 - 1944a^3b^3c^6e^1k^1z^4 \\
& - 1944a^3b^3c^6d^1l^1z^4 + 243a^2b^5c^5f^1jz^4 + 243a^2b^5c^5e^1k^1 \\
& z^4 + 243a^2b^5c^5d^1l^1z^4 - 1944a^3b^3c^6g^1h^1z^4 + 243a^2b^5c^5g^1 \\
& h^1z^4 + 3888a^3b^2c^7e^1g^1z^4 + 3888a^3b^2c^7d^1h^1z^4 - 486a^2b^4 \\
& c^6e^1g^1z^4 - 486a^2b^4c^6d^1h^1z^4 - 1944a^2b^3c^7d^1e^1z^4 + 7776a^5 \\
& c^7h^1k^1z^4 + 7776a^5c^7g^1l^1z^4 + 7776a^5c^7f^1m^1z^4 - 7776a^4c^8 \\
& e^1g^1z^4 - 7776a^4c^8d^1h^1z^4 - 13608a^5b^2c^5m^2z^4 + 11421a^4b^4c^4 \\
& m^2z^4 - 2916a^3b^6c^3m^2z^4 + 243a^2b^8c^2m^2z^4 + 13608a^4 \\
& b^2c^6j^2z^4 - 3159a^3b^4c^5j^2z^4 + 243a^2b^6c^4j^2z^4 + 19 \\
& 44a^3b^2c^7f^2z^4 - 243a^2b^4c^6f^2z^4 - 3888a^6c^6m^2z^4 - 1 \\
& 9440a^5c^7j^2z^4 - 3888a^4c^8f^2z^4 + 3078a^4b^4c^3k^1l^1mz^3 - \\
& 2592a^5b^2c^4k^1l^1mz^3 - 891a^3b^6c^2k^1l^1mz^3 - 4536a^4b^3c^4j \\
& k^1l^1z^3 + 1053a^3b^5c^3j^1k^1l^1z^3 - 81a^2b^7c^2j^1k^1l^1z^3 - 2592a^4 \\
& b^3c^4h^1k^1mz^3 - 2592a^4b^3c^4g^1l^1mz^3 + 810a^3b^5c^3h^1k^1mz^3 \\
& + 810a^3b^5c^3g^1l^1mz^3 - 81a^2b^7c^2h^1k^1mz^3 - 81a^2b^7c^2g^1 \\
& l^1mz^3 + 7776a^4b^2c^5f^1j^1mz^3 + 3888a^4b^2c^5h^1j^1k^1z^3 + 3888a^4 \\
& b^2c^5g^1j^1l^1z^3 - 3888a^4b^2c^5f^1k^1l^1z^3 - 2916a^3b^4c^4f^1j^1mz^3 \\
& + 1458a^3b^4c^4f^1k^1l^1z^3 - 972a^3b^4c^4h^1j^1k^1z^3 - 972a^3b^4c^4 \\
& g^1j^1l^1z^3 - 486a^3b^4c^4e^1k^1mz^3 - 486a^3b^4c^4d^1l^1mz^3 + 324a^2 \\
& b^6c^3f^1j^1mz^3 - 162a^2b^6c^3f^1k^1l^1z^3 + 81a^2b^6c^3h^1j^1k^1z^3 \\
& + 81a^2b^6c^3g^1j^1l^1z^3 + 81a^2b^6c^3e^1k^1mz^3 + 81a^2b^6c^3d^1 \\
& l^1mz^3 - 486a^3b^4c^4g^1h^1mz^3 + 81a^2b^6c^3g^1h^1mz^3 + 648a^3b^3 \\
& c^5e^1j^1k^1z^3 + 648a^3b^3c^5d^1j^1l^1z^3 - 81a^2b^5c^4e^1j^1k^1z^3 - 81 \\
& a^2b^5c^4d^1j^1l^1z^3 + 2592a^3b^3c^5e^1g^1mz^3 + 2592a^3b^3c^5d^1h^1 \\
& mz^3 - 1296a^3b^3c^5f^1h^1k^1z^3 - 1296a^3b^3c^5f^1g^1l^1z^3 - 1296a^3b^3 \\
& c^5e^1h^1l^1z^3 + 648a^3b^3c^5g^1h^1j^1z^3 - 324a^2b^5c^4e^1g^1mz^3 - \\
& 324a^2b^5c^4d^1h^1mz^3 + 162a^2b^5c^4f^1h^1k^1z^3 + 162a^2b^5c^4f^1g^1 \\
& l^1z^3 + 162a^2b^5c^4e^1h^1l^1z^3 - 81a^2b^5c^4g^1h^1j^1z^3 + 5184a^3b^2 \\
& c^6d^1e^1mz^3 - 2592a^3b^2c^6e^1g^1j^1z^3 - 2592a^3b^2c^6d^1h^1j^1z^3 \\
& - 2106a^2b^4c^5d^1e^1mz^3 + 1296a^3b^2c^6e^1f^1k^1z^3 + 1296a^3b^2c^6 \\
& d^1g^1k^1z^3 + 1296a^3b^2c^6d^1f^1l^1z^3 + 324a^2b^4c^5e^1g^1j^1z^3 + 324a^2 \\
& b^4c^5d^1h^1j^1z^3 - 162a^2b^4c^5e^1f^1k^1z^3 - 162a^2b^4c^5d^1g^1k^1z^3 \\
& - 162a^2b^4c^5d^1f^1l^1z^3 + 1296a^3b^2c^6f^1g^1h^1z^3 - 162a^2b^4c^5 \\
& f^1g^1h^1z^3 + 1944a^2b^3c^6d^1e^1j^1z^3 - 1296a^2b^2c^7d^1e^1f^1z^3 + 81
\end{aligned}$$

$$\begin{aligned}
& *a^2*b^8*c*k*1*m*z^3 + 6480*a^5*b*c^5*j*k*1*z^3 + 2592*a^5*b*c^5*h*k*m*z^3 \\
& + 2592*a^5*b*c^5*g*1*m*z^3 - 1296*a^4*b*c^6*e*j*k*z^3 - 1296*a^4*b*c^6*d*j* \\
& 1*z^3 - 5184*a^4*b*c^6*e*g*m*z^3 - 5184*a^4*b*c^6*d*h*m*z^3 + 2592*a^4*b*c^ \\
& 6*f*h*k*z^3 + 2592*a^4*b*c^6*f*g*1*z^3 + 2592*a^4*b*c^6*e*h*1*z^3 - 1296*a^ \\
& 4*b*c^6*g*h*j*z^3 + 243*a*b^6*c^4*d*e*m*z^3 - 3888*a^3*b*c^7*d*e*j*z^3 - 24 \\
& 3*a*b^5*c^5*d*e*j*z^3 + 162*a*b^4*c^6*d*e*f*z^3 - 2592*a^6*c^5*k*1*m*z^3 - \\
& 5184*a^5*c^6*h*j*k*z^3 - 5184*a^5*c^6*g*j*1*z^3 - 5184*a^5*c^6*f*j*m*z^3 + \\
& 2592*a^5*c^6*f*k*1*z^3 + 2592*a^5*c^6*e*k*m*z^3 + 2592*a^5*c^6*d*1*m*z^3 + \\
& 2592*a^5*c^6*g*h*m*z^3 + 5184*a^4*c^7*e*g*j*z^3 + 5184*a^4*c^7*d*h*j*z^3 - \\
& 2592*a^4*c^7*e*f*k*z^3 - 2592*a^4*c^7*d*g*k*z^3 - 2592*a^4*c^7*d*f*1*z^3 - \\
& 2592*a^4*c^7*d*e*m*z^3 - 2592*a^4*c^7*f*g*h*z^3 + 2592*a^3*c^8*d*e*f*z^3 + \\
& 6480*a^5*b^2*c^4*j*m^2*z^3 + 6480*a^4*b^3*c^4*j^2*m*z^3 - 5022*a^4*b^4*c^3* \\
& j*m^2*z^3 - 1296*a^3*b^5*c^3*j^2*m*z^3 + 1134*a^3*b^6*c^2*j*m^2*z^3 + 81*a^ \\
& 2*b^7*c^2*j^2*m*z^3 + 2592*a^4*b^3*c^4*h*1^2*z^3 - 1944*a^4*b^2*c^5*h^2*1*z \\
& ^3 - 810*a^3*b^5*c^3*h*1^2*z^3 + 729*a^3*b^4*c^4*h^2*1*z^3 + 81*a^2*b^7*c^2 \\
& *h*1^2*z^3 - 81*a^2*b^6*c^3*h^2*1*z^3 - 5184*a^4*b^3*c^4*f*m^2*z^3 + 1620*a \\
& ^3*b^5*c^3*f*m^2*z^3 + 1296*a^3*b^3*c^5*f^2*m*z^3 - 162*a^2*b^7*c^2*f*m^2*z \\
& ^3 - 162*a^2*b^5*c^4*f^2*m*z^3 - 1944*a^4*b^2*c^5*g*k^2*z^3 + 729*a^3*b^4*c \\
& ^4*g*k^2*z^3 - 648*a^3*b^3*c^5*g^2*k*z^3 - 81*a^2*b^6*c^3*g*k^2*z^3 + 81*a^ \\
& 2*b^5*c^4*g^2*k*z^3 - 1944*a^4*b^2*c^5*e*1^2*z^3 + 729*a^3*b^4*c^4*e*1^2*z^ \\
& 3 + 648*a^3*b^2*c^6*e^2*1*z^3 - 81*a^2*b^6*c^3*e*1^2*z^3 - 81*a^2*b^4*c^5*e \\
& ^2*1*z^3 + 1296*a^3*b^3*c^5*f*j^2*z^3 - 1296*a^3*b^2*c^6*f^2*j*z^3 - 162*a^ \\
& 2*b^5*c^4*f*j^2*z^3 + 162*a^2*b^4*c^5*f^2*j*z^3 - 648*a^3*b^3*c^5*d*k^2*z^3 \\
& + 81*a^2*b^5*c^4*d*k^2*z^3 + 648*a^3*b^2*c^6*e*h^2*z^3 - 81*a^2*b^4*c^5*e* \\
& h^2*z^3 - 648*a^2*b^2*c^7*d^2*g*z^3 - 10368*a^5*b*c^5*j^2*m*z^3 - 81*a^2*b^ \\
& 8*c*j*m^2*z^3 - 2592*a^5*b*c^5*h*1^2*z^3 + 5184*a^5*b*c^5*f*m^2*z^3 - 2592* \\
& a^4*b*c^6*f^2*m*z^3 + 1296*a^4*b*c^6*g^2*k*z^3 - 2592*a^4*b*c^6*f*j^2*z^3 + \\
& 1296*a^4*b*c^6*d*k^2*z^3 + 81*a*b^4*c^6*d^2*g*z^3 + 2592*a^6*c^5*j*m^2*z^3 \\
& + 1296*a^5*c^6*h^2*1*z^3 + 1296*a^5*c^6*g*k^2*z^3 + 1296*a^5*c^6*e*1^2*z^3 \\
& - 1296*a^4*c^7*e^2*1*z^3 + 2592*a^4*c^7*f^2*j*z^3 - 2592*a^6*b*c^4*m^3*z^3 \\
& - 324*a^3*b^7*c*m^3*z^3 - 27*a^2*b^8*c*1^3*z^3 - 1296*a^4*c^7*e*h^2*z^3 - \\
& 864*a^5*b*c^5*k^3*z^3 + 1296*a^3*c^8*d^2*g*z^3 + 432*a^4*b*c^6*h^3*z^3 + 27 \\
& *a*b^4*c^6*e^3*z^3 - 432*a^2*b*c^8*d^3*z^3 + 216*a*b^3*c^7*d^3*z^3 + 1134*a \\
& ^4*b^5*c^2*m^3*z^3 - 432*a^5*b^3*c^3*m^3*z^3 + 1512*a^5*b^2*c^4*1^3*z^3 - 1 \\
& 107*a^4*b^4*c^3*1^3*z^3 + 297*a^3*b^6*c^2*1^3*z^3 + 864*a^4*b^3*c^4*k^3*z^3 \\
& - 270*a^3*b^5*c^3*k^3*z^3 + 27*a^2*b^7*c^2*k^3*z^3 - 2592*a^4*b^2*c^5*j^3* \\
& z^3 + 486*a^3*b^4*c^4*j^3*z^3 - 27*a^2*b^6*c^3*j^3*z^3 - 216*a^3*b^3*c^5*h^ \\
& 3*z^3 + 27*a^2*b^5*c^4*h^3*z^3 + 216*a^3*b^2*c^6*g^3*z^3 - 27*a^2*b^4*c^5*g \\
& ^3*z^3 - 216*a^2*b^2*c^7*e^3*z^3 - 432*a^6*c^5*1^3*z^3 + 27*a^2*b^9*m^3*z^3 \\
& + 4320*a^5*c^6*j^3*z^3 - 432*a^4*c^7*g^3*z^3 + 432*a^3*c^8*e^3*z^3 - 27*b^ \\
& 5*c^6*d^3*z^3 + 81*a^3*b^6*c*j*k*1*m*z^2 - 1296*a^5*b*c^4*h*j*k*m*z^2 - 129 \\
& 6*a^5*b*c^4*g*j*1*m*z^2 + 1296*a^5*b*c^4*f*k*1*m*z^2 - 81*a^2*b^7*c*f*k*1*m \\
& *z^2 + 2592*a^4*b*c^5*e*g*j*m*z^2 + 2592*a^4*b*c^5*d*h*j*m*z^2 - 1296*a^4*b \\
& *c^5*f*h*j*k*z^2 - 1296*a^4*b*c^5*f*g*j*1*z^2 - 1296*a^4*b*c^5*e*f*k*m*z^2 \\
& - 1296*a^4*b*c^5*d*f*1*m*z^2 - 648*a^4*b*c^5*e*h*j*1*z^2 - 648*a^4*b*c^5*e
\end{aligned}$$

$$\begin{aligned}
& g*k*1*z^2 - 648*a^4*b*c^5*d*h*k*1*z^2 - 648*a^4*b*c^5*d*g*k*m*z^2 - 1296*a^4*b*c^5*f*g*h*m*z^2 - 162*a*b^6*c^3*d*e*j*m*z^2 + 81*a*b^6*c^3*d*e*k*1*z^2 \\
& + 1296*a^3*b*c^6*d*e*f*m*z^2 - 648*a^3*b*c^6*d*f*g*k*z^2 - 648*a^3*b*c^6*d*e*h*k*z^2 - 648*a^3*b*c^6*d*e*g*1*z^2 - 81*a*b^5*c^4*d*e*h*k*z^2 - 81*a*b^5*c^4*d*e*g*1*z^2 + 81*a*b^5*c^4*d*e*f*m*z^2 - 81*a*b^4*c^5*d*e*f*j*z^2 + 81*a*b^4*c^5*d*e*g*h*z^2 + 648*a^5*b^2*c^3*j*k*1*m*z^2 - 567*a^4*b^4*c^2*j*k*1*m*z^2 - 1944*a^4*b^3*c^3*f*k*1*m*z^2 + 729*a^3*b^5*c^2*f*k*1*m*z^2 + 648*a^4*b^3*c^3*h*j*k*m*z^2 + 648*a^4*b^3*c^3*g*j*1*m*z^2 - 81*a^3*b^5*c^2*h*j*k*m*z^2 - 81*a^3*b^5*c^2*g*j*1*m*z^2 + 1944*a^4*b^2*c^4*f*j*k*1*z^2 - 729*a^3*b^4*c^3*f*j*k*1*z^2 + 648*a^4*b^2*c^4*e*j*k*m*z^2 + 648*a^4*b^2*c^4*d*j*1*m*z^2 - 81*a^3*b^4*c^3*e*j*k*m*z^2 - 81*a^3*b^4*c^3*d*j*1*m*z^2 + 81*a^2*b^6*c^2*f*j*k*1*z^2 + 1296*a^4*b^2*c^4*f*h*k*m*z^2 + 1296*a^4*b^2*c^4*f*g*1*m*z^2 + 648*a^4*b^2*c^4*g*h*j*m*z^2 - 648*a^3*b^4*c^3*f*h*k*m*z^2 - 648*a^3*b^4*c^3*f*g*1*m*z^2 - 324*a^4*b^2*c^4*g*h*k*1*z^2 - 324*a^4*b^2*c^4*e*h*1*m*z^2 + 81*a^3*b^4*c^3*g*h*k*1*z^2 - 81*a^3*b^4*c^3*g*h*j*m*z^2 + 81*a^2*b^6*c^2*f*h*k*m*z^2 + 81*a^2*b^6*c^2*f*g*1*m*z^2 - 1296*a^3*b^3*c^4*e*g*j*m*z^2 - 1296*a^3*b^3*c^4*d*h*j*m*z^2 + 648*a^3*b^3*c^4*f*h*j*k*z^2 + 648*a^3*b^3*c^4*f*g*j*1*z^2 + 648*a^3*b^3*c^4*e*f*k*m*z^2 + 648*a^3*b^3*c^4*d*f*1*m*z^2 + 486*a^3*b^3*c^4*e*g*k*1*z^2 + 486*a^3*b^3*c^4*d*h*k*1*z^2 + 162*a^3*b^3*c^4*e*h*j*1*z^2 + 162*a^3*b^3*c^4*d*g*k*m*z^2 + 162*a^2*b^5*c^3*e*g*j*m*z^2 + 162*a^2*b^5*c^3*d*h*j*m*z^2 - 81*a^2*b^5*c^3*f*h*j*k*z^2 - 81*a^2*b^5*c^3*f*g*j*1*z^2 - 81*a^2*b^5*c^3*e*g*k*1*z^2 - 81*a^2*b^5*c^3*e*f*k*m*z^2 - 81*a^2*b^5*c^3*d*h*k*1*z^2 - 81*a^2*b^5*c^3*d*f*1*m*z^2 + 648*a^3*b^3*c^4*f*g*h*m*z^2 - 81*a^2*b^5*c^3*f*g*h*m*z^2 - 3240*a^3*b^2*c^5*d*e*j*m*z^2 + 1620*a^3*b^2*c^5*d*e*k*1*z^2 + 1377*a^2*b^4*c^4*d*e*j*m*z^2 - 648*a^3*b^2*c^5*e*f*j*k*z^2 - 648*a^3*b^2*c^5*d*f*j*1*z^2 - 648*a^2*b^4*c^4*d*e*k*1*z^2 - 324*a^3*b^2*c^5*d*g*j*k*z^2 + 81*a^2*b^4*c^4*e*f*j*k*z^2 + 81*a^2*b^4*c^4*d*f*j*1*z^2 + 972*a^3*b^2*c^5*e*f*h*1*z^2 - 648*a^3*b^2*c^5*f*g*h*j*z^2 - 324*a^3*b^2*c^5*e*g*h*k*z^2 - 324*a^3*b^2*c^5*d*g*h*1*z^2 - 162*a^2*b^4*c^4*e*f*h*1*z^2 + 81*a^2*b^4*c^4*f*g*h*j*z^2 + 81*a^2*b^4*c^4*e*g*h*k*z^2 + 81*a^2*b^4*c^4*d*g*h*1*z^2 - 648*a^2*b^3*c^5*d*e*f*m*z^2 + 486*a^2*b^3*c^5*d*e*h*k*z^2 + 486*a^2*b^3*c^5*d*e*g*1*z^2 + 162*a^2*b^3*c^5*d*f*g*k*z^2 + 648*a^2*b^2*c^6*d*e*f*j*z^2 - 324*a^2*b^2*c^6*d*e*g*h*z^2 - 1296*a^6*b*c^3*k*1*m^2*z^2 - 81*a^4*b^5*c*k*1*m^2*z^2 - 1296*a^5*b*c^4*j^2*k*1*z^2 - 324*a^5*b*c^4*h^2*1*m*z^2 + 324*a^5*b*c^4*h*k^2*1*z^2 - 324*a^5*b*c^4*g*k^2*m*z^2 + 972*a^5*b*c^4*h*j*1^2*z^2 + 324*a^5*b*c^4*g*k*1^2*z^2 - 324*a^5*b*c^4*e*1^2*m*z^2 - 324*a^4*b*c^5*e^2*1*m*z^2 - 1944*a^5*b*c^4*f*j*m^2*z^2 + 1296*a^5*b*c^4*e*k*m^2*z^2 + 1296*a^5*b*c^4*d*1*m^2*z^2 + 648*a^4*b*c^5*f^2*j*m*z^2 + 81*a^2*b^7*c*f*j*m^2*z^2 + 1296*a^5*b*c^4*g*h*m^2*z^2 - 324*a^4*b*c^5*g^2*j*k*z^2 + 324*a^4*b*c^5*g^2*h*1*z^2 + 972*a^4*b*c^5*f*h^2*1*z^2 + 324*a^4*b*c^5*g*h^2*k*z^2 - 324*a^4*b*c^5*e*h^2*m*z^2 - 324*a^4*b*c^5*d*j*k^2*z^2 - 324*a^3*b*c^6*d^2*j*k*z^2 + 972*a^4*b*c^5*f*g*k^2*z^2 + 972*a^3*b*c^6*d^2*g*m*z^2 + 324*a^4*b*c^5*e*h*k^2*z^2 + 324*a^3*b*c^6*d^2*h*1*z^2 + 81*a*b^5*c^4*d^2*g*m*z^2 + 972*a^4*b*c^5*e*f*1^2*z^2 + 324*a^4*b*c^5*d*g*1^2*z^2 - 324*a^3*b*c^6*e^2*h*j*z^2 + 324*a^3*b*c^6*e^2*g*k*z^2 - 324*a^3*b*c^6*e^2*
\end{aligned}$$

$$\begin{aligned}
& f^1 z^2 - 1296 a^4 b^3 c^5 d^2 e^2 m^2 z^2 + 81 a^3 b^7 c^2 d^2 e^2 m^2 z^2 - 324 a^3 b^3 c^6 d^2 g^2 j^2 z^2 - 81 a^3 b^4 c^5 d^2 g^2 j^2 z^2 + 81 a^3 b^4 c^5 d^2 e^1 z^2 + 324 a^3 b^3 c^6 e^2 g^2 h^2 z^2 + 81 a^3 b^4 c^5 d^2 e^2 k^2 z^2 + 1296 a^3 b^3 c^6 d^2 e^2 j^2 z^2 - 324 a^3 b^3 c^6 e^2 f^2 h^2 z^2 + 324 a^3 b^3 c^6 d^2 g^2 h^2 z^2 + 81 a^3 b^5 c^4 d^2 e^2 j^2 z^2 - 324 a^2 b^3 c^7 d^2 f^2 g^2 z^2 + 324 a^2 b^3 c^7 d^2 e^2 h^2 z^2 + 81 a^3 b^3 c^6 d^2 f^2 g^2 z^2 - 81 a^3 b^3 c^6 d^2 e^2 h^2 z^2 + 324 a^2 b^3 c^7 d^2 e^2 g^2 z^2 - 81 a^3 b^3 c^6 d^2 e^2 g^2 z^2 + 1296 a^6 c^4 j^2 k^2 l^2 m^2 z^2 - 1296 a^5 c^5 f^2 j^2 k^2 l^2 m^2 z^2 - 1296 a^5 c^5 e^2 j^2 k^2 l^2 m^2 z^2 - 1296 a^5 c^5 g^2 h^2 j^2 m^2 z^2 + 1296 a^5 c^5 e^2 h^2 l^2 m^2 z^2 + 1296 a^4 c^6 e^2 f^2 j^2 k^2 z^2 + 1296 a^4 c^6 d^2 g^2 j^2 k^2 z^2 + 1296 a^4 c^6 d^2 f^2 j^2 l^2 z^2 - 1296 a^4 c^6 d^2 e^2 k^2 l^2 z^2 + 1296 a^4 c^6 d^2 e^2 j^2 m^2 z^2 + 1296 a^4 c^6 f^2 g^2 h^2 j^2 z^2 - 1296 a^4 c^6 e^2 f^2 h^2 l^2 z^2 - 1296 a^3 c^7 d^2 e^2 f^2 j^2 z^2 + 648 a^5 b^3 c^2 k^2 l^2 m^2 z^2 + 648 a^4 b^3 c^3 j^2 k^2 l^2 z^2 + 486 a^5 b^2 c^3 h^2 l^2 m^2 z^2 - 81 a^4 b^4 c^2 h^2 l^2 m^2 z^2 + 81 a^4 b^3 c^3 h^2 l^2 m^2 z^2 - 81 a^3 b^5 c^2 j^2 k^2 l^2 z^2 - 162 a^4 b^2 c^4 g^2 k^2 m^2 z^2 - 81 a^4 b^3 c^3 h^2 k^2 l^2 z^2 + 81 a^4 b^3 c^3 g^2 k^2 m^2 z^2 - 567 a^4 b^3 c^3 h^2 j^2 l^2 z^2 + 486 a^4 b^2 c^4 h^2 j^2 l^2 z^2 - 81 a^4 b^3 c^3 g^2 k^2 l^2 z^2 + 81 a^4 b^3 c^3 e^2 l^2 m^2 z^2 + 81 a^3 b^5 c^2 h^2 j^2 l^2 z^2 - 81 a^3 b^4 c^3 h^2 j^2 l^2 z^2 + 81 a^3 b^3 c^4 e^2 l^2 m^2 z^2 + 2430 a^4 b^3 c^3 f^2 j^2 m^2 z^2 - 2268 a^4 b^2 c^4 f^2 j^2 m^2 z^2 - 810 a^3 b^5 c^2 f^2 j^2 m^2 z^2 + 810 a^3 b^4 c^3 f^2 j^2 m^2 z^2 - 648 a^4 b^3 c^3 e^2 k^2 m^2 z^2 - 648 a^4 b^3 c^3 d^2 l^2 m^2 z^2 - 648 a^4 b^2 c^4 h^2 j^2 k^2 z^2 - 648 a^4 b^2 c^4 g^2 j^2 l^2 z^2 - 162 a^3 b^3 c^4 f^2 j^2 m^2 z^2 + 81 a^3 b^5 c^2 e^2 k^2 m^2 z^2 + 81 a^3 b^5 c^2 d^2 l^2 m^2 z^2 + 81 a^3 b^4 c^3 h^2 j^2 k^2 z^2 + 81 a^3 b^4 c^3 g^2 j^2 l^2 z^2 - 81 a^2 b^6 c^2 f^2 j^2 m^2 z^2 - 648 a^4 b^3 c^3 g^2 h^2 m^2 z^2 + 486 a^4 b^2 c^4 g^2 j^2 k^2 z^2 - 486 a^4 b^2 c^4 e^2 k^2 l^2 z^2 + 486 a^3 b^2 c^5 d^2 k^2 m^2 z^2 - 162 a^4 b^2 c^4 d^2 k^2 m^2 z^2 + 81 a^3 b^5 c^2 g^2 h^2 m^2 z^2 - 81 a^3 b^4 c^3 g^2 j^2 k^2 z^2 + 81 a^3 b^4 c^3 e^2 k^2 l^2 z^2 + 81 a^3 b^3 c^4 g^2 j^2 k^2 z^2 - 81 a^2 b^4 c^4 d^2 k^2 m^2 z^2 + 486 a^4 b^2 c^4 e^2 j^2 l^2 z^2 - 486 a^4 b^2 c^4 d^2 k^2 l^2 z^2 - 162 a^3 b^2 c^5 e^2 j^2 l^2 z^2 - 81 a^3 b^4 c^3 e^2 j^2 l^2 z^2 + 81 a^3 b^4 c^3 d^2 k^2 l^2 z^2 - 81 a^3 b^3 c^4 g^2 h^2 l^2 z^2 - 1458 a^4 b^2 c^4 f^2 h^2 l^2 z^2 + 648 a^3 b^4 c^3 f^2 h^2 l^2 z^2 - 567 a^3 b^3 c^4 f^2 h^2 l^2 z^2 + 486 a^3 b^2 c^5 e^2 h^2 m^2 z^2 - 81 a^3 b^3 c^4 g^2 h^2 k^2 z^2 + 81 a^3 b^3 c^4 e^2 h^2 m^2 z^2 - 81 a^2 b^6 c^2 f^2 h^2 l^2 z^2 + 81 a^2 b^5 c^3 f^2 h^2 l^2 z^2 - 81 a^2 b^4 c^4 e^2 h^2 m^2 z^2 - 1296 a^4 b^2 c^4 e^2 g^2 m^2 z^2 - 1296 a^4 b^2 c^4 d^2 h^2 m^2 z^2 + 648 a^3 b^4 c^3 e^2 g^2 m^2 z^2 + 648 a^3 b^4 c^3 d^2 h^2 m^2 z^2 + 81 a^3 b^3 c^4 d^2 j^2 k^2 z^2 - 81 a^2 b^6 c^2 e^2 g^2 m^2 z^2 - 81 a^2 b^6 c^2 d^2 h^2 m^2 z^2 + 81 a^2 b^3 c^5 d^2 j^2 k^2 z^2 - 567 a^3 b^3 c^4 f^2 g^2 k^2 z^2 - 567 a^2 b^3 c^5 d^2 g^2 m^2 z^2 + 486 a^3 b^2 c^5 f^2 g^2 k^2 z^2 - 486 a^3 b^2 c^5 e^2 g^2 l^2 z^2 + 486 a^3 b^2 c^5 d^2 g^2 m^2 z^2 - 81 a^3 b^3 c^4 e^2 h^2 k^2 z^2 + 81 a^2 b^5 c^3 f^2 g^2 k^2 z^2 - 81 a^2 b^4 c^4 f^2 g^2 k^2 z^2 + 81 a^2 b^4 c^4 e^2 g^2 l^2 z^2 - 81 a^2 b^4 c^4 d^2 g^2 m^2 z^2 - 81 a^2 b^3 c^5 d^2 h^2 l^2 z^2 - 567 a^3 b^3 c^4 e^2 f^2 l^2 z^2 - 486 a^3 b^2 c^5 d^2 h^2 k^2 z^2 - 162 a^3 b^2 c^5 e^2 h^2 j^2 z^2 - 81 a^3 b^3 c^4 d^2 g^2 l^2 z^2 + 81 a^2 b^5 c^3 e^2 f^2 l^2 z^2 + 81 a^2 b^4 c^4 d^2 h^2 k^2 z^2 + 81 a^2 b^3 c^5 e^2 h^2 j^2 z^2 - 81 a^2 b^3 c^5 e^2 g^2 k^2 z^2 + 81 a^2 b^3 c^5 e^2 f^2 l^2 z^2 + 1944 a^3 b^3 c^4 d^2 e^2 m^2 z^2 - 729 a^2 b^5 c^3 d^2 e^2 m^2 z^2 + 648 a
\end{aligned}$$



$$\begin{aligned}
&^3b^2c^5e*g*j^2z^2 + 648a^3b^2c^5d*h*j^2z^2 - 81a^2b^4c^4e*g*j^2z^2 - 81a^2b^4c^4d*h*j^2z^2 + 486a^3b^2c^5d*f*k^2z^2 + 486a^2b^2c^6d^2g*jz^2 - 486a^2b^2c^6d^2e*l^2z^2 - 162a^2b^2c^6d^2f*kz^2 - 81a^2b^4c^4d*f*k^2z^2 + 81a^2b^3c^5d*g^2jz^2 - 486a^2b^2c^6d^2e^2kz^2 - 81a^2b^3c^5e*g^2hz^2 - 648a^2b^3c^5d*e*j^2z^2 - 162a^2b^2c^6e^2f*hz^2 + 81a^2b^3c^5e*f*h^2z^2 - 81a^2b^3c^5d*g*h^2z^2 - 162a^2b^2c^6d*f*g^2z^2 - 189a^5b^3c^2l^3mz^2 + 162a^5b^2c^3k^3mz^2 - 27a^4b^4c^2k^3mz^2 - 702a^4b^3c^3j^3mz^2 - 81a^3b^6c*j^2m^2z^2 + 81a^3b^5c^2j^3mz^2 - 54a^5b^3c^2j^3m^3z^2 - 486a^5b^2c^3j^3l^3z^2 + 216a^4b^4c^2j^3l^3z^2 - 189a^4b^3c^3j^3k^3z^2 - 54a^4b^2c^4h^3mz^2 + 27a^3b^5c^2j^3k^3z^2 + 27a^3b^3c^4g^3mz^2 - 810a^4b^4c^2f^3m^3z^2 + 540a^5b^2c^3f^3m^3z^2 - 324a^3b^2c^5f^3mz^2 + 54a^2b^4c^4f^3mz^2 + 675a^4b^3c^3f^3l^3z^2 - 243a^3b^5c^2f^3l^3z^2 - 189a^2b^3c^5e^3mz^2 + 27a^3b^3c^4h^3jz^2 - 486a^4b^2c^4f^3k^3z^2 - 486a^2b^2c^6d^3mz^2 + 216a^3b^4c^3f^3k^3z^2 - 54a^3b^2c^5g^3jz^2 - 27a^2b^6c^2f^3k^3z^2 - 270a^3b^3c^4f^3j^3z^2 - 54a^2b^3c^5f^3jz^2 + 27a^2b^5c^3f^3j^3z^2 + 162a^2b^2c^6e^3jz^2 + 162a^3b^2c^5f^3h^3z^2 - 27a^2b^4c^4f^3h^3z^2 + 27a^2b^3c^5f^3g^3z^2 + 81a^2b^2c^7d^2e^2z^2 - 648a^6c^4h^3l^2mz^2 + 648a^5c^5g^2k^3mz^2 - 648a^5c^5h^2j^3l^2z^2 + 1296a^5c^5h^3j^2k^3z^2 + 1296a^5c^5g^3j^2l^2z^2 + 1296a^5c^5f^3j^2mz^2 - 648a^5c^5g^3j^2k^2z^2 + 648a^5c^5e^3k^2l^2z^2 + 648a^5c^5d^3k^2mz^2 - 648a^4c^6d^2k^3mz^2 - 648a^5c^5e^3j^2l^2z^2 + 648a^5c^5d^3k^2l^2z^2 + 648a^4c^6e^2j^3l^2z^2 + 324a^6b^3c^3l^3mz^2 + 27a^4b^5c^3l^3mz^2 + 648a^5c^5f^3h^3l^2z^2 - 648a^4c^6e^2h^3mz^2 + 1512a^5b^3c^4j^3mz^2 + 1080a^6b^3c^3j^3m^3z^2 - 162a^4b^5c^3j^3m^3z^2 - 648a^4c^6f^3g^2k^3z^2 + 648a^4c^6e^3g^2l^2z^2 - 648a^4c^6d^3g^2mz^2 - 27a^3b^6c^3j^3l^3z^2 + 648a^4c^6e^3h^2j^3z^2 + 648a^4c^6d^3h^2k^3z^2 + 324a^5b^3c^4j^3k^3z^2 - 1296a^4c^6e^3g^3j^2z^2 - 1296a^4c^6d^3h^2j^2z^2 - 108a^4b^3c^5g^3mz^2 - 648a^4c^6d^3f^3k^2z^2 - 648a^3c^7d^2g^3jz^2 + 648a^3c^7d^2f^3k^3z^2 + 648a^3c^7d^2e^3l^2z^2 + 270a^3b^6c^3f^3m^3z^2 + 648a^3c^7d^2e^2k^3z^2 - 540a^5b^3c^4f^3l^3z^2 + 324a^3b^3c^6e^3mz^2 - 108a^4b^3c^5h^3jz^2 + 27a^2b^7c^3f^3l^3z^2 + 27a^2b^5c^4e^3mz^2 + 648a^3c^7e^2f^3h^3z^2 + 216a^2b^4c^5d^3mz^2 + 648a^4b^3c^5f^3j^3z^2 + 216a^3b^3c^6f^3jz^2 + 648a^3c^7d^3f^3g^2z^2 - 27a^2b^4c^5e^3jz^2 + 324a^2b^3c^7d^3jz^2 - 189a^2b^3c^6d^3jz^2 - 108a^3b^3c^6f^3g^3z^2 - 108a^2b^3c^7e^3f^3z^2 + 27a^2b^3c^6e^3f^3z^2 + 162a^2b^2c^7d^3f^3z^2 - 1134a^5b^2c^3j^2m^2z^2 + 648a^4b^4c^2j^2m^2z^2 + 81a^5b^2c^3k^2l^2z^2 + 162a^4b^2c^4f^2m^2z^2 + 81a^4b^2c^4h^2k^2z^2 + 81a^4b^2c^4g^2l^2z^2 + 162a^3b^2c^5f^2j^2z^2 + 81a^3b^2c^5e^2k^2z^2 + 81a^3b^2c^5d^2l^2z^2 + 81a^3b^2c^5g^2h^2z^2 + 81a^2b^2c^6e^2g^2z^2 + 81a^2b^2c^6d^2h^2z^2 - 216a^6c^4k^3mz^2 + 216a^6c^4j^3l^3z^2 + 27a^3b^7j^3m^3z^2 + 216a^5c^5h^3mz^2 + 432a^6c^4f^3m^3z^2 + 432a^4c^6f^3mz^2 - 27b^6c^4d^3mz^2 - 27a^2b^8f^3m^3z^2 + 216a^5c^5f^3k^3z^2
\end{aligned}$$

$$\begin{aligned}
& 2 + 216a^4c^6g^3j^2z^2 + 216a^3c^7d^3m^2z^2 + 216a^5b^4c^m^4z^2 - \\
& 216a^3c^7e^3j^2z^2 + 27b^5c^5d^3j^2z^2 - 216a^4c^6f^3h^3z^2 - 27b^4c^6d^3f^2z^2 - 216a^2c^8d^3f^2z^2 - 648a^6c^4j^2m^2z^2 - 324a^6c^4k^2l^2z^2 - 648a^5c^5f^2m^2z^2 - 324a^5c^5h^2k^2z^2 - 324a^5c^5g^2l^2z^2 - 648a^4c^6f^2j^2z^2 - 324a^4c^6e^2k^2z^2 - \\
& 324a^4c^6d^2l^2z^2 - 405a^6b^2c^2m^4z^2 - 324a^4c^6g^2h^2z^2 - 324a^3c^7e^2g^2z^2 - 324a^3c^7d^2h^2z^2 + 243a^4b^2c^4j^4z^2 - 27a^3b^4c^3j^4z^2 - 324a^2c^8d^2e^2z^2 + 27a^2b^2c^6f^4z^2 - 108a^7c^3m^4z^2 - 27a^4b^6m^4z^2 - 540a^5c^5j^4z^2 - 108a^3c^7f^4z^2 - 216a^5b^3c^3f^2j^2k^2l^2m^2z + 54a^3b^5c^2f^2j^2k^2l^2m^2z + 27a^3b^5c^2g^2h^2k^2l^2m^2z - 27a^2b^6c^2d^2e^2j^2k^2l^2m^2z + 432a^4b^3c^4d^2g^2j^2k^2l^2m^2z - 432a^4b^3c^4d^2e^2k^2l^2m^2z + 216a^4b^3c^4e^2g^2j^2k^2l^2m^2z + 216a^4b^3c^4e^2f^2j^2k^2l^2m^2z + 216a^4b^3c^4d^2h^2j^2k^2l^2m^2z + 216a^4b^3c^4d^2f^2j^2k^2l^2m^2z + 216a^4b^3c^4f^2g^2h^2j^2k^2l^2m^2z - 27a^2b^6c^2d^2e^2j^2k^2l^2m^2z - 27a^2b^6c^2d^2e^2g^2l^2m^2z + 216a^3b^3c^5d^2e^2h^2j^2k^2z + 216a^3b^3c^5d^2e^2g^2j^2l^2z - 216a^3b^3c^5d^2e^2f^2j^2m^2z + 27a^2b^5c^3d^2e^2h^2j^2k^2z + 27a^2b^5c^3d^2e^2g^2j^2l^2z + 27a^2b^5c^3d^2e^2g^2h^2m^2z - 27a^2b^4c^4d^2e^2g^2h^2j^2z + 27a^2b^7c^2d^2e^2k^2l^2m^2z + 270a^4b^3c^2f^2j^2k^2l^2m^2z - 108a^4b^3c^2g^2h^2k^2l^2m^2z - 216a^4b^2c^3f^2h^2j^2k^2l^2m^2z - 216a^4b^2c^3f^2g^2j^2l^2m^2z - 216a^4b^2c^3e^2g^2k^2l^2m^2z - 216a^4b^2c^3d^2h^2k^2l^2m^2z + 162a^3b^4c^2e^2g^2k^2l^2m^2z + 162a^3b^4c^2d^2h^2k^2l^2m^2z + 108a^4b^2c^3g^2h^2j^2k^2l^2z + 108a^4b^2c^3e^2h^2j^2l^2m^2z + 54a^3b^4c^2f^2h^2j^2k^2m^2z + 54a^3b^4c^2f^2g^2j^2l^2m^2z - 27a^3b^4c^2g^2h^2j^2k^2l^2z + 540a^3b^3c^3d^2e^2k^2l^2m^2z - 216a^2b^5c^2d^2e^2k^2l^2m^2z - 162a^3b^3c^3e^2g^2j^2k^2l^2z - 162a^3b^3c^3d^2h^2j^2k^2l^2z - 108a^3b^3c^3d^2g^2j^2k^2m^2z - 54a^3b^3c^3e^2f^2j^2k^2m^2z - 54a^3b^3c^3d^2f^2j^2l^2m^2z + 27a^2b^5c^2e^2g^2j^2k^2l^2z + 27a^2b^5c^2d^2h^2j^2k^2l^2z - 108a^3b^3c^3e^2g^2h^2k^2m^2z - 108a^3b^3c^3d^2g^2h^2l^2m^2z - 54a^3b^3c^3f^2g^2h^2j^2m^2z + 27a^2b^5c^2e^2g^2h^2k^2m^2z + 27a^2b^5c^2d^2g^2h^2l^2m^2z - 540a^3b^2c^4d^2e^2j^2k^2l^2z + 216a^2b^4c^3d^2e^2j^2k^2l^2z - 216a^3b^2c^4d^2e^2h^2k^2m^2z - 216a^3b^2c^4d^2e^2g^2l^2m^2z + 162a^2b^4c^3d^2e^2h^2k^2m^2z + 162a^2b^4c^3d^2e^2g^2l^2m^2z + 108a^3b^2c^4e^2g^2h^2j^2k^2z - 108a^3b^2c^4e^2f^2h^2j^2l^2z + 108a^3b^2c^4d^2g^2h^2j^2l^2z + 108a^3b^2c^4d^2f^2g^2k^2m^2z - 27a^2b^4c^3e^2g^2h^2j^2k^2z - 27a^2b^4c^3d^2g^2h^2j^2l^2z - 162a^2b^3c^4d^2e^2h^2j^2k^2z - 162a^2b^3c^4d^2e^2g^2j^2l^2z + 54a^2b^3c^4d^2e^2f^2j^2m^2z - 108a^2b^3c^4d^2e^2g^2h^2m^2z + 108a^2b^2c^5d^2e^2g^2h^2j^2z + 324a^6b^3c^2j^2k^2l^2m^2z - 81a^5b^3c^2j^2k^2l^2m^2z + 27a^4b^4c^2j^2k^2l^2m^2z - 27a^4b^4c^2h^2k^2l^2m^2z - 27a^4b^4c^2g^2k^2l^2m^2z + 216a^5b^3c^3h^2j^2k^2m^2z + 216a^5b^3c^3g^2j^2l^2m^2z + 54a^4b^4c^2f^2k^2l^2m^2z + 27a^4b^4c^2h^2j^2k^2m^2z + 27a^4b^4c^2g^2j^2l^2m^2z + 27a^2b^6c^2f^2k^2l^2m^2z + 216a^5b^3c^3e^2k^2l^2m^2z - 108a^5b^3c^3h^2j^2k^2l^2z + 27a^3b^5c^2e^2k^2l^2m^2z + 216a^5b^3c^3d^2k^2l^2m^2z + 216a^4b^3c^4e^2j^2l^2m^2z - 108a^5b^3c^3g^2j^2k^2l^2z + 27a^3b^5c^2d^2k^2l^2m^2z - 324a^5b^3c^3e^2j^2k^2m^2z - 324a^5b^3c^3d^2j^2l^2m^2z - 216a^5b^3c^3f^2h^2l^2m^2z - 108a^4b^3c^4f^2j^2k^2l^2z - 27a^3b^5c^2e^2j^2k^2m^2z - 27a^3b^5c^2d^2j^2l^2m^2z - 324a^5b^3c^3g^2h^2j^2m^2z + 216a^5b^3c^3f^2h^2k^2m^2z + 216a^5b^3c^3f^2g^2l^2m^2z +
\end{aligned}$$

$$\begin{aligned}
& 216a^5b^3c^3e^h1m^2z - 216a^4b^3c^4f^2h^kmmz - 216a^4b^3c^4f^2g^1mmz - 27a^3b^5c^3g^hjm^2z + 216a^4b^3c^4e^g^21mmz - 108a^4b^3c^4g^2h^j1z - 216a^4b^3c^4f^2h^2j^1z + 216a^4b^3c^4e^h^2jm^2z + 216a^4b^3c^4d^2h^2kmmz - 108a^4b^3c^4g^2h^2j^kz - 432a^4b^3c^4e^g^2jm^2z - 432a^4b^3c^4d^2h^2jm^2z + 216a^4b^3c^4f^2h^2j^kz + 216a^4b^3c^4f^2g^2j^1z + 27a^2b^6c^3e^g^2jm^2z + 27a^2b^6c^3d^2h^2jm^2z - 432a^3b^3c^5d^2g^2jm^2z - 216a^4b^3c^4f^2g^2j^k^2z + 216a^3b^3c^5d^2f^2kmmz + 216a^3b^3c^5d^2e^1mmz - 108a^4b^3c^4e^h^2j^k^2z - 108a^4b^3c^4d^2g^2k^21z - 108a^3b^3c^5d^2h^2j^1z + 108a^3b^3c^5d^2g^2k^1z - 54a^3b^5c^3d^2g^2jm^2z + 27a^3b^5c^3d^2g^2k^1z + 27a^3b^5c^3d^2e^1mmz - 216a^4b^3c^4e^f^2j^1^2z + 216a^3b^3c^5d^2e^2kmmz - 108a^4b^3c^4d^2g^2j^1^2z - 108a^3b^3c^5e^2g^2j^kz + 27a^3b^5c^3d^2e^2kmmz + 324a^4b^3c^4d^2e^2jm^2z + 216a^3b^3c^5e^2f^2hmmz - 108a^4b^3c^4e^g^2h^1^2z + 108a^3b^3c^5e^2g^2h^1z + 108a^3b^3c^5e^2f^2j^kz + 108a^3b^3c^5d^2f^2j^1z + 27a^3b^6c^2d^2e^2jm^2z - 216a^3b^3c^5e^2f^2h^1z + 108a^3b^3c^5f^2g^2h^1z - 27a^3b^4c^4d^2e^2j^1z + 216a^3b^3c^5d^2f^2g^2mmz - 108a^3b^3c^5e^2g^2h^2j^1z + 54a^3b^4c^4d^2f^2g^2mmz - 27a^3b^4c^4d^2g^2h^2kz - 27a^3b^4c^4d^2e^2hmmz - 27a^3b^4c^4d^2e^2j^kz - 108a^3b^3c^5d^2g^2h^2j^1z + 54a^3b^4c^4d^2e^2h^1z + 27a^3b^6c^2d^2e^2h^1^2z - 27a^3b^5c^3d^2e^2h^1z - 27a^3b^4c^4d^2e^2g^2mmz - 27a^3b^4c^4d^2e^2f^2mmz + 216a^2b^3c^6d^2f^2g^2j^1z - 108a^3b^3c^5d^2e^2g^2k^2z - 108a^2b^3c^6d^2e^2h^2j^1z + 108a^2b^3c^6d^2e^2g^2k^2z - 54a^3b^3c^5d^2f^2g^2j^1z - 27a^3b^5c^3d^2e^2g^2k^2z + 27a^3b^4c^4d^2e^2g^2k^2z + 27a^3b^3c^5d^2e^2h^2j^1z - 27a^3b^3c^5d^2e^2g^2k^2z - 108a^2b^3c^6d^2e^2g^2j^1z + 27a^3b^3c^5d^2e^2g^2j^1z - 108a^2b^3c^6d^2e^2f^2j^1z + 27a^3b^3c^5d^2e^2f^2j^1z - 432a^5c^4e^h^2j^1mmz + 432a^4c^5d^2e^2j^k^1z + 432a^4c^5e^2f^2h^2j^1z - 432a^4c^5d^2f^2g^2kmmz - 27a^3b^7c^3d^2e^2jm^2z - 54a^5b^2c^2j^2k^1mmz + 108a^5b^2c^2h^2k^21mmz + 108a^5b^2c^2g^2k^1^2mmz - 54a^5b^2c^2h^2j^1^2mmz + 378a^4b^2c^3f^2k^1mmz - 270a^5b^2c^2f^2k^1mm^2z - 189a^3b^4c^2f^2k^1mmz - 108a^5b^2c^2h^2j^kmm^2z - 108a^5b^2c^2g^2j^1mm^2z - 54a^4b^3c^2h^2j^2kmmz - 54a^4b^3c^2g^2j^21mmz - 162a^4b^3c^2e^2k^21mmz + 54a^4b^2c^3g^2j^kmmz + 27a^4b^3c^2h^2j^k^21z - 162a^4b^3c^2d^2k^1^2mmz + 108a^4b^2c^3g^2h^1mmz - 54a^3b^3c^3e^2j^1mmz + 27a^4b^3c^2g^2j^k^1^2z - 27a^3b^4c^2g^2h^1mmz - 270a^4b^2c^3f^2j^2k^1z + 189a^4b^3c^2e^2j^kmm^2z + 189a^4b^3c^2d^2j^1mm^2z - 162a^4b^2c^3e^2j^2kmmz - 162a^4b^2c^3d^2j^21mmz + 135a^3b^3c^3f^2j^k^1z + 108a^4b^2c^3g^2h^2kmmz + 54a^4b^3c^2f^2h^1^2mmz - 54a^4b^2c^3f^2h^21mmz + 54a^3b^4c^2f^2j^2k^1z - 27a^3b^4c^2g^2h^2kmmz + 27a^3b^4c^2e^2j^2kmmz + 27a^3b^4c^2d^2j^21mmz - 27a^2b^5c^2f^2j^k^1z - 270a^3b^2c^4d^2j^kmmz + 189a^4b^3c^2g^2h^2jm^2z - 162a^4b^2c^3g^2h^2jm^2z + 162a^4b^2c^3e^2j^k^21z + 162a^3b^3c^3f^2h^2kmmz + 162a^3b^3c^3f^2g^21mmz - 54a^4b^3c^2f^2h^2kmm^2z - 54a^4b^3c^2f^2g^21mm^2z - 54a^4b^3c^2e^2h^1mm^2z + 54a^4b^2c^3d^2j^k^2mmz + 54a^2b^4c^3d^2j^kmmz + 27a^3b^4c^2g^2h^2jm^2z - 27a^3b^4c^2e^2j^k^21z - 27a^2b^5c^2f^2h^2kmmz - 27a^2b^
\end{aligned}$$

$$\begin{aligned}
& ^5c^2f^2g^1m^*z + 162a^4b^2c^3d^*jk^1l^2z - 162a^3b^3c^3e^*g^2l^*m^*z + 108a^4b^2c^3e^*h^*k^2m^*z + 108a^3b^2c^4d^2h^1m^*z - 54a^4b^2c^3f^*g^*k^2m^*z - 27a^3b^4c^2e^*h^*k^2m^*z - 27a^3b^4c^2d^*jk^1l^2z \\
& + 27a^3b^3c^3g^2h^*j^1l^*z + 27a^2b^5c^2e^*g^2l^*m^*z - 27a^2b^4c^3d^2h^1m^*z + 270a^4b^2c^3f^*h^*j^1l^2z - 270a^3b^2c^4e^2h^*j^*m^*z - \\
& 162a^4b^2c^3e^*h^*k^1l^2z - 162a^3b^3c^3d^*h^2k^*m^*z + 162a^3b^2c^4e^2h^*k^1l^*z + 108a^4b^2c^3d^*g^1l^2m^*z + 108a^3b^2c^4e^2g^*k^*m^*z - \\
& 54a^4b^2c^3e^*f^1l^2m^*z - 54a^3b^4c^2f^*h^*j^1l^2z + 54a^3b^3c^3f^*h^2j^1l^*z - 54a^3b^3c^3e^*h^2j^*m^*z + 54a^3b^2c^4e^2f^1l^*m^*z + 54a^2b^4c^3e^2h^*j^*m^*z + 27a^3b^4c^2e^*h^*k^1l^2z - 27a^3b^4c^2d^*g^1l^2m^*z + 27a^3b^3c^3g^*h^2j^*k^*z + 27a^2b^5c^2d^*h^2k^*m^*z - 27a^2b^4c^3e^2h^*k^1l^*z - 27a^2b^4c^3e^2g^*k^*m^*z + 432a^4b^2c^3e^*g^*j^*m^2z + 432a^4b^2c^3d^*h^*j^*m^2z - 270a^4b^2c^3d^*g^*k^*m^2z - 216a^3b^4c^2e^*g^*j^*m^2z - 216a^3b^4c^2d^*h^*j^*m^2z + 216a^3b^3c^3e^*g^*j^2m^*z + 216a^3b^3c^3d^*h^*j^2m^*z - 162a^3b^2c^4e^*f^2k^*m^*z - 162a^3b^2c^4d^*f^2l^*m^*z - 108a^3b^2c^4f^2h^*j^*k^*z - 108a^3b^2c^4f^2g^*j^1l^*z + 54a^4b^2c^3e^*f^*k^*m^2z + 54a^4b^2c^3d^*f^1l^*m^2z + 54a^3b^4c^2d^*g^*k^*m^2z - 54a^3b^3c^3f^*h^*j^2k^*z - 54a^3b^3c^3f^*g^*j^2l^*z - 27a^2b^5c^2e^*g^*j^2m^*z - 27a^2b^5c^2d^*h^*j^2m^*z + 27a^2b^4c^3f^2h^*j^*k^*z + 27a^2b^4c^3f^2g^*j^1l^*z + 27a^2b^4c^3e^*f^2k^*m^*z + 27a^2b^4c^3d^*f^2l^*m^*z + 324a^2b^3c^4d^2g^*j^*m^*z - 270a^3b^2c^4d^*g^2j^*m^*z - 162a^3b^2c^4f^2g^*h^*m^*z + 162a^3b^2c^4e^*g^2j^1l^*z - 162a^2b^3c^4d^2e^1l^*m^*z - 135a^2b^3c^4d^2g^*k^1l^*z + 108a^3b^2c^4d^*g^2k^1l^*z + 54a^4b^2c^3f^*g^*h^*m^2z + 54a^3b^3c^3f^*g^*j^*k^2z - 54a^3b^2c^4f^*g^2j^*k^*z + 54a^2b^4c^3d^*g^2j^*m^*z - 54a^2b^3c^4d^2f^*k^*m^*z + 27a^3b^3c^3e^*h^*j^*k^2z + 27a^3b^3c^3d^*g^*k^2l^*z + 27a^2b^4c^3f^2g^*h^*m^*z - 27a^2b^4c^3e^*g^2j^1l^*z - 27a^2b^4c^3d^*g^2k^1l^*z + 27a^2b^3c^4d^2h^*j^1l^*z + 162a^3b^2c^4d^*h^2j^*k^*z - 162a^2b^3c^4d^*e^2k^*m^*z + 108a^3b^2c^4e^*g^2h^*m^*z + 54a^3b^3c^3e^*f^*j^1l^2z + 27a^3b^3c^3d^*g^*j^1l^2z - 27a^2b^4c^3e^*g^2h^*m^*z - 27a^2b^4c^3d^*h^2j^*k^*z + 27a^2b^3c^4e^2g^*j^*k^*z - 621a^3b^3c^3d^*e^*j^*m^2z + 594a^3b^2c^4d^*e^*j^2m^*z + 243a^2b^5c^2d^*e^*j^*m^2z - 243a^2b^4c^3d^*e^*j^2m^*z + 135a^3b^3c^3e^*g^*h^1l^2z - 108a^3b^2c^4e^*g^*h^2l^*z + 108a^3b^2c^4d^*d^*g^*h^2m^*z + 54a^3b^2c^4e^*f^*j^2k^*z + 54a^3b^2c^4e^*f^*h^2m^*z + 54a^3b^2c^4d^*g^*j^2k^*z + 54a^3b^2c^4d^*d^*f^*j^2l^*z - 54a^2b^3c^4e^2f^*h^*m^*z - 27a^2b^5c^2e^*g^*h^1l^2z + 27a^2b^4c^3e^*g^*h^2l^*z - 27a^2b^4c^3d^*g^*h^2m^*z - 27a^2b^3c^4e^2g^*h^1l^*z - 27a^2b^3c^4e^*f^2j^*k^*z - 27a^2b^3c^4d^*f^2j^1l^*z + 162a^2b^2c^5d^2e^*j^1l^*z + 54a^3b^2c^4f^*g^*h^*j^2z - 54a^3b^2c^4d^*f^*j^*k^2z + 54a^2b^3c^4e^*f^2h^*j^1l^*z + 54a^2b^2c^5d^2f^*j^*k^*z - 27a^2b^3c^4f^2g^*h^*j^*z - 270a^2b^2c^5d^2f^*g^*m^*z - 162a^3b^2c^4d^*g^*h^*k^2z + 162a^2b^2c^5d^2g^*h^*k^*z + 162a^2b^2c^5d^2e^2j^*k^*z + 108a^2b^2c^5d^2e^*h^*m^*z - 54a^2b^3c^4d^*d^*f^*g^2m^*z + 27a^2b^4c^3d^*g^*h^*k^2z + 27a^2b^3c^4e^*g^2h^*j^*z + 270a^3b^2c^4d^*e^*h^1l^2z - 270a^2b^2c^5d^2e^2h^1l^*z - 162a^2b^4c^3d^*e^*h^1l^2z + 108a^2b^3c^4d^*e^*h^2l^*z + 108a^2b^2c^5d^2e^2g^*m^*z
\end{aligned}$$

$$\begin{aligned}
& + 54a^2b^2c^5e^2f^2h^2j^2z + 27a^2b^3c^4d^2g^2h^2j^2z + 162a^2b^2c^5 \\
& *d^2e^2f^2m^2z - 54a^3b^2c^4d^2e^2f^2m^2z - 54a^2b^2c^5d^2f^2g^2k^2z + 13 \\
& 5a^2b^3c^4d^2e^2g^2k^2z - 108a^2b^2c^5d^2e^2g^2k^2z + 54a^2b^2c^5d^2 \\
& f^2g^2j^2z - 54a^2b^2c^5d^2e^2f^2j^2z - 9a^2b^7c^4d^2e^2l^3z - 36a^2b^2c^7d \\
& ^3e^2g^2z - 108a^6b^2c^2k^2l^2m^2z + 27a^5b^3c^2k^2l^2m^2z - 18a^5b^2 \\
& c^2j^2k^3m^2z - 27a^4b^3c^2j^3k^2l^2z - 108a^5b^2c^3h^2k^2m^2z - 10 \\
& 8a^5b^2c^3g^2l^2m^2z + 108a^5b^2c^3h^2k^2l^2z + 108a^5b^2c^3g^2k^2m \\
& ^2z + 90a^5b^2c^2f^2l^3m^2z - 18a^5b^2c^2h^2k^2l^3z + 18a^4b^2c^3 \\
& *h^3k^2l^2z + 18a^4b^2c^3h^3j^2m^2z - 108a^5b^2c^3h^2j^2l^2z + 18a^4b \\
& ^3c^2f^2k^3m^2z - 18a^3b^3c^3g^3j^2m^2z - 9a^4b^3c^2g^2k^3l^2z + 9a \\
& ^3b^3c^3g^3k^2l^2z + 252a^4b^2c^3f^2j^3m^2z + 216a^5b^2c^3f^2j^2m^2 \\
& z + 180a^3b^2c^4f^3j^2m^2z - 108a^4b^2c^4e^2k^2m^2z - 108a^4b^2c^4 \\
& d^2l^2m^2z + 90a^5b^2c^2e^2k^2m^3z + 90a^5b^2c^2d^2l^2m^3z - 90a^3b \\
& ^2c^4f^3k^2l^2z + 54a^3b^5c^2f^2j^2m^2z - 54a^3b^4c^2f^2j^3m^2z + 3 \\
& 6a^5b^2c^2f^2j^2m^3z + 36a^4b^2c^3h^2j^3k^2z + 36a^4b^2c^3g^2j^3l^2 \\
& z - 36a^2b^4c^3f^3j^2m^2z - 27a^2b^6c^2f^2j^2m^2z + 18a^2b^4c^3f \\
& ^3k^2l^2z - 216a^4b^2c^4d^2k^2m^2z + 108a^5b^2c^3d^2k^2m^2z - 108a^4b \\
& ^3c^2f^2j^2l^3z - 108a^4b^2c^4g^2h^2m^2z + 108a^2b^3c^4e^3j^2m^2z + \\
& 90a^5b^2c^2g^2h^2m^3z + 54a^4b^3c^2e^2k^2l^3z - 54a^2b^3c^4e^3k \\
& ^2l^2z + 234a^2b^2c^5d^3j^2m^2z - 144a^2b^2c^5d^3k^2l^2z + 90a^4b^2c \\
& ^3f^2j^2k^3z - 72a^4b^2c^3d^2k^3l^2z + 27a^4b^3c^2g^2h^2l^3z - 27a^3 \\
& *b^3c^3g^2h^3l^2z - 18a^3b^4c^2f^2j^2k^3z + 9a^3b^4c^2d^2k^3l^2z + 2 \\
& 16a^4b^2c^4f^2h^2l^2z - 216a^4b^2c^4e^2h^2m^2z + 108a^4b^2c^4g^2h^2 \\
& k^2z - 18a^4b^2c^3g^2h^2k^3z + 18a^3b^2c^4g^3h^2k^2z + 18a^3b^2c^4 \\
& f^2g^3m^2z + 9a^3b^4c^2g^2h^2k^3z - 9a^3b^3c^3e^2j^3k^2z - 9a^3b^3 \\
& *c^3d^2j^3l^2z - 144a^4b^3c^2e^2g^2m^3z - 144a^4b^3c^2d^2h^2m^3z - 10 \\
& 8a^3b^2c^5e^2g^2m^2z + 108a^3b^2c^5d^2j^2k^2z - 108a^3b^2c^5d^2h^2 \\
& *m^2z - 18a^2b^3c^4f^3h^2k^2z - 18a^2b^3c^4f^3g^2l^2z - 9a^3b^3c^3g \\
& ^2h^2j^3z - 216a^4b^2c^4d^2g^2m^2z + 144a^4b^2c^3e^2g^2l^3z - 126a^3 \\
& *b^2c^4d^2h^3l^2z - 108a^4b^2c^4d^2h^2l^2z - 108a^3b^2c^5f^2g^2k^2z \\
& - 108a^3b^2c^5e^2h^2k^2z - 90a^2b^2c^5e^3f^2m^2z + 72a^2b^2c^5e^3 \\
& *g^2l^2z - 63a^3b^4c^2e^2g^2l^3z - 36a^3b^4c^2d^2h^2l^3z + 27a^2b^4c \\
& ^3d^2h^3l^2z + 27a^2b^6c^2d^2g^2m^2z - 18a^4b^2c^3d^2h^2l^3z - 18a^3 \\
& *b^2c^4f^2h^3j^2z - 18a^3b^2c^4e^2h^3k^2z + 18a^2b^2c^5e^3h^2k^2z + \\
& 108a^3b^2c^5e^2h^2j^2z + 54a^3b^3c^3d^2h^2k^3z + 27a^3b^3c^3e^2g^2k \\
& ^3z - 27a^2b^3c^4e^2g^3k^2z + 27a^2b^3c^4d^2g^3l^2z - 27a^2b^4c^4d \\
& ^2g^2l^2z - 9a^2b^5c^2e^2g^2k^3z - 9a^2b^5c^2d^2h^2k^3z + 207a^3b^ \\
& 4c^2d^2e^2m^3z - 108a^2b^2c^6d^2e^2m^2z - 90a^4b^2c^3d^2e^2m^3z - 72 \\
& *a^3b^2c^4e^2g^2j^3z - 72a^3b^2c^4d^2h^2j^3z + 27a^2b^3c^5d^2e^2m^2 \\
& z + 18a^2b^2c^5e^2f^3k^2z + 18a^2b^2c^5d^2f^3l^2z + 9a^2b^4c^3e^2g \\
& ^2j^3z + 9a^2b^4c^3d^2h^2j^3z - 216a^3b^2c^5d^2e^2l^2z - 198a^3b^3c \\
& ^3d^2e^2l^3z + 108a^3b^2c^5d^2g^2j^2z - 108a^3b^2c^5d^2f^2k^2z + 72 \\
& a^2b^5c^2d^2e^2l^3z - 27a^2b^5c^3d^2e^2l^2z + 27a^2b^4c^4d^2g^2j^2z \\
& + 18a^2b^2c^5f^3g^2h^2z + 144a^3b^2c^4d^2e^2k^3z - 63a^2b^4c^3d^2 \\
& e^2k^3z + 27a^2b^4c^4d^2e^2k^2z - 9a^2b^3c^4e^2g^2h^3z - 108a^2b^2c^
\end{aligned}$$

$$\begin{aligned}
& 6d^2g^2hz + 81a^2b^3c^4de^j^3z + 27a^2b^3c^5d^2g^2hz - 27a^2b^2c^6d^2e^2j^z - 18a^2b^2c^5d^2g^3hz + 108a^2b^2c^6d^2e^2h^2z \\
& - 27a^2b^3c^5d^2e^2h^2z + 27a^2b^2c^6d^2f^2g^z - 18a^2b^2c^5d^2e^2h^3z - 216a^6c^3j^2k^1m^z + 216a^6c^3h^j^1l^2m^z + 216a^6c^3f^k^1m^2z - 216a^5c^4f^2k^1m^z - 216a^5c^4g^2j^k^1m^z + 216a^5c^4f^j^2k^1m^z \\
& + 216a^5c^4f^h^2l^1m^z + 216a^5c^4e^j^2k^1m^z + 216a^5c^4d^j^2l^1m^z + 216a^5c^4g^h^j^2m^z - 216a^5c^4e^j^k^2l^1z - 216a^5c^4d^j^k^2m^z + 216a^4c^5d^2j^k^1m^z - 18a^6b^2c^k^1m^3z + 216a^5c^4f^g^k^2m^z - 216a^5c^4d^j^k^1l^2z - 72a^6b^2c^2j^1l^3m^z + 18a^5b^3c^j^1l^3m^z - 216a^5c^4f^h^j^1l^2z + 216a^5c^4e^h^k^1l^2z + 216a^5c^4e^f^1l^2m^z - 216a^4c^5e^2h^k^1l^z + 216a^4c^5e^2h^j^1m^z - 216a^4c^5e^2f^1m^z - 216a^5c^4e^f^k^1m^2z + 216a^5c^4d^g^k^1m^2z - 216a^5c^4d^f^1m^2z + 216a^4c^5e^f^2k^1m^z + 216a^4c^5d^f^2l^1m^z + 108a^5b^2c^3j^3k^1l^z - 216a^5c^4f^g^h^1m^2z + 216a^4c^5f^2g^h^1m^z + 216a^4c^5f^g^2j^k^1z - 216a^4c^5e^g^2j^1l^z + 216a^4c^5d^g^2j^1m^z - 72a^6b^2c^2h^k^1m^3z - 72a^6b^2c^2g^1m^3z + 54a^5b^3c^h^k^1m^3z + 54a^5b^3c^g^1m^3z - 216a^4c^5d^h^2j^k^1z - 18a^4b^4c^f^1l^3m^z + 9a^4b^4c^h^k^1l^3z - 216a^4c^5e^f^j^2k^1z - 216a^4c^5e^f^h^2m^z - 216a^4c^5d^g^j^2k^1z - 216a^4c^5d^f^j^2l^1z - 216a^4c^5d^e^j^2m^z - 72a^5b^2c^3f^k^1m^z + 72a^4b^2c^4g^3j^1m^z + 36a^5b^2c^3g^k^1l^z - 36a^4b^2c^4g^3k^1l^z - 216a^4c^5f^g^h^j^2z + 216a^4c^5d^f^j^k^2z - 216a^3c^6d^2f^j^k^1z - 216a^3c^6d^2e^j^1l^z + 72a^4b^4c^f^j^1m^3z - 63a^4b^4c^e^k^1m^3z - 63a^4b^4c^d^1m^3z + 216a^4c^5d^g^h^k^2z - 216a^3c^6d^2g^h^k^1z + 216a^3c^6d^2f^g^1m^z - 216a^3c^6d^2e^j^k^1z + 144a^5b^2c^3f^j^1l^3z - 144a^3b^2c^5e^3j^1m^z - 72a^5b^2c^3e^k^1l^3z + 72a^3b^2c^5e^3k^1l^z - 63a^4b^4c^g^h^1m^3z + 18a^3b^5c^f^j^1l^3z - 18a^3b^5c^e^3j^1m^z - 9a^3b^5c^e^k^1l^3z + 9a^3b^5c^e^3k^1l^z - 216a^4c^5d^e^h^1l^2z - 216a^3c^6e^2f^h^j^1z + 216a^3c^6d^e^2h^1l^z - 126a^4b^4c^4d^3j^1m^z + 108a^4b^2c^4g^h^3l^z + 63a^4b^4c^4d^3k^1l^z + 36a^5b^2c^3g^h^1l^3z - 9a^3b^5c^g^h^1l^3z + 216a^4c^5d^e^f^1m^2z + 216a^3c^6d^f^2g^k^1z - 216a^3c^6d^e^f^2m^z + 36a^4b^2c^4e^j^3k^1z + 36a^4b^2c^4d^j^3l^1z - 216a^3c^6d^f^g^2j^1z + 72a^3b^5c^e^g^1m^3z + 72a^3b^5c^d^h^1m^3z + 72a^3b^2c^5f^3h^k^1z + 72a^3b^2c^5f^3g^1l^z + 36a^4b^2c^4g^h^j^3z + 18a^4b^4c^4e^3f^1m^z + 9a^2b^6c^e^g^1l^3z + 9a^2b^6c^d^h^1l^3z - 9a^4b^4c^4e^3h^k^1z - 9a^4b^4c^4e^3g^1l^z + 216a^3c^6d^e^f^j^2z - 144a^2b^2c^6d^3f^1m^z + 108a^3b^2c^5e^g^3k^1z - 108a^3b^2c^5d^g^3l^1z + 108a^2b^3c^5d^3f^1m^z - 72a^4b^2c^4d^h^k^3z + 72a^2b^2c^6d^3h^k^1z - 54a^2b^3c^5d^3h^k^1z + 36a^4b^2c^4e^g^k^3z - 36a^2b^2c^6d^3g^1l^z - 27a^2b^3c^5d^3g^1l^z - 81a^2b^6c^d^e^1l^3z + 216a^4b^2c^4d^e^1l^3z + 72a^2b^2c^6e^3f^j^1z + 72a^2b^2c^6d^e^3l^1z - 18a^2b^3c^5e^3f^j^1z - 18a^2b^3c^5d^e^3l^1z - 90a^2b^2c^6d^3f^j^1z + 72a^2b^2c^6d^3e^k^1z + 36a^3b^2c^5e^g^h^3z - 36a^2b^2c^6e^3g^h^1z + 9a^2b^6c^2d^e^k^3z + 9a^2b^3c^5e^3g^h^1z - 180a^3b^2c^5d^e^j^3z + 18a^2b^2c^6d^3g^h^1z - 9a^2b^5c^3d^e^j^3z + 18a^2b^2c^6d^e^3h^1z + 9a^2b^4c^4d^e^h^3z + 36a^2b^2c^6d^
\end{aligned}$$

$$\begin{aligned}
& e*g^3*z - 9*a*b^3*c^5*d*e*g^3*z - 18*a*b^2*c^6*d*e*f^3*z + 27*a^5*b^2*c^2*h \\
& ^2*l*m^2*z - 27*a^5*b^2*c^2*j*k^2*l^2*z + 27*a^4*b^3*c^2*h^2*k^2*m*z + 27*a \\
& ^4*b^3*c^2*g^2*l^2*m*z + 27*a^5*b^2*c^2*g*k^2*m^2*z - 27*a^4*b^3*c^2*h^2*k* \\
& l^2*z - 27*a^4*b^3*c^2*g^2*k*m^2*z - 135*a^4*b^2*c^3*e^2*l*m^2*z + 27*a^5*b \\
& ^2*c^2*e*l^2*m^2*z + 27*a^4*b^3*c^2*h*j^2*l^2*z - 27*a^4*b^2*c^3*h^2*j^2*l* \\
& z + 27*a^3*b^4*c^2*e^2*l*m^2*z - 270*a^4*b^3*c^2*f*j^2*m^2*z - 270*a^4*b^2*c \\
& ^3*f^2*j*m^2*z + 162*a^3*b^4*c^2*f^2*j*m^2*z - 108*a^3*b^3*c^3*f^2*j^2*m*z \\
& - 27*a^4*b^2*c^3*h^2*j*k^2*z - 27*a^4*b^2*c^3*g^2*j*l^2*z + 27*a^3*b^3*c^3 \\
& *e^2*k^2*m*z + 27*a^3*b^3*c^3*d^2*l^2*m*z + 27*a^2*b^5*c^2*f^2*j^2*m*z + 16 \\
& 2*a^3*b^3*c^3*d^2*k*m^2*z - 27*a^4*b^3*c^2*d*k^2*m^2*z - 27*a^4*b^2*c^3*g*j \\
& ^2*k^2*z + 27*a^3*b^3*c^3*g^2*h^2*m*z - 27*a^2*b^5*c^2*d^2*k*m^2*z + 162*a^ \\
& 3*b^2*c^4*d^2*k^2*l*z - 108*a^4*b^2*c^3*g*h^2*l^2*z - 27*a^4*b^2*c^3*e*j^2* \\
& l^2*z + 27*a^3*b^4*c^2*g*h^2*l^2*z + 27*a^3*b^2*c^4*e^2*j^2*l*z - 27*a^2*b^ \\
& 4*c^3*d^2*k^2*l*z - 162*a^3*b^3*c^3*f^2*h*l^2*z + 162*a^3*b^3*c^3*e^2*h*m^2 \\
& *z - 135*a^4*b^2*c^3*e*h^2*m^2*z + 135*a^3*b^2*c^4*f^2*h^2*l*z + 27*a^3*b^4 \\
& *c^2*e*h^2*m^2*z - 27*a^3*b^3*c^3*g^2*h*k^2*z - 27*a^3*b^2*c^4*e^2*j*k^2*z \\
& - 27*a^3*b^2*c^4*d^2*j*l^2*z + 27*a^2*b^5*c^2*f^2*h*l^2*z - 27*a^2*b^5*c^2* \\
& e^2*h*m^2*z - 27*a^2*b^4*c^3*f^2*h^2*l*z - 27*a^3*b^2*c^4*g^2*h^2*j*z + 27* \\
& a^2*b^3*c^4*e^2*g^2*m*z - 27*a^2*b^3*c^4*d^2*j^2*k*z + 27*a^2*b^3*c^4*d^2*h \\
& ^2*m*z + 351*a^3*b^2*c^4*d^2*g*m^2*z - 189*a^2*b^4*c^3*d^2*g*m^2*z + 162*a^ \\
& 3*b^3*c^3*d*g^2*m^2*z - 162*a^3*b^2*c^4*e^2*g*l^2*z + 135*a^3*b^3*c^3*d*h^2 \\
& *l^2*z + 135*a^3*b^2*c^4*f^2*g*k^2*z - 27*a^2*b^5*c^2*d*h^2*l^2*z - 27*a^2* \\
& b^5*c^2*d*g^2*m^2*z - 27*a^2*b^4*c^3*f^2*g*k^2*z + 27*a^2*b^4*c^3*e^2*g*l^2 \\
& *z + 27*a^2*b^3*c^4*f^2*g^2*k*z + 27*a^2*b^3*c^4*e^2*h^2*k*z + 135*a^3*b^2* \\
& c^4*e*f^2*l^2*z - 108*a^3*b^2*c^4*e*g^2*k^2*z + 108*a^2*b^2*c^5*d^2*g^2*l*z \\
& + 27*a^3*b^2*c^4*e*h^2*j^2*z + 27*a^2*b^4*c^3*e*g^2*k^2*z - 27*a^2*b^4*c^3 \\
& *e*f^2*l^2*z - 27*a^2*b^3*c^4*e^2*h*j^2*z - 27*a^2*b^2*c^5*e^2*f^2*l*z - 27 \\
& *a^2*b^2*c^5*e^2*g^2*j*z - 27*a^2*b^2*c^5*d^2*h^2*j*z + 162*a^2*b^3*c^4*d*e \\
& ^2*l^2*z - 135*a^2*b^2*c^5*d^2*g*j^2*z - 27*a^2*b^3*c^4*d*g^2*j^2*z + 27*a^ \\
& 2*b^3*c^4*d*f^2*k^2*z - 162*a^2*b^2*c^5*d^2*e*k^2*z - 27*a^2*b^2*c^5*e*f^2* \\
& h^2*z - 72*a^7*c^2*k*l*m^3*z + 9*a^5*b^4*k*l*m^3*z + 72*a^6*c^3*j*k^3*m*z - \\
& 72*a^6*c^3*h*k*l^3*z - 72*a^6*c^3*f*l^3*m*z - 72*a^5*c^4*h^3*k*l*z - 72*a^ \\
& 5*c^4*h^3*j*m*z - 9*a^4*b^5*h*k*m^3*z - 9*a^4*b^5*g*l*m^3*z - 144*a^6*c^3*f \\
& *j*m^3*z - 144*a^5*c^4*h*j^3*k*z - 144*a^5*c^4*g*j^3*l*z - 144*a^5*c^4*f*j^ \\
& 3*m*z - 144*a^4*c^5*f^3*j*m*z + 72*a^6*c^3*e*k*m^3*z + 72*a^6*c^3*d*l*m^3*z \\
& + 72*a^4*c^5*f^3*k*l*z + 72*a^6*c^3*g*h*m^3*z + 18*b^6*c^3*d^3*j*m*z - 18* \\
& a^3*b^6*f*j*m^3*z - 9*b^6*c^3*d^3*k*l*z + 9*a^3*b^6*e*k*m^3*z + 9*a^3*b^6*d \\
& *l*m^3*z + 144*a^5*c^4*d*k^3*l*z + 144*a^3*c^6*d^3*k*l*z - 72*a^5*c^4*f*j*k \\
& ^3*z - 72*a^3*c^6*d^3*j*m*z + 9*a^3*b^6*g*h*m^3*z - 72*a^5*c^4*g*h*k^3*z - \\
& 72*a^4*c^5*g^3*h*k*z - 72*a^4*c^5*f*g^3*m*z - 108*a^5*b*c^3*j^4*m*z + 63*a^ \\
& 6*b^2*c*j*m^4*z + 36*a^6*b*c^2*k*l^4*z - 9*a^5*b^3*c*k*l^4*z - 144*a^5*c^4* \\
& e*g*l^3*z - 144*a^3*c^6*e^3*g*l*z + 72*a^5*c^4*d*h*l^3*z + 72*a^4*c^5*f*h^3 \\
& *j*z + 72*a^4*c^5*e*h^3*k*z + 72*a^4*c^5*d*h^3*l*z + 72*a^3*c^6*e^3*h*k*z + \\
& 72*a^3*c^6*e^3*f*m*z - 18*b^5*c^4*d^3*f*m*z + 9*b^5*c^4*d^3*h*k*z + 9*b^5* \\
& c^4*d^3*g*l*z - 9*a^2*b^7*e*g*m^3*z - 9*a^2*b^7*d*h*m^3*z + 144*a^4*c^5*e*g
\end{aligned}$$

$$\begin{aligned}
& *j^3*z + 144*a^4*c^5*d*h*j^3*z - 72*a^5*c^4*d*e*m^3*z - 72*a^3*c^6*e*f^3*k* \\
& z - 72*a^3*c^6*d*f^3*l*z + 144*a^6*b*c^2*f*m^4*z - 108*a^5*b^3*c*f*m^4*z - \\
& 72*a^3*c^6*f^3*g*h*z + 36*a^5*b*c^3*h*k^4*z - 36*a^3*b*c^5*f^4*m*z + 18*b^4 \\
& *c^5*d^3*f*j*z - 9*b^4*c^5*d^3*e*k*z + 9*a^4*b^4*c*g*l^4*z - 144*a^4*c^5*d* \\
& e*k^3*z - 144*a^2*c^7*d^3*e*k*z + 72*a^2*c^7*d^3*f*j*z - 9*b^4*c^5*d^3*g*h* \\
& z + 72*a^3*c^6*d*g^3*h*z + 72*a^2*c^7*d^3*g*h*z - 72*a^5*b*c^3*d*l^4*z - 72 \\
& *a^4*b*c^4*f*j^4*z + 45*a*b^2*c^6*d^4*l*z - 36*a^2*b*c^6*e^4*k*z - 9*a^3*b^ \\
& 5*c*d*l^4*z + 9*a*b^3*c^5*e^4*k*z - 72*a^3*c^6*d*e*h^3*z - 72*a^2*c^7*d*e^3 \\
& *h*z + 9*b^3*c^6*d^3*e*g*z + 72*a^2*c^7*d*e*f^3*z + 36*a^3*b*c^5*d*h^4*z - \\
& 9*a*b^2*c^6*e^4*g*z + 36*a*b*c^7*d^3*f^2*z + 90*a^5*b^2*c^2*j^3*m^2*z + 45* \\
& a^5*b^2*c^2*j^2*l^3*z + 9*a^4*b^3*c^2*j^2*k^3*z - 9*a^4*b^3*c^2*h^3*m^2*z - \\
& 45*a^4*b^2*c^3*g^3*m^2*z + 9*a^3*b^4*c^2*g^3*m^2*z + 198*a^4*b^3*c^2*f^2*m \\
& ^3*z - 108*a^3*b^3*c^3*f^3*m^2*z + 18*a^2*b^5*c^2*f^3*m^2*z - 117*a^4*b^2*c \\
& ^3*f^2*l^3*z + 117*a^3*b^2*c^4*e^3*m^2*z + 63*a^3*b^4*c^2*f^2*l^3*z - 63*a^ \\
& 2*b^4*c^3*e^3*m^2*z - 171*a^2*b^3*c^4*d^3*m^2*z - 54*a^3*b^3*c^3*f^2*k^3*z \\
& + 9*a^3*b^2*c^4*g^3*j^2*z + 9*a^2*b^5*c^2*f^2*k^3*z + 18*a^3*b^2*c^4*f^2*j^ \\
& 3*z + 18*a^2*b^3*c^4*f^3*j^2*z - 9*a^2*b^4*c^3*f^2*j^3*z - 45*a^2*b^2*c^5*e \\
& ^3*j^2*z + 9*a^2*b^3*c^4*f^2*h^3*z - 9*a^2*b^2*c^5*f^2*g^3*z + 9*a*b^8*d*e* \\
& m^3*z - 36*a*b*c^7*d^4*h*z - 108*a^6*c^3*h^2*l*m^2*z + 108*a^6*c^3*j*k^2*l^ \\
& 2*z - 108*a^6*c^3*g*k^2*m^2*z - 108*a^6*c^3*e*l^2*m^2*z + 108*a^5*c^4*h^2*j \\
& ^2*l*z + 108*a^5*c^4*e^2*l*m^2*z + 216*a^5*c^4*f^2*j*m^2*z + 108*a^5*c^4*h^ \\
& 2*j*k^2*z + 108*a^5*c^4*g^2*j*l^2*z + 108*a^5*c^4*g*j^2*k^2*z - 216*a^4*c^5 \\
& *d^2*k^2*l*z + 108*a^5*c^4*e*j^2*l^2*z - 108*a^4*c^5*e^2*j^2*l*z - 9*a^6*b^ \\
& 2*c*l^3*m^2*z + 108*a^5*c^4*e*h^2*m^2*z - 108*a^4*c^5*f^2*h^2*l*z + 108*a^4 \\
& *c^5*e^2*j*k^2*z + 108*a^4*c^5*d^2*j*l^2*z - 144*a^6*b*c^2*j^2*m^3*z + 108* \\
& a^4*c^5*g^2*h^2*j*z - 27*a^4*b^4*c*j^3*m^2*z + 27*a^4*b^3*c^2*j^4*m*z + 9*a \\
& ^5*b^2*c^2*k^4*l*z + 216*a^4*c^5*e^2*g*l^2*z - 108*a^4*c^5*f^2*g*k^2*z - 10 \\
& 8*a^4*c^5*d^2*g*m^2*z - 9*a^4*b^4*c*j^2*l^3*z - 108*a^4*c^5*e*h^2*j^2*z - 1 \\
& 08*a^4*c^5*e*f^2*l^2*z + 108*a^3*c^6*e^2*f^2*l*z - 36*a^5*b*c^3*j^2*k^3*z + \\
& 36*a^5*b*c^3*h^3*m^2*z + 108*a^3*c^6*e^2*g^2*j*z + 108*a^3*c^6*d^2*h^2*j*z \\
& - 216*a^5*b*c^3*f^2*m^3*z + 144*a^4*b*c^4*f^3*m^2*z + 108*a^3*c^6*d^2*g*j^ \\
& 2*z - 72*a^3*b^5*c*f^2*m^3*z - 45*a^5*b^2*c^2*g*l^4*z - 9*a^4*b^3*c^2*h*k^4 \\
& *z - 9*a^3*b^2*c^4*g^4*l*z + 9*a^2*b^3*c^4*f^4*m*z + 216*a^3*c^6*d^2*e*k^2* \\
& z - 9*a^2*b^6*c*f^2*l^3*z + 9*a*b^6*c^2*e^3*m^2*z + 108*a^3*c^6*e*f^2*h^2*z \\
& + 108*a^3*b*c^5*d^3*m^2*z + 108*a^2*c^7*d^2*e^2*j*z + 72*a^4*b*c^4*f^2*k^3 \\
& *z + 72*a*b^5*c^3*d^3*m^2*z - 72*a^3*b*c^5*f^3*j^2*z + 54*a^4*b^3*c^2*d*l^4 \\
& *z - 45*a^4*b^2*c^3*e*k^4*z + 18*a^3*b^3*c^3*f*j^4*z + 9*a^3*b^4*c^2*e*k^4* \\
& z - 9*a^2*b^2*c^5*f^4*j*z - 108*a^2*c^7*d^2*f^2*g*z + 9*a^3*b^2*c^4*g*h^4*z \\
& + 9*a*b^4*c^4*e^3*j^2*z - 72*a^2*b*c^6*d^3*j^2*z + 54*a*b^3*c^5*d^3*j^2*z \\
& - 36*a^3*b*c^5*f^2*h^3*z - 9*a^2*b^3*c^4*d*h^4*z + 9*a^2*b^2*c^5*e*g^4*z + \\
& 9*a*b^2*c^6*e^3*f^2*z + 36*a^7*c^2*l^3*m^2*z + 72*a^6*c^3*j^3*m^2*z - 36*a^ \\
& 6*c^3*j^2*l^3*z + 9*a^4*b^5*j^2*m^3*z + 36*a^5*c^4*g^3*m^2*z + 36*a^5*c^4*f \\
& ^2*l^3*z - 36*a^4*c^5*e^3*m^2*z - 9*b^7*c^2*d^3*m^2*z + 9*a^2*b^7*f^2*m^3*z \\
& - 36*a^4*c^5*g^3*j^2*z + 72*a^4*c^5*f^2*j^3*z + 36*a^3*c^6*e^3*j^2*z - 9*b \\
& ^5*c^4*d^3*j^2*z + 36*a^3*c^6*f^2*g^3*z - 9*a^4*b^2*c^3*j^5*z - 36*a^2*c^7*
\end{aligned}$$



$$\begin{aligned}
& e^3 f^2 z - 9 b^3 c^6 d^3 f^2 z + 36 a^7 c^2 j m^4 z - 36 a^6 c^3 k^4 l z - \\
& 18 a^5 b^4 j m^4 z + 36 a^6 c^3 g^1 l^4 z + 36 a^4 c^5 g^4 l z + 18 a^4 b^5 f m^4 z - 9 b^4 c^5 d^4 l z + 36 a^5 c^4 e e k^4 z + 36 a^3 c^6 f^4 j z - 36 a^2 c^7 d^4 l z - 36 a^4 c^5 g^4 h z + 9 b^3 c^6 d^4 h z - 36 a^3 c^6 e e g^4 z + 36 a^2 c^7 e^4 g z - 9 b^2 c^7 d^4 e z - 36 a^7 b c m^5 z + 36 a c^8 d^4 e z + 9 a^6 b^3 m^5 z + 36 a^5 c^4 j^5 z + 9 a^4 b^3 c g h j k l m - 9 a^3 b^4 c e g j k l m - 9 a^3 b^4 c d h j k l m - 9 a^3 b^4 c f g h k l m + 36 a^4 b c^3 d e j k l m + 9 a^2 b^5 c d e j k l m + 36 a^4 b c^3 e f h j k l m + 36 a^4 b c^3 e f g k l m + 36 a^4 b c^3 d f h k l m + 9 a^2 b^5 c e e f g k l m + 9 a^2 b^5 c d f h k l m + 36 a^3 b c^4 d e f j k l + 9 a b^5 c^2 d e f j k l + 36 a^3 b c^4 d e g h k l + 36 a^3 b c^4 d e f h k m + 36 a^3 b c^4 d e f g l m + 9 a b^5 c^2 d e f h k m + 9 a b^5 c^2 d e f g l m - 9 a b^4 c^3 d e f h j k - 9 a b^4 c^3 d e f g j l - 9 a b^4 c^3 d e f g h m + 9 a b^3 c^4 d e f g h j - 9 a b^6 c d e f k l m + 18 a^4 b^2 c^2 e g j k l m + 18 a^4 b^2 c^2 d h j k l m + 18 a^4 b^2 c^2 f g h k l m - 36 a^3 b^3 c^2 d e j k l m - 36 a^3 b^3 c^2 e f g k l m - 36 a^3 b^3 c^2 d f h k l m + 9 a^3 b^3 c^2 f g h j k l + 9 a^3 b^3 c^2 e g h j k m + 9 a^3 b^3 c^2 d g h j l m - 108 a^3 b^2 c^3 d e f k l m + 54 a^2 b^4 c^2 d e f k l m - 36 a^3 b^2 c^3 d f g j k m + 18 a^3 b^2 c^3 e f g j k l + 18 a^3 b^2 c^3 d f h j k l + 18 a^3 b^2 c^3 d e h j k m + 18 a^3 b^2 c^3 d e g j l m - 9 a^2 b^4 c^2 e e f g j k l - 9 a^2 b^4 c^2 d f h j k l - 9 a^2 b^4 c^2 d e h j k m - 9 a^2 b^4 c^2 d e g j l m + 18 a^3 b^2 c^3 e e f g h k m + 18 a^3 b^2 c^3 d f g h l m - 9 a^2 b^4 c^2 e e f g h k m - 9 a^2 b^4 c^2 d f g h l m - 36 a^2 b^3 c^3 d e f j k l - 36 a^2 b^3 c^3 d e f h k m - 36 a^2 b^3 c^3 d e f g l m + 9 a^2 b^3 c^3 e e f g h j k + 9 a^2 b^3 c^3 d f g h j l + 9 a^2 b^3 c^3 d e e g h j m + 18 a^2 b^2 c^4 d e f h j k + 18 a^2 b^2 c^4 d e f g j l + 18 a^2 b^2 c^4 d e f g h m - 9 a^5 b^2 c h j k^2 l m - 9 a^5 b^2 c g j k l^2 m + 27 a^5 b^2 c f j k l m^2 - 9 a^4 b^3 c f j^2 k l m + 9 a^3 b^4 c f^2 j k l m - 18 a^5 b c^2 e j k^2 l m - 9 a^5 b^2 c g h k l m^2 + 9 a^4 b^3 c e j k^2 l m - 18 a^5 b c^2 f h k^2 l m - 18 a^5 b c^2 d j k l^2 m + 9 a^4 b^3 c f h k^2 l m + 9 a^4 b^3 c d j k l^2 m + 36 a^5 b c^2 e h k l^2 m - 36 a^4 b c^3 e^2 h k l m + 18 a^5 b c^2 f h j l^2 m - 18 a^5 b c^2 f g k l^2 m - 18 a^4 b^3 c e h k l^2 m + 9 a^4 b^3 c f g k l^2 m + 9 a^3 b^4 c e h^2 k l m - 9 a^2 b^5 c e^2 h k l m - 54 a^5 b c^2 e h j l m^2 - 18 a^5 b c^2 e g k l m^2 - 18 a^5 b c^2 d h k l m^2 + 18 a^4 b^3 c e h j l m^2 - 9 a^4 b^3 c f h j k m^2 - 9 a^4 b^3 c f g j l m^2 + 9 a^4 b^3 c e g k l m^2 + 9 a^4 b^3 c d h k l m^2 + 18 a^4 b c^3 f g^2 j k m - 18 a^4 b c^3 e g^2 j l m + 18 a^3 b^4 c d g k^2 l m - 9 a^3 b^4 c e f k^2 l m - 9 a^2 b^5 c d g^2 k l m - 18 a^4 b c^3 f g^2 h l m - 18 a^4 b c^3 d h^2 j k m - 9 a^3 b^4 c d f k l^2 m - 54 a^4 b c^3 d g j^2 k m - 18 a^4 b c^3 f g h^2 k m - 18 a^4 b c^3 e g j^2 k l - 18 a^4 b c^3 d h j^2 k l - 18 a^3 b^4 c d g j k m^2 + 9 a^3 b^4 c e f j k m^2 + 9 a^3 b^4 c d f j l m^2 - 9 a^3 b^4 c d e k l m^2 - 54 a^3 b c^4 d^2 f j k m + 36 a^4 b c^3 d g j k^2 l - 36 a^3 b c^4 d^2 g j k l - 18 a^4 b c^3 e f j k^2 l + 18 a^4 b c^3 d f j k^2 m - 18 a^3 b c^4 d^2 e j l m + 9 a^3 b^4 c f g h j m^2 - 9 a b^5 c^2 d^2 g j k l + 36 a^4 b c^3 d g h k^2
\end{aligned}$$

$$\begin{aligned}
& m - 36a^3b^3c^4d^2g^*h^*k^*m + 18a^4b^3c^3e^*g^*h^*k^2*1 - 18a^4b^3c^3e^*f^*h^*k^2*m - 18a^4b^3c^3d^*f^*j^*k^*1^2 - 18a^3b^3c^4d^2*f^*h^*1*m - 18a^3b^3c^4d^2e^2*j^*k^*m - 9a^3b^5c^2d^2g^*h^*k^*m - 54a^4b^3c^3d^2g^*h^*k^*1^2 - 54a^3b^3c^4e^2*f^*h^*j^*m - 18a^4b^3c^3d^2*f^*g^*1^2*m - 18a^3b^3c^4e^2*f^*g^*k^*m - 54a^4b^3c^3d^2*f^*g^*k^*m^2 - 36a^4b^3c^3e^*f^*g^*j^*m^2 - 36a^4b^3c^3d^2*f^*h^*j^*m^2 + 36a^3b^3c^4e^*f^2*g^*j^*m + 36a^3b^3c^4d^2*f^2*h^*j^*m - 18a^4b^3c^3d^2e^*h^*k^*m^2 - 18a^4b^3c^3d^2e^*g^*1^2*m^2 + 18a^3b^3c^4e^*f^2*h^*j^*1 - 18a^3b^3c^4e^*f^2*g^*k^*1 - 18a^3b^3c^4d^2*f^2*h^*k^*1 + 18a^3b^3c^4d^2*f^2*g^*k^*m - 9a^2b^5c^2e^*f^*g^*j^*m^2 - 9a^2b^5c^2d^2*f^*h^*j^*m^2 - 54a^3b^3c^4d^2*f^*g^2*j^*m - 18a^3b^3c^4e^*f^*g^2*j^*1 - 18a^3b^4c^3d^2*f^*g^*j^*m + 9a^3b^4c^3d^2g^*h^*j^*k + 9a^3b^4c^3d^2f^*g^*k^*1 + 9a^3b^4c^3d^2e^*g^*k^*m - 9a^3b^4c^3d^2e^*f^*1*m - 18a^3b^3c^4e^*f^*g^2*h^*m - 18a^3b^3c^4d^2*f^*h^2*j^*k - 9a^3b^4c^3d^2e^2*f^*k^*m + 18a^3b^3c^4d^2*f^*g^*j^2*k - 18a^3b^3c^4d^2*f^*g^*h^2*m - 18a^3b^3c^4d^2e^*h^*j^2*k - 18a^3b^3c^4d^2e^*g^*j^2*1 + 18a^3b^4c^3d^2e^*f^2*j^*m - 9a^3b^5c^2d^2e^*f^*j^2*m - 9a^3b^4c^3d^2e^*f^2*k^*1 - 18a^2b^3c^5d^2e^*f^*j^*1 - 9a^3b^3c^4d^2e^*g^*j^*k + 9a^3b^3c^4d^2e^*f^*j^*1 - 54a^2b^3c^5d^2e^*g^*h^*1 - 18a^2b^3c^5d^2e^*f^*h^*m - 18a^2b^3c^5d^2e^2*f^*j^*k + 18a^3b^3c^4d^2e^*g^*h^*1 - 9a^3b^3c^4d^2*f^*g^*h^*k + 9a^3b^3c^4d^2e^*f^*h^*m + 9a^3b^3c^4d^2e^2*f^*j^*k - 36a^3b^3c^4d^2e^*f^*h^*1^2 + 36a^2b^3c^5d^2e^2*f^*h^*1 + 18a^2b^3c^5d^2e^2g^*h^*k - 18a^2b^3c^5d^2e^2f^*g^*m - 18a^3b^3c^4d^2e^2*f^*h^*1 - 9a^3b^5c^2d^2e^*f^*h^*1^2 + 9a^3b^4c^3d^2e^*f^*h^2*1 + 9a^3b^3c^4d^2e^2*f^*g^*m - 18a^2b^3c^5d^2e^*f^2*h^*k - 18a^2b^3c^5d^2e^*f^2*g^*1 + 9a^3b^3c^4d^2e^*f^2*h^*k + 9a^3b^3c^4d^2e^*f^2*g^*1 + 27a^3b^2c^5d^2e^*f^*g^*k + 9a^3b^4c^3d^2e^*f^*g^*k^2 - 9a^3b^3c^4d^2e^*f^*g^2*k - 9a^3b^2c^5d^2e^*f^*h^*j - 9a^3b^2c^5d^2e^2*f^*g^*j - 9a^3b^2c^5d^2e^*f^2*g^*h + 72a^4b^2c^4d^2*f^*g^*j^*k^*m + 72a^4b^2c^4d^2e^*f^*k^*1*m + 9a^3b^6c^2d^2g^*k^*1*m + 9a^3b^6c^2d^2e^*f^*j^*m^2 - 27a^4b^2c^2f^2*j^*k^*1*m - 9a^4b^2c^2g^2*h^*j^*1*m + 36a^3b^3c^2e^2*h^*k^*1*m - 18a^4b^2c^2e^*h^2*k^*1*m - 9a^4b^2c^2g^*h^2*j^*k^*m + 18a^4b^2c^2f^*h^*j^2*k^*m + 18a^4b^2c^2f^*g^*j^2*1*m - 18a^4b^2c^2e^*h^*j^2*1*m - 9a^4b^2c^2g^*h^*j^2*k^*1 - 9a^3b^3c^2f^2*h^*j^*k^*m - 9a^3b^3c^2f^2g^*j^*1*m - 63a^4b^2c^2d^2g^*k^2*1*m + 63a^3b^2c^3d^2g^*k^*1*m - 45a^2b^4c^2d^2g^*k^*1*m + 36a^4b^2c^2e^*f^*k^2*1*m + 27a^3b^3c^2d^2g^2*k^*1*m - 9a^4b^2c^2f^*h^*j^*k^2*1 - 9a^4b^2c^2e^*h^*j^*k^2*m + 9a^3b^3c^2e^*g^2*j^*1*m - 9a^3b^2c^3d^2h^*j^*1*m + 36a^4b^2c^2d^2*f^*k^*1^2*m + 27a^4b^2c^2e^*h^*j^*k^*1^2 - 27a^3b^2c^3e^2*h^*j^*k^*1 - 18a^3b^2c^3e^2*f^*j^*1*m - 9a^4b^2c^2f^*g^*j^*k^*1^2 - 9a^4b^2c^2d^2g^*j^*1^2*m + 9a^3b^3c^2f^*g^2*h^*1*m - 9a^3b^3c^2e^*h^2*j^*k^*1 + 9a^3b^3c^2d^2h^2*j^*k^*m - 9a^3b^2c^3e^2g^*j^*k^*m + 9a^2b^4c^2e^2h^*j^*k^*1 + 72a^4b^2c^2d^2g^*j^*k^*m^2 + 36a^4b^2c^2d^2e^*k^*1*m^2 + 27a^4b^2c^2e^*g^*h^*1^2*m - 27a^4b^2c^2e^*f^*j^*k^*m^2 - 27a^4b^2c^2d^2*f^*j^*1*m^2 - 27a^3b^2c^3e^2g^*h^*1*m + 27a^3b^2c^3e^*f^2*j^*k^*m + 27a^3b^2c^3d^2*f^2*j^*1*m + 18a^3b^3c^2d^2g^*j^2*k^*m + 9a^3b^3c^2f^*g^*h^2*k^*m + 9a^3b^3c^2e^*g^*j^2*k^*1 - 9a^3b^3c^2e^*g^*h^2*1*m - 9a^3b^3c^2e^*f^*j^2*k^*m + 9a^3b^3c^2d^2h^*j^2*k^*1 - 9a^3b^3c^2d^2*f^*j^2*1*m + 9a^2b^4c^2e^2g^*h^*1*m + 36a^2b^3c^3d^2g^*j^*k^*1 - 27a^4b^2c^2f^*g^*h^*j^*m^2 + 27a^3b^2c^3f^2g^*h^*j^*m - 18a^4b^
\end{aligned}$$

$$\begin{aligned}
&^2c^2efh^1m^2 - 18a^3b^3c^2d^2g^2jk^2l - 18a^3b^2c^3d^2g^2jk^2l + 18a^2b^3c^3d^2f^2jk^2m - 9a^4b^2c^2e^2g^2hk^2m^2 - 9a^4b^2c^2d^2g^2h^1m^2 - 9a^3b^3c^2f^2g^2hk^2m + 9a^3b^3c^2ef^2jk^2l - 9a^3b^2c^3f^2g^2hk^2l + 9a^2b^4c^2d^2g^2jk^2l + 9a^2b^3c^3d^2e^2j^1m + 36a^3b^2c^3ef^2g^2l^1m + 36a^2b^3c^3d^2g^2hk^2m - 18a^3b^3c^2d^2g^2hk^2m - 18a^3b^2c^3d^2g^2h^2k^2m + 9a^3b^3c^2ef^2hk^2m + 9a^3b^3c^2d^2f^2jk^2l^2 - 9a^3b^2c^3f^2g^2h^2j^1l - 9a^3b^2c^3e^2g^2h^2j^1m - 9a^2b^4c^2ef^2g^2l^1m + 9a^2b^4c^2d^2g^2h^2k^2m + 9a^2b^3c^3d^2f^2h^1m + 9a^2b^3c^3d^2e^2j^2k^2m + 36a^3b^2c^3d^2f^2h^2k^2m + 36a^3b^2c^3d^2e^2j^2k^2l + 18a^3b^3c^2d^2g^2hk^2l^2 + 18a^3b^2c^3e^2g^2h^2j^1l + 18a^3b^2c^3ef^2h^2k^2l - 18a^3b^2c^3ef^2h^2j^1m - 18a^3b^2c^3d^2g^2h^2k^2l + 18a^3b^2c^3d^2e^2h^2l^1m + 18a^2b^3c^3e^2f^2h^2j^1m - 9a^3b^3c^2e^2g^2h^2j^1l^2 - 9a^3b^3c^2ef^2hk^2l^2 + 9a^3b^3c^2d^2f^2g^2l^2m - 9a^3b^3c^2d^2e^2h^2l^2m - 9a^3b^2c^3f^2g^2h^2j^2k - 9a^3b^2c^3d^2g^2h^2j^2m - 9a^2b^4c^2d^2f^2h^2k^2m - 9a^2b^4c^2d^2e^2j^2k^2l - 9a^2b^3c^3e^2g^2h^2j^1l - 9a^2b^3c^3e^2f^2hk^2l + 9a^2b^3c^3e^2f^2g^2k^2m - 9a^2b^3c^3d^2e^2h^2l^1m + 36a^3b^3c^2ef^2g^2j^2m^2 + 36a^3b^3c^2d^2f^2h^2j^2m^2 + 18a^3b^3c^2d^2f^2g^2k^2m^2 - 18a^3b^2c^3ef^2g^2j^2m^2 - 18a^3b^2c^3d^2f^2h^2j^2m - 18a^2b^3c^3ef^2g^2j^2m - 18a^2b^3c^3d^2f^2h^2j^2m + 9a^3b^3c^2d^2e^2hk^2m^2 + 9a^3b^3c^2d^2e^2g^2l^1m^2 - 9a^3b^2c^3e^2g^2h^2j^2k - 9a^3b^2c^3d^2g^2h^2j^2l + 9a^2b^4c^2ef^2g^2j^2m + 9a^2b^4c^2d^2f^2h^2j^2m + 9a^2b^3c^3ef^2g^2k^2l + 9a^2b^3c^3d^2f^2h^2k^2l + 72a^2b^2c^4d^2f^2g^2j^2m + 36a^2b^2c^4d^2e^2f^1m + 27a^3b^2c^3d^2g^2h^2jk^2 + 27a^3b^2c^3d^2f^2g^2k^2l + 27a^3b^2c^3d^2e^2g^2k^2m - 27a^2b^2c^4d^2g^2h^2jk - 27a^2b^2c^4d^2f^2g^2k^2l - 27a^2b^2c^4d^2e^2g^2k^2m + 18a^2b^3c^3d^2f^2g^2j^2m - 18a^2b^2c^4d^2e^2hk^2l - 9a^3b^2c^3ef^2h^2jk^2 + 9a^2b^3c^3ef^2g^2j^2l - 9a^2b^3c^3d^2g^2h^2jk - 9a^2b^3c^3d^2f^2g^2k^2l - 9a^2b^3c^3d^2e^2g^2k^2m - 9a^2b^2c^4d^2f^2h^2j^1l - 9a^2b^2c^4d^2e^2h^2j^1m + 36a^2b^2c^4d^2e^2f^2k^2m - 27a^3b^2c^3d^2e^2h^2j^1l^2 + 27a^2b^2c^4d^2e^2h^2j^1l - 18a^3b^2c^3d^2e^2g^2k^2l^2 - 9a^3b^2c^3d^2f^2g^2j^1l^2 + 9a^2b^4c^2d^2e^2h^2j^1l^2 + 9a^2b^3c^3ef^2g^2h^2m + 9a^2b^3c^3d^2f^2h^2j^2k - 9a^2b^3c^3d^2e^2h^2j^1l - 9a^2b^2c^4e^2f^2g^2jk - 9a^2b^2c^4d^2e^2g^2j^2m + 63a^3b^2c^3d^2e^2f^2j^2m^2 - 63a^2b^2c^4d^2e^2f^2j^2m - 45a^2b^4c^2d^2e^2f^2j^2m^2 + 36a^2b^2c^4d^2e^2f^2k^2l - 27a^3b^2c^3ef^2g^2h^2l^2 + 27a^2b^3c^3d^2e^2f^2j^2m + 27a^2b^2c^4e^2f^2g^2h^2l + 9a^2b^4c^2ef^2g^2h^2l^2 - 9a^2b^3c^3ef^2g^2h^2l + 9a^2b^3c^3d^2f^2g^2h^2m + 9a^2b^3c^3d^2e^2h^2j^2k + 9a^2b^3c^3d^2e^2g^2j^2l + 18a^2b^2c^4d^2e^2g^2jk - 9a^3b^2c^3d^2e^2g^2hk^2m^2 - 9a^2b^3c^3d^2e^2g^2jk^2 - 9a^2b^2c^4e^2f^2g^2hk - 9a^2b^2c^4d^2f^2g^2h^2l + 18a^2b^2c^4d^2f^2g^2hk - 18a^2b^2c^4d^2e^2g^2h^2l - 9a^2b^3c^3d^2f^2g^2hk^2 - 9a^2b^2c^4e^2f^2g^2h^2j + 36a^2b^3c^3d^2e^2f^2h^2l^2 - 18a^2b^2c^4d^2e^2f^2h^2l - 9a^2b^2c^4d^2f^2g^2h^2j - 9a^2b^2c^4d^2e^2g^2h^2j^2 - 27a^2b^2c^4d^2e^2f^2g^2k^2 + 18a^2b^2c^4d^2f^2hk^2 - 9a^2b^3c^3ef^2g^2k^2 - 9a^2b^2c^4e^2f^2h^2j^2 - 9a^2b^2c^4d^2f^2h^2k + 45a^2b^3c^3d^2e^2f^2m^2 + 36a^2b^2c^4d^2e^2g^2l^2
\end{aligned}$$

$$\begin{aligned}
& + 9a^2b^3c^3d*eg^2l^2 + 9a^2b^2c^4*ef^2*gj^2 + 9a^2b^2c^4*d* \\
& f^2*h*j^2 - 9a^2b^2c^4*d*e^2*h*k^2 - 36a^2b^2c^4*d*e^2*f*l^2 - 9a^2* \\
& b^2*c^4*d*f*g^2*j^2 - 12a^6*b*c*h*k*l^3*m + 3a*b^6*c*e^3*k*l*m + 3a*b^6* \\
& c*d*ef*l^3 - 12a*b*c^6*d*e^3*f*h + 9a^5*b^2*c*h^2*k*l^2*m + 18a^5*b*c^2 \\
& *g^2*k^2*l*m - 9a^5*b^2*c*h^2*j*l*m^2 + 9a^5*b*c^2*h^2*j^2*l*m - 9a^4*b^ \\
& 3*c*g^2*k^2*l*m - 3a^4*b^2*c^2*g^3*k*l*m + 18a^5*b*c^2*f^2*k*l*m^2 + 15a \\
& ^3*b^3*c^2*f^3*k*l*m + 9a^5*b^2*c*h*j^2*k*m^2 + 9a^5*b^2*c*g*j^2*l*m^2 - \\
& 9a^5*b^2*c*f*k^2*l^2*m + 9a^5*b*c^2*h^2*j*k^2*m + 9a^5*b*c^2*g^2*j*l^2*m \\
& - 9a^4*b^3*c*f^2*k*l*m^2 + 36a^3*b^2*c^3*e^3*k*l*m - 27a^5*b*c^2*g^2*j* \\
& k*m^2 - 18a^5*b*c^2*h^2*j*k*l^2 - 18a^2*b^4*c^2*e^3*k*l*m - 9a^5*b^2*c*g \\
& *j*k^2*m^2 - 9a^5*b^2*c*e*k^2*l*m^2 + 9a^5*b*c^2*h*j^2*k^2*l + 9a^5*b*c^ \\
& 2*g*j^2*k^2*m + 9a^4*b^3*c*g^2*j*k*m^2 + 9a^3*b^4*c*e^2*k*l^2*m + 3a^4*b \\
& ^2*c^2*h^3*j*k*l - 54a^4*b*c^3*d^2*k^2*l*m - 51a^2*b^3*c^3*d^3*k*l*m - 27 \\
& *a^4*b*c^3*e^2*j^2*l*m - 18a^5*b*c^2*g*h^2*l^2*m - 9a^5*b^2*c*e*j*l^2*m^2 \\
& - 9a^5*b^2*c*d*k*l^2*m^2 + 9a^5*b*c^2*g^2*h*l*m^2 + 9a^5*b*c^2*g*j^2*k* \\
& l^2 + 9a^5*b*c^2*e*j^2*l^2*m - 9a^3*b^4*c*e^2*j*l*m^2 - 9a^2*b^5*c*d^2*k \\
& ^2*l*m + 3a^4*b^2*c^2*g*h^3*l*m - 3a^3*b^3*c^2*g^3*j*k*l + 18a^5*b*c^2*e \\
& *j^2*k*m^2 + 18a^5*b*c^2*d*j^2*l*m^2 + 18a^4*b*c^3*f^2*j^2*k*l + 9a^5*b* \\
& c^2*g*h^2*k*m^2 + 9a^5*b*c^2*f*h^2*l*m^2 + 9a^5*b*c^2*f*j*k^2*l^2 - 9a^4 \\
& *b^3*c*e*j^2*k*m^2 - 9a^4*b^3*c*d*j^2*l*m^2 + 9a^4*b^2*c^2*f*j^3*k*l + 9* \\
& a^4*b^2*c^2*e*j^3*k*m + 9a^4*b^2*c^2*d*j^3*l*m + 9a^4*b*c^3*f^2*h^2*l*m + \\
& 9a^4*b*c^3*e^2*j*k^2*m + 9a^4*b*c^3*d^2*j*l^2*m - 3a^3*b^3*c^2*g^3*h*k* \\
& m - 3a^3*b^2*c^3*f^3*j*k*l + 3a^2*b^4*c^2*f^3*j*k*l + 45a^4*b*c^3*d^2*j* \\
& k*m^2 - 27a^5*b*c^2*d*j*k^2*m^2 + 18a^5*b*c^2*g*h*j^2*m^2 + 18a^4*b*c^3* \\
& e^2*j*k*l^2 + 15a^2*b^3*c^3*e^3*j*k*l - 12a^3*b^2*c^3*f^3*h*k*m - 12a^3* \\
& b^2*c^3*f^3*g*l*m + 9a^5*b*c^2*g*h*k^2*l^2 - 9a^4*b^3*c*g*h*j^2*m^2 + 9a \\
& ^4*b^3*c*d*j*k^2*m^2 + 9a^4*b^2*c^2*g*h*j^3*m + 9a^4*b*c^3*g^2*h^2*k*l + \\
& 9a^4*b*c^3*g^2*h^2*j*m + 9a^2*b^5*c*d^2*j*k*m^2 + 3a^2*b^4*c^2*f^3*h*k*m \\
& + 3a^2*b^4*c^2*f^3*g*l*m + 36a^2*b^2*c^4*d^3*j*k*l + 18a^4*b*c^3*e^2*g* \\
& l^2*m + 15a^2*b^3*c^3*e^3*g*l*m + 12a^4*b^2*c^2*d*j*k^3*l + 9a^5*b*c^2*f \\
& *g*k^2*m^2 + 9a^5*b*c^2*e*h*k^2*m^2 + 9a^4*b*c^3*g^2*h*j^2*l + 9a^4*b*c^ \\
& 3*f^2*h*k^2*l + 9a^4*b*c^3*f^2*g*k^2*m + 9a^4*b*c^3*d^2*h*l*m^2 - 9a^3*b \\
& ^3*c^2*e*h^3*k*m + 6a^2*b^3*c^3*e^3*h*k*m + 45a^4*b*c^3*e^2*h*j*m^2 + 36* \\
& a^2*b^2*c^4*d^3*h*k*m - 33a^3*b^2*c^3*d*g^3*l*m - 27a^4*b*c^3*f^2*h*j*l^2 \\
& - 27a^4*b*c^3*e^2*f*l*m^2 - 27a^4*b*c^3*e*h^2*j^2*m - 18a^4*b*c^3*g^2*h \\
& *j*k^2 - 18a^4*b*c^3*f*g^2*k^2*l - 18a^4*b*c^3*e*g^2*k^2*m - 18a^3*b*c^4 \\
& *d^2*g^2*l*m + 12a^4*b^2*c^2*d*h*k^3*m + 9a^5*b*c^2*ef*l^2*m^2 + 9a^5*b \\
& *c^2*d*g*l^2*m^2 + 9a^4*b*c^3*f^2*g*k*l^2 + 9a^4*b*c^3*e^2*g*k*m^2 + 9a^ \\
& 4*b*c^3*g*h^2*j^2*k + 9a^4*b*c^3*f*h^2*j^2*l + 9a^4*b*c^3*ef^2*l^2*m - 9 \\
& *a^3*b^4*c*e*h^2*j*m^2 + 9a^3*b*c^4*e^2*f^2*l*m + 9a^2*b^5*c*e^2*h*j*m^2 \\
& + 9a^2*b^4*c^2*d*g^3*l*m - 9a^2*b^2*c^4*d^3*g*l*m - 9a*b^5*c^2*d^2*g^2*l \\
& *m - 6a^4*b^2*c^2*e*h*k^3*l - 6a^3*b^2*c^3*f*g^3*j*m + 3a^4*b^2*c^2*g*h* \\
& j*k^3 + 3a^4*b^2*c^2*f*g*k^3*l + 3a^4*b^2*c^2*e*g*k^3*m + 3a^3*b^2*c^3*g \\
& ^3*h*j*k + 3a^3*b^2*c^3*f*g^3*k*l + 3a^3*b^2*c^3*e*g^3*k*m - 27a^3*b*c^4 \\
& *d^2*h^2*k*l + 18a^4*b*c^3*ef^2*k*m^2 + 18a^4*b*c^3*d*f^2*l*m^2 + 9a^4*
\end{aligned}$$



$$\begin{aligned}
& *c^4*ef*g^3*k + 9*a^2*b^2*c^4*d*g^3*h*j + 9*a^2*b^2*c^4*d*f*g^3*l + 9*a^2* \\
& b^2*c^4*d*ef*g^3*m + 9*a^2*b*c^5*e^2*f^2*h*j + 9*a^2*b*c^5*e^2*f^2*g*k - 9*a \\
& *b^3*c^4*d^2*g^2*h*j - 9*a*b^3*c^4*d^2*f*g^2*l - 9*a*b^3*c^4*d^2*ef*g^2*m - \\
& 3*a^3*b^2*c^3*ef*g*k^3 + 3*a^2*b^4*c^2*ef*g*k^3 + 3*a^2*b^4*c^2*d*f*h*k^3 \\
& - 54*a^3*b*c^4*d*ef^2*m^2 - 51*a^3*b^3*c^2*d*ef*m^3 - 27*a^3*b*c^4*d*ef* \\
& ^2*l^2 + 9*a^3*b*c^4*d*ef*h^2*k^2 + 9*a^2*b*c^5*e^2*f*g^2*j + 9*a^2*b*c^5*d^ \\
& 2*f*h^2*j + 9*a^2*b*c^5*d^2*ef*h^2*k + 9*a^2*b*c^5*d*ef^2*g^2*l - 9*a*b^5*c^2 \\
& *d*ef^2*m^2 - 9*a*b^4*c^3*d^2*ef*g*l^2 - 9*a*b^2*c^5*d^2*ef^2*g*l - 9*a*b^2* \\
& c^5*d^2*ef^2*f*m - 3*a^2*b^3*c^3*ef*g*j^3 - 3*a^2*b^3*c^3*d*f*h*j^3 + 36*a^ \\
& 3*b^2*c^3*d*ef*l^3 - 27*a^2*b*c^5*d^2*f*g*j^2 - 18*a^2*b^4*c^2*d*ef*l^3 - \\
& 18*a^2*b*c^5*d*ef^2*h^2*j + 9*a^2*b*c^5*d^2*ef*h*j^2 + 9*a^2*b*c^5*d*f^2*g^2 \\
& *j + 9*a*b^4*c^3*d*ef^2*f*l^2 + 9*a*b^3*c^4*d^2*f*g*j^2 - 9*a*b^2*c^5*d^2*f^ \\
& 2*g*j - 9*a*b^2*c^5*d^2*ef^2*l + 3*a^2*b^2*c^4*d*ef*h^3*j - 18*a^2*b*c^5*ef^ \\
& 2*f*g*h^2 + 18*a^2*b*c^5*d^2*ef*f*k^2 + 15*a^2*b^3*c^3*d*ef*f*k^3 + 9*a^2*b*c \\
& ^5*ef^2*g^2*h + 9*a^2*b*c^5*d*ef^2*g*j^2 - 9*a*b^3*c^4*d^2*ef*f*k^2 + 9*a*b^ \\
& 2*c^5*d^2*ef*g^2*j - 9*a*b^2*c^5*d*ef^2*f^2*k + 3*a^2*b^2*c^4*ef*g*h^3 + 18* \\
& a^2*b*c^5*d*ef^2*j^2 + 9*a^2*b*c^5*d*f^2*g*h^2 - 9*a*b^3*c^4*d*ef^2*j^2 + \\
& 9*a*b^2*c^5*d^2*f*g^2*h - 3*a^2*b^2*c^4*d*ef*f*j^3 + 9*a^2*b*c^5*d*ef*g^2*h^ \\
& 2 - 9*a*b^2*c^5*d^2*ef*g*h^2 + 9*a*b^2*c^5*d*ef^2*f*h^2 - 36*a^6*c^2*f*j*k*l* \\
& m^2 + 36*a^5*c^3*f^2*j*k*l*m - 36*a^5*c^3*f*h^2*j*l*m + 36*a^5*c^3*ef*h*j^2* \\
& l*m - 18*a^6*b*c*j^2*k*l*m^2 + 9*a^6*b*c*j*k^2*l^2*m + 3*a^5*b^2*c*j^3*k*l* \\
& m - 36*a^5*c^3*f*g*j*k^2*m - 36*a^5*c^3*ef*f*k^2*l*m + 36*a^5*c^3*d*g*k^2*l* \\
& m - 36*a^4*c^4*d^2*g*k*l*m - 36*a^5*c^3*ef*h*j*k*l^2 - 36*a^5*c^3*ef*f*j*l^2* \\
& m - 36*a^5*c^3*d*f*k*l^2*m + 36*a^4*c^4*ef^2*h*j*k*l + 36*a^4*c^4*ef^2*f*j*l* \\
& m + 9*a^6*b*c*h*k^2*l*m^2 - 3*a^4*b^3*c*h^3*k*l*m - 36*a^5*c^3*ef*g*h*l^2*m \\
& + 36*a^5*c^3*ef*f*j*k*m^2 - 36*a^5*c^3*d*g*j*k*m^2 + 36*a^5*c^3*d*f*j*l*m^2 \\
& - 36*a^5*c^3*d*ef*k*l*m^2 + 36*a^4*c^4*ef^2*g*h*l*m - 36*a^4*c^4*ef^2*j*k*m \\
& - 36*a^4*c^4*d*f^2*j*l*m + 9*a^6*b*c*h*j*l^2*m^2 + 9*a^6*b*c*g*k*l^2*m^2 + \\
& 9*a^5*b^2*c*g*k^3*l*m + 3*a^3*b^4*c*g^3*k*l*m + 36*a^5*c^3*f*g*h*j*m^2 + 36 \\
& *a^5*c^3*ef*f*h*l*m^2 - 36*a^4*c^4*f^2*g*h*j*m - 36*a^4*c^4*ef^2*h*l*m - 24 \\
& *a^4*b*c^3*f^3*k*l*m - 12*a^5*b*c^2*h*j^3*k*m - 12*a^5*b*c^2*g*j^3*l*m - 3* \\
& a^2*b^5*c*f^3*k*l*m - 36*a^4*c^4*ef*g^2*h*k*l - 36*a^4*c^4*ef*f*g^2*l*m + 12* \\
& a^5*b^2*c*ef*k*l^3*m - 6*a^5*b^2*c*f*j*l^3*m + 3*a^5*b^2*c*h*j*k*l^3 + 48*a^ \\
& 3*b*c^4*d^3*k*l*m + 36*a^4*c^4*ef*f*h^2*j*m + 36*a^4*c^4*d*g*h^2*k*l - 36*a^ \\
& 4*c^4*d*f*h^2*k*m - 36*a^4*c^4*d*ef*j^2*k*l + 24*a^5*b*c^2*d*k^3*l*m + 21*a* \\
& b^5*c^2*d^3*k*l*m - 12*a^5*b*c^2*g*j*k^3*l - 9*a^4*b^3*c*d*k^3*l*m + 6*a^5* \\
& b*c^2*f*j*k^3*m + 3*a^5*b^2*c*g*h*l^3*m - 36*a^4*c^4*ef*f*h*j^2*l - 12*a^5*b \\
& *c^2*g*h*k^3*m - 3*a^5*b^2*c*ef*j*k*m^3 - 3*a^5*b^2*c*d*j*l*m^3 - 36*a^4*c^4 \\
& *d*g*h*j*k^2 - 36*a^4*c^4*d*f*g*k^2*l - 36*a^4*c^4*d*ef*h*k^2*l - 36*a^4*c^4 \\
& *d*ef*g*k^2*m + 36*a^3*c^5*d^2*g*h*j*k + 36*a^3*c^5*d^2*f*g*k*l - 36*a^3*c^5 \\
& *d^2*f*g*j*m + 36*a^3*c^5*d^2*ef*h*k*l + 36*a^3*c^5*d^2*ef*g*k*m - 36*a^3*c^5 \\
& *d^2*ef*f*l*m + 24*a^5*b^2*c*ef*h*l*m^3 - 24*a^3*b*c^4*ef^3*j*k*l - 12*a^5*b^2 \\
& *c*f*h*k*m^3 - 12*a^5*b^2*c*f*g*l*m^3 - 3*a^5*b^2*c*g*h*j*m^3 - 3*a^4*b^3*c \\
& *ef*j*k*l^3 - 3*a*b^5*c^2*ef^3*j*k*l + 36*a^4*c^4*d*ef*h*j*l^2 + 36*a^4*c^4*d* \\
& ef*g*k*l^2 - 36*a^3*c^5*d*ef^2*h*j*l - 36*a^3*c^5*d*ef^2*g*k*l - 36*a^3*c^5*d*
\end{aligned}$$

$$\begin{aligned}
& e^2*f*k*m + 24*a^4*b*c^3*e*h^3*k*m - 24*a^3*b*c^4*e^3*g*l*m - 18*a*b^4*c^3* \\
& d^3*j*k*1 - 12*a^4*b*c^3*g*h^3*j*1 - 12*a^4*b*c^3*f*h^3*k*1 - 12*a^4*b*c^3* \\
& d*h^3*l*m + 12*a^3*b*c^4*e^3*h*k*m + 6*a^4*b*c^3*f*h^3*j*m - 3*a^4*b^3*c*g* \\
& h*j*1^3 - 3*a^4*b^3*c*f*h*k*1^3 - 3*a^4*b^3*c*e*g*1^3*m - 3*a^4*b^3*c*d*h*1 \\
& ^3*m - 3*a*b^5*c^2*e^3*h*k*m - 3*a*b^5*c^2*e^3*g*l*m + 36*a^4*c^4*e*f*g*h*1 \\
& ^2 - 36*a^4*c^4*d*e*f*j*m^2 - 36*a^3*c^5*e^2*f*g*h*1 - 36*a^3*c^5*d*f^2*g*j \\
& *k - 36*a^3*c^5*d*e*f^2*k*1 + 36*a^3*c^5*d*e*f^2*j*m - 18*a*b^4*c^3*d^3*h*k \\
& *m - 9*a*b^4*c^3*d^3*g*l*m + 30*a^5*b*c^2*d*g*k*m^3 - 30*a^4*b^3*c*d*g*k*m^3 \\
& - 24*a^5*b*c^2*e*f*k*m^3 - 24*a^5*b*c^2*d*f*1*m^3 + 24*a^4*b*c^3*e*g*j^3*m \\
& + 24*a^4*b*c^3*d*h*j^3*m + 15*a^4*b^3*c*e*f*k*m^3 + 15*a^4*b^3*c*d*f*1*m^3 \\
& + 12*a^5*b*c^2*e*g*j*m^3 + 12*a^5*b*c^2*d*h*j*m^3 - 12*a^4*b*c^3*f*h*j^3* \\
& k - 12*a^4*b*c^3*f*g*j^3*1 + 6*a^4*b^3*c*e*g*j*m^3 + 6*a^4*b^3*c*d*h*j*m^3 \\
& + 6*a^4*b*c^3*e*h*j^3*1 + 36*a^3*c^5*d*e*g^2*h*1 - 24*a^5*b*c^2*f*g*h*m^3 + \\
& 15*a^4*b^3*c*f*g*h*m^3 - 9*a*b^6*c*d^2*g*j*m^2 - 6*a^3*b^4*c*d*g*k*1^3 - 6 \\
& *a*b^4*c^3*e^3*f*j*m + 3*a^3*b^4*c*e*g*j*1^3 + 3*a^3*b^4*c*e*f*k*1^3 + 3*a^ \\
& 3*b^4*c*d*h*j*1^3 + 3*a^3*b^4*c*d*e*1^3*m + 3*a*b^4*c^3*e^3*h*j*k + 3*a*b^4 \\
& *c^3*e^3*g*j*1 + 3*a*b^4*c^3*e^3*f*k*1 + 3*a*b^4*c^3*d*e^3*1*m - 36*a^3*c^5 \\
& *d*e*g*h^2*k + 30*a^2*b*c^5*d^3*f*j*m - 30*a*b^3*c^4*d^3*f*j*m + 24*a^3*b*c \\
& ^4*d*g^3*j*1 - 24*a^2*b*c^5*d^3*h*j*k - 24*a^2*b*c^5*d^3*f*k*1 - 24*a^2*b*c \\
& ^5*d^3*e*k*m + 15*a*b^3*c^4*d^3*h*j*k + 15*a*b^3*c^4*d^3*f*k*1 + 15*a*b^3*c \\
& ^4*d^3*e*k*m - 12*a^3*b*c^4*e*g^3*j*k + 12*a^2*b*c^5*d^3*g*j*1 + 6*a*b^3*c^ \\
& 4*d^3*g*j*1 + 3*a^3*b^4*c*f*g*h*1^3 + 3*a*b^4*c^3*e^3*g*h*m + 24*a^3*b*c^4 \\
& d*g^3*h*m - 12*a^3*b*c^4*f*g^3*h*k + 12*a^2*b*c^5*d^3*g*h*m - 9*a^3*b^4*c*d \\
& *e*j*m^3 + 6*a^3*b*c^4*e*g^3*h*1 + 6*a*b^3*c^4*d^3*g*h*m + 36*a^3*c^5*d*e*f \\
& *g*k^2 - 36*a^2*c^6*d^2*e*f*g*k - 24*a^4*b*c^3*d*e*j*1^3 - 18*a^3*b^4*c*e*f \\
& *g*m^3 - 18*a^3*b^4*c*d*f*h*m^3 - 3*a^2*b^5*c*d*e*j*1^3 - 3*a*b^3*c^4*d*e^3 \\
& *j*1 - 24*a^4*b*c^3*e*f*g*1^3 + 24*a^3*b*c^4*d*f*h^3*1 + 12*a^4*b*c^3*d*f*h \\
& *1^3 - 12*a^3*b*c^4*e*g*h^3*j - 12*a^3*b*c^4*e*f*h^3*k - 12*a^3*b*c^4*d*e*h \\
& ^3*m - 12*a*b^2*c^5*d^3*e*j*k + 6*a^3*b*c^4*d*g*h^3*k - 3*a^2*b^5*c*e*f*g*1 \\
& ^3 - 3*a^2*b^5*c*d*f*h*1^3 - 3*a*b^3*c^4*e^3*g*h*j - 3*a*b^3*c^4*e^3*f*h*k \\
& - 3*a*b^3*c^4*e^3*f*g*1 - 3*a*b^3*c^4*d*e^3*h*m + 24*a*b^2*c^5*d^3*e*h*1 - \\
& 12*a*b^2*c^5*d^3*f*h*k - 3*a*b^2*c^5*d^3*g*h*j - 3*a*b^2*c^5*d^3*f*g*1 - 3* \\
& a*b^2*c^5*d^3*e*g*m + 48*a^4*b*c^3*d*e*f*m^3 + 24*a^2*b*c^5*d*e*f^3*m + 21* \\
& a^2*b^5*c*d*e*f*m^3 - 12*a^2*b*c^5*e*f^3*g*j - 12*a^2*b*c^5*d*f^3*h*j - 9*a \\
& *b^3*c^4*d*e*f^3*m + 6*a^2*b*c^5*d*f^3*g*k + 12*a*b^2*c^5*d*e^3*f*1 - 6*a*b \\
& ^2*c^5*d*e^3*g*k + 3*a*b^2*c^5*d*e^3*h*j - 24*a^3*b*c^4*d*e*f*k^3 - 12*a^2* \\
& b*c^5*d*e*g^3*j - 3*a*b^5*c^2*d*e*f*k^3 + 3*a*b^2*c^5*e^3*f*g*h - 12*a^2*b* \\
& c^5*d*f*g^3*h + 9*a*b^2*c^5*d*e*f^3*j + 9*a*b*c^6*d^2*e^2*f*j + 3*a*b^4*c^3 \\
& *d*e*f*j^3 + 9*a*b*c^6*d^2*e^2*g*h + 9*a*b*c^6*d^2*e*f^2*h - 3*a*b^3*c^4*d* \\
& e*f*h^3 - 18*a*b*c^6*d^2*e*f*g^2 + 9*a*b*c^6*d*e^2*f^2*g + 3*a*b^2*c^5*d*e* \\
& f*g^3 - 36*a^4*b^2*c^2*e^2*k*1^2*m - 9*a^4*b^2*c^2*g^2*j^2*k*m + 45*a^3*b^3 \\
& *c^2*d^2*k^2*1*m + 36*a^4*b^2*c^2*e^2*j*1*m^2 + 9*a^4*b^2*c^2*g^2*j*k^2*1 + \\
& 9*a^3*b^3*c^2*e^2*j^2*1*m + 9*a^4*b^2*c^2*g^2*h*k^2*m - 9*a^4*b^2*c^2*f^2* \\
& h*1^2*m - 9*a^3*b^3*c^2*f^2*j^2*k*1 - 45*a^3*b^3*c^2*d^2*j*k*m^2 + 36*a^3*b \\
& ^2*c^3*d^2*j^2*k*m + 18*a^4*b^2*c^2*f^2*h*k*m^2 + 18*a^4*b^2*c^2*f^2*g*1*m^
\end{aligned}$$

$$\begin{aligned}
& 2 - 9a^4b^2c^2g^2hk^2l^2 - 9a^4b^2c^2f^2h^2k^2m - 9a^4b^2c^2f^2g^2l^2m - 9a^4b^2c^2e^2j^2k^2l^2 - 9a^4b^2c^2e^2d^2j^2k^2m - 9a^3b^3c^2e^2jk^2l^2 - 9a^2b^4c^2d^2j^2k^2m - 36a^3b^2c^3d^2jk^2l^2 - 27a^3b^2c^3e^2hk^2m + 9a^4b^2c^2g^2h^2j^2l^2 + 9a^4b^2c^2f^2h^2k^2l^2 - 9a^4b^2c^2f^2g^2k^2m^2 - 9a^4b^2c^2e^2g^2l^2m^2 - 9a^4b^2c^2d^2j^2k^2l^2 + 9a^4b^2c^2d^2h^2l^2m - 9a^3b^3c^2e^2g^2l^2m + 9a^2b^4c^2e^2h^2k^2m + 9a^2b^4c^2d^2jk^2l^2 - 45a^3b^3c^2e^2hk^2j^2m^2 + 36a^4b^2c^2e^2h^2j^2m^2 + 36a^3b^2c^3e^2hk^2j^2m - 36a^3b^2c^3d^2hk^2m + 36a^2b^3c^3d^2g^2l^2m - 9a^4b^2c^2f^2hk^2j^2l^2 - 9a^4b^2c^2d^2h^2k^2m^2 + 9a^3b^3c^2f^2hk^2j^2l^2 + 9a^3b^3c^2e^2f^2l^2m^2 + 9a^3b^3c^2e^2h^2j^2m - 9a^3b^2c^3f^2h^2j^2l^2 - 9a^2b^4c^2e^2hk^2j^2m + 9a^2b^4c^2d^2hk^2m + 36a^3b^2c^3d^2hk^2k^2l^2 - 27a^4b^2c^2e^2g^2j^2m^2 - 27a^4b^2c^2d^2hk^2j^2m^2 - 9a^4b^2c^2d^2hk^2l^2 - 9a^3b^3c^2e^2f^2k^2m^2 - 9a^3b^3c^2d^2f^2l^2m^2 + 9a^3b^2c^3f^2hk^2j^2k + 9a^3b^2c^3f^2g^2j^2l - 9a^3b^2c^3e^2g^2k^2l - 9a^3b^2c^3e^2f^2k^2m - 9a^3b^2c^3d^2f^2l^2m - 9a^2b^4c^2d^2hk^2l^2 + 9a^2b^3c^3d^2h^2k^2l - 81a^3b^2c^3d^2g^2j^2m^2 + 54a^2b^4c^2d^2g^2j^2m^2 - 45a^3b^3c^2d^2g^2j^2m^2 - 45a^2b^3c^3d^2g^2j^2m + 36a^3b^2c^3d^2f^2k^2m^2 + 36a^3b^2c^3d^2g^2j^2m + 18a^3b^2c^3e^2g^2j^2l^2 + 18a^3b^2c^3e^2f^2k^2l^2 + 18a^3b^2c^3d^2e^2l^2m - 9a^4b^2c^2d^2f^2k^2m^2 - 9a^3b^3c^2f^2g^2h^2m^2 - 9a^3b^3c^2d^2h^2j^2l^2 - 9a^3b^2c^3f^2g^2j^2k^2 - 9a^3b^2c^3d^2e^2l^2m^2 - 9a^3b^2c^3f^2g^2h^2m - 9a^3b^2c^3e^2g^2j^2l - 9a^3b^2c^3e^2f^2k^2l - 9a^2b^4c^2d^2f^2k^2m^2 - 9a^2b^4c^2d^2g^2j^2m - 9a^2b^3c^3e^2h^2j^2k - 9a^2b^2c^4d^2f^2k^2m - 27a^2b^2c^4d^2g^2j^2l - 9a^3b^3c^2f^2g^2h^2l^2 + 9a^3b^2c^3e^2g^2j^2k^2 - 9a^3b^2c^3e^2f^2j^2l^2 - 9a^3b^2c^3d^2h^2j^2k - 9a^3b^2c^3d^2f^2k^2l^2 - 9a^3b^2c^3d^2e^2k^2m^2 - 9a^2b^3c^3e^2g^2h^2m - 9a^2b^3c^3d^2h^2jk^2 - 9a^2b^3c^3d^2f^2k^2l - 9a^2b^3c^3d^2e^2k^2m + 36a^3b^3c^2d^2e^2j^2m^2 + 36a^3b^2c^3e^2f^2h^2m^2 - 27a^2b^2c^4d^2g^2h^2m + 9a^3b^3c^2e^2f^2h^2m^2 + 9a^3b^2c^3f^2g^2hk^2 - 9a^2b^4c^2e^2f^2h^2m^2 + 9a^2b^3c^3d^2e^2k^2l^2 - 9a^2b^2c^4e^2f^2h^2m - 45a^2b^3c^3d^2g^2h^2l^2 - 36a^3b^2c^3e^2f^2g^2m^2 + 36a^3b^2c^3d^2g^2h^2l^2 - 36a^3b^2c^3d^2f^2h^2m^2 + 36a^2b^2c^4d^2g^2h^2l - 9a^3b^2c^3e^2g^2h^2k^2 + 9a^2b^4c^2e^2f^2g^2m^2 - 9a^2b^4c^2d^2g^2h^2l^2 + 9a^2b^4c^2d^2f^2h^2m^2 + 9a^2b^3c^3e^2g^2hk^2 + 9a^2b^3c^3d^2g^2h^2l - 9a^2b^3c^3d^2e^2j^2l^2 - 9a^2b^2c^4e^2g^2hk^2 - 9a^2b^2c^4e^2f^2g^2m - 9a^2b^2c^4d^2f^2j^2k - 9a^2b^2c^4d^2f^2h^2m - 9a^2b^2c^4d^2e^2j^2l - 45a^2b^3c^3d^2f^2g^2m^2 + 36a^3b^2c^3d^2f^2g^2m^2 - 27a^3b^2c^3d^2f^2h^2l^2 + 18a^2b^2c^4d^2e^2jk^2 + 9a^2b^4c^2d^2f^2h^2l^2 - 9a^2b^4c^2d^2f^2g^2m^2 - 9a^2b^3c^3e^2f^2g^2l^2 + 9a^2b^2c^4e^2g^2h^2j + 9a^2b^2c^4e^2f^2h^2k - 9a^2b^2c^4e^2f^2g^2l - 9a^2b^2c^4d^2f^2g^2m - 9a^2b^2c^4d^2e^2j^2k + 9a^2b^2c^4d^2e^2h^2m + 18a^4b^2c^2f^2j^2m^2 + 18a^3b^2c^3e^2h^2l^2 - 9a^2b^4c^2e^2h^2l^2 + 18a^2b^2c^4d^2g^2k^2 + 12a^6c^2j^3k^2l^2 + 3a^6b^2
\end{aligned}$$



$$\begin{aligned}
& *j*k*1*m^3 - 12*a^6*c^2*g*k^3*1*m - 12*a^5*c^3*g^3*k*1*m - 24*a^6*c^2*e*k*1 \\
& ^3*m - 24*a^4*c^4*e^3*k*1*m + 12*a^6*c^2*h*j*k*1^3 + 12*a^6*c^2*f*j*1^3*m + \\
& 12*a^5*c^3*h^3*j*k*1 - 3*a^5*b^3*h*j*k*m^3 - 3*a^5*b^3*g*j*1*m^3 - 3*a^5*b \\
& ^3*f*k*1*m^3 + 12*a^6*c^2*g*h*1^3*m + 12*a^5*c^3*g*h^3*1*m - 12*a^6*c^2*e*j \\
& *k*m^3 - 12*a^6*c^2*d*j*1*m^3 - 12*a^5*c^3*f*j^3*k*1 - 12*a^5*c^3*e*j^3*k*m \\
& - 12*a^5*c^3*d*j^3*1*m - 12*a^4*c^4*f^3*j*k*1 + 24*a^6*c^2*f*h*k*m^3 + 24* \\
& a^6*c^2*f*g*1*m^3 + 24*a^4*c^4*f^3*h*k*m + 24*a^4*c^4*f^3*g*1*m - 12*a^6*c^ \\
& 2*g*h*j*m^3 - 12*a^6*c^2*e*h*1*m^3 - 12*a^5*c^3*g*h*j^3*m + 3*b^6*c^2*d^3*j \\
& *k*1 + 3*a^4*b^4*e*j*k*m^3 + 3*a^4*b^4*d*j*1*m^3 - 24*a^5*c^3*d*j*k^3*1 - 2 \\
& 4*a^3*c^5*d^3*j*k*1 - 6*a^4*b^4*e*h*1*m^3 + 3*b^6*c^2*d^3*h*k*m + 3*b^6*c^2 \\
& *d^3*g*1*m + 3*a^6*b*c*j^2*1^3*m + 3*a^4*b^4*g*h*j*m^3 + 3*a^4*b^4*f*h*k*m^ \\
& 3 + 3*a^4*b^4*f*g*1*m^3 - 24*a^5*c^3*d*h*k^3*m - 24*a^3*c^5*d^3*h*k*m + 12* \\
& a^5*c^3*g*h*j*k^3 + 12*a^5*c^3*f*g*k^3*1 + 12*a^5*c^3*e*h*k^3*1 + 12*a^5*c^ \\
& 3*e*g*k^3*m + 12*a^4*c^4*g^3*h*j*k + 12*a^4*c^4*f*g^3*k*1 + 12*a^4*c^4*f*g^ \\
& 3*j*m + 12*a^4*c^4*e*g^3*k*m + 12*a^4*c^4*d*g^3*1*m + 12*a^3*c^5*d^3*g*1*m \\
& + 3*a^6*b*c*j*k^3*m^2 - 9*a^6*b*c*h^2*1*m^3 - 3*a^5*b*c^2*j^4*k*1 + 24*a^5* \\
& c^3*e*g*j*1^3 + 24*a^5*c^3*e*f*k*1^3 + 24*a^5*c^3*d*e*1^3*m + 24*a^3*c^5*e^ \\
& 3*g*j*1 + 24*a^3*c^5*e^3*f*k*1 + 24*a^3*c^5*d*e^3*1*m - 12*a^5*c^3*d*h*j*1^ \\
& 3 - 12*a^5*c^3*d*g*k*1^3 - 12*a^4*c^4*e*h^3*j*k - 12*a^4*c^4*d*h^3*j*1 - 12 \\
& *a^3*c^5*e^3*h*j*k - 12*a^3*c^5*e^3*f*j*m + 9*a^4*b*c^3*g^4*1*m + 6*b^5*c^3 \\
& *d^3*f*j*m + 6*a^3*b^5*d*g*k*m^3 - 3*b^5*c^3*d^3*h*j*k - 3*b^5*c^3*d^3*g*j* \\
& 1 - 3*b^5*c^3*d^3*f*k*1 - 3*b^5*c^3*d^3*e*k*m - 3*a^3*b^5*e*g*j*m^3 - 3*a^3 \\
& *b^5*e*f*k*m^3 - 3*a^3*b^5*d*h*j*m^3 - 3*a^3*b^5*d*f*1*m^3 - 12*a^5*c^3*f*g \\
& *h*1^3 - 12*a^4*c^4*f*g*h^3*1 - 12*a^4*c^4*e*g*h^3*m - 12*a^3*c^5*e^3*g*h*m \\
& - 9*a^6*b*c*g*k^2*m^3 - 3*b^5*c^3*d^3*g*h*m + 3*a^6*b*c*f*1^3*m^2 - 3*a^3* \\
& b^5*f*g*h*m^3 + 12*a^5*c^3*d*e*j*m^3 + 12*a^4*c^4*e*f*j^3*k + 12*a^4*c^4*d* \\
& g*j^3*k + 12*a^4*c^4*d*f*j^3*1 + 12*a^4*c^4*d*e*j^3*m + 12*a^3*c^5*e*f^3*j* \\
& k + 12*a^3*c^5*d*f^3*j*1 - 9*a^6*b*c*e*1^2*m^3 - 24*a^5*c^3*e*f*g*m^3 - 24* \\
& a^5*c^3*d*f*h*m^3 - 24*a^3*c^5*e*f^3*g*m - 24*a^3*c^5*d*f^3*h*m - 15*a^2*b* \\
& c^5*d^4*1*m + 15*a*b^3*c^4*d^4*1*m + 12*a^4*c^4*f*g*h*j^3 + 12*a^3*c^5*f^3* \\
& g*h*j + 12*a^3*c^5*e*f^3*h*1 + 9*a^3*b*c^4*f^4*k*1 - 9*a^3*b*c^4*f^4*j*m + \\
& 3*b^4*c^4*d^3*e*j*k + 3*a^5*b^2*c*g*j*1^4 + 3*a^5*b^2*c*f*k*1^4 + 3*a^5*b^2 \\
& *c*d*1^4*m - 3*a^5*b*c^2*h*j*k^4 - 3*a^5*b*c^2*f*k^4*1 - 3*a^5*b*c^2*e*k^4* \\
& m - 3*a^4*b*c^3*h^4*j*k + 3*a^2*b^6*d*e*j*m^3 + 3*a*b^4*c^3*e^4*k*m + 24*a^ \\
& 4*c^4*d*e*j*k^3 + 24*a^2*c^6*d^3*e*j*k - 6*b^4*c^4*d^3*e*h*1 + 3*b^4*c^4*d^ \\
& 3*g*h*j + 3*b^4*c^4*d^3*f*h*k + 3*b^4*c^4*d^3*f*g*1 + 3*b^4*c^4*d^3*e*g*m - \\
& 3*a^4*b*c^3*g*h^4*m + 3*a^2*b^6*e*f*g*m^3 + 3*a^2*b^6*d*f*h*m^3 - 3*a*b^6* \\
& c*e^3*j*m^2 + 24*a^4*c^4*d*f*h*k^3 + 24*a^2*c^6*d^3*f*h*k - 12*a^4*c^4*e*f* \\
& g*k^3 - 12*a^3*c^5*e*f*g^3*k - 12*a^3*c^5*d*g^3*h*j - 12*a^3*c^5*d*f*g^3*1 \\
& - 12*a^3*c^5*d*e*g^3*m - 12*a^2*c^6*d^3*g*h*j - 12*a^2*c^6*d^3*f*g*1 - 12*a \\
& ^2*c^6*d^3*e*h*1 - 12*a^2*c^6*d^3*e*g*m - 12*a*b^2*c^5*d^4*j*1 + 9*a^5*b*c^ \\
& 2*d*j*1^4 + 9*a^2*b*c^5*e^4*j*k - 3*a^4*b^3*c*d*j*1^4 - 3*a^4*b*c^3*e*j^4*k \\
& - 3*a^4*b*c^3*d*j^4*1 - 3*a*b^3*c^4*e^4*j*k - 24*a^4*c^4*d*e*f*1^3 - 24*a^ \\
& 2*c^6*d*e^3*f*1 - 12*a^5*b^2*c*e*g*m^4 - 12*a^5*b^2*c*d*h*m^4 + 12*a^3*c^5* \\
& d*e*h^3*j + 12*a^2*c^6*d*e^3*h*j + 12*a^2*c^6*d*e^3*g*k - 12*a*b^2*c^5*d^4*
\end{aligned}$$

$$\begin{aligned}
& h^m + 9a^5b^2c^2f^2g^2h^4 - 9a^5b^2c^2e^2h^4 - 9a^2b^2c^5e^4h^4 + 9a^2b^2c^5e^4g^2m + 6a^4b^3c^3e^2h^4 + 6a^2b^3c^4e^4h^4 - 3b^3c^5d^3e^2g^2j - 3b^3c^5d^3e^2f^2k - 3a^4b^3c^3f^2g^2h^4 - 3a^4b^2c^3g^2h^4j - 3a^3b^2c^4g^2h^4j - 3a^3b^2c^4f^2g^2h^4 - 3a^3b^2c^4e^2g^2m - 3a^2b^3c^4e^4g^2m + 12a^3c^5e^2f^2g^2h^3 + 12a^2c^6e^3f^2g^2h - 3b^3c^5d^3f^2g^2h - 12a^3c^5d^2e^2f^2j^3 - 12a^2c^6d^2e^2f^2j^3 - 3a^2b^6c^2d^2g^2h^3 - 15a^5b^2c^2d^2e^2m^4 + 15a^4b^3c^2d^2e^2m^4 + 9a^4b^2c^3e^2f^2k^4 - 9a^4b^2c^3d^2g^2k^4 + 3a^3b^4c^2d^2f^2h^4 - 3a^3b^2c^4d^2h^4j - 3a^2b^2c^5e^2f^2k - 3a^2b^2c^5d^2f^2h^4 + 3a^2b^2c^5e^4g^2j + 3a^2b^2c^5e^4f^2k + 3a^2b^2c^5d^2e^4m - 9a^2b^2c^6d^3e^2h^4 + 3b^2c^6d^3e^2f^2g - 3a^3b^2c^4f^2g^2h^4 - 3a^2b^2c^5f^2g^2h^4 + 12a^2c^6d^2e^2f^2g^3 - 9a^2b^2c^6d^3f^2j + 3a^2b^2c^6d^2e^3k + 9a^3b^2c^4d^2e^2j^4 - 3a^2b^2c^5e^2f^2g^4 - 9a^2b^2c^6d^3e^2h^2 + 3a^2b^2c^6d^2f^3g + 3a^2b^2c^6d^2e^3g^2 - 3a^4b^2c^2h^3j^2m + 12a^4b^2c^2g^3j^2m^2 - 3a^4b^2c^2f^2k^3m + 3a^3b^3c^2g^3j^2m - 9a^3b^4c^2f^2j^2m^2 + 9a^3b^3c^2f^2j^3m - 6a^3b^3c^2f^3j^2m^2 - 6a^3b^2c^3f^3j^2m - 3a^2b^4c^2f^3j^2m - 27a^4b^2c^2d^2k^3m^3 - 27a^3b^2c^3e^3j^2m^2 + 18a^2b^4c^2e^3j^2m^2 - 15a^2b^3c^3e^3j^2m + 12a^4b^2c^2f^2j^2m^3 + 3a^3b^3c^2e^2k^3m^3 + 42a^2b^3c^3d^3j^2m^2 - 27a^2b^2c^4d^3j^2m - 15a^3b^3c^2d^2k^3m^3 - 3a^4b^2c^2f^2j^2k^3 - 3a^4b^2c^2f^2h^3m^2 + 3a^3b^3c^2g^3h^2m^2 + 3a^3b^3c^2f^2j^2k^3 - 3a^3b^2c^3g^3h^2m^2 - 3a^3b^2c^3e^2j^3m^2 - 27a^4b^2c^2e^2h^3m^3 + 12a^3b^2c^3f^3h^2m^2 + 3a^3b^3c^2f^2g^3m^2 - 3a^2b^4c^2f^3h^2m^2 + 3a^2b^3c^3f^3h^2m^2 + 9a^3b^3c^2e^2h^3m^2 + 9a^2b^3c^3e^2h^3m^2 - 6a^4b^2c^2e^2h^2m^3 - 6a^3b^3c^2e^2h^2m^3 - 6a^2b^3c^3e^3h^2m^2 - 6a^2b^2c^4e^3h^2m^2 + 3a^2b^3c^3d^2j^3k + 42a^3b^3c^2d^2g^2m^3 - 27a^4b^2c^2d^2g^2m^3 - 27a^2b^2c^4d^3h^2m^2 - 15a^2b^3c^3e^3f^2m^2 + 12a^3b^2c^3e^2h^2k^3 + 3a^3b^3c^2e^2h^2k^3 - 3a^3b^2c^3e^2g^3h^2m^2 - 3a^2b^4c^2e^2h^2k^3 + 3a^2b^3c^3f^3g^2k^2 - 3a^2b^2c^4f^3g^2k - 27a^3b^2c^3d^2g^2h^3 - 27a^2b^2c^4d^3f^2m^2 + 18a^2b^4c^2d^2g^2h^3 - 15a^3b^3c^2d^2g^2h^3 + 12a^2b^2c^4e^3g^2k^2 - 3a^3b^2c^3e^2h^2j^3 + 3a^2b^3c^3e^2h^2j^3 + 3a^2b^3c^3e^2f^3h^2m^2 - 3a^2b^2c^4d^2h^3k + 9a^2b^3c^3d^2g^3k^2 - 9a^2b^4c^3d^2g^2k^2 - 6a^3b^2c^3d^2g^2k^3 - 6a^2b^3c^3d^2g^2k^3 - 3a^2b^4c^2d^2g^2k^3 + 12a^2b^2c^4d^2g^2j^3 + 3a^2b^3c^3d^2g^2j^3 - 3a^2b^2c^4d^2f^3k^2 - 3a^2b^2c^4d^2g^2h^3 + 12a^7c^2j^2k^2m^3 - 3b^7c^2d^3k^2m - 3a^6b^2c^2k^4m - 3a^6b^2c^2j^2k^2m^4 - 3a^6b^2c^2g^2h^4m - 9a^6b^2c^2f^2j^2m^4 + 9a^6b^2c^2e^2k^2m^4 + 9a^6b^2c^2d^2l^2m^4 + 9a^6b^2c^2g^2h^2m^4 - 3a^2b^7d^2e^2f^2m^3 + 9a^2b^2c^6d^4h^2j - 9a^2b^2c^6d^4g^2k + 9a^2b^2c^6d^4f^2h + 9a^2b^2c^6d^4e^2m + 12a^2c^7d^3e^2f^2g - 3a^2b^2c^6d^2e^4j - 3a^2b^2c^6e^4f^2g - 3a^2b^2c^6d^2e^2f^4 + 18a^6c^2h^2j^2m^2 - 18a^6c^2h^2j^2l^2m + 18a^6c^2f^2k^2l^2m + 36a^5c^3e^2k^2l^2m + 18a^6c^2g^2j^2k^2m^2 + 18a^6c^2e^2k^2l^2m^2 + 18a^5c^3g^2j^2k^2m + 18a^6c^2e^2j^2l^2m^2 + 18a^6c^2d^2k^2l^2m^2 - 18a^5c^3e^2j^2l^2m^2 - 18a^6c^2f^2h^2l^2m^2 + 18a^5c^3f^2h^2l^2m^2 - 36a^5c^3f^2h^2k^2m^2 - 36a^5c^3f^2g^2h^2k^2m + 18a^5c^3g^2h^2k^2m
\end{aligned}$$

$$\begin{aligned}
& *l^2 - 18*a^5*c^3*g*h^2*k^2*m + 18*a^5*c^3*f*h^2*k^2*m + 18*a^5*c^3*f*g^2*m \\
& ^2*m + 18*a^5*c^3*e*j^2*k^2*m + 18*a^5*c^3*d*j^2*k^2*m - 18*a^4*c^4*d^2*j^2 \\
& *k*m + 36*a^4*c^4*d^2*j*k^2*m + 18*a^5*c^3*f*g^2*k*m^2 + 18*a^5*c^3*e*g^2*m \\
& *m^2 + 18*a^5*c^3*d*j^2*k*l^2 - 18*a^4*c^4*f^2*g^2*k*m + 36*a^4*c^4*d^2*h*k \\
& ^2*m + 18*a^5*c^3*f*h*j^2*l^2 - 18*a^5*c^3*e*h^2*j*m^2 + 18*a^5*c^3*d*h^2*k \\
& *m^2 + 18*a^4*c^4*f^2*h^2*j*l - 18*a^4*c^4*e^2*h*j^2*m - 18*a^5*c^3*e*g*k^2 \\
& *l^2 + 18*a^5*c^3*d*h*k^2*l^2 + 18*a^4*c^4*e^2*g*k^2*m + 18*a^4*c^4*e^2*f*k \\
& ^2*m - 18*a^4*c^4*d^2*h*k*l^2 + 18*a^4*c^4*d^2*f*l^2*m - 36*a^4*c^4*e^2*g*j \\
& *l^2 - 36*a^4*c^4*e^2*f*k*l^2 - 36*a^4*c^4*d*e^2*l^2*m + 18*a^5*c^3*d*f*k^2 \\
& *m^2 + 18*a^4*c^4*f^2*g*j*k^2 + 18*a^4*c^4*d^2*g*j*m^2 - 18*a^4*c^4*d^2*f*k \\
& *m^2 + 18*a^4*c^4*d^2*e*l*m^2 - 18*a^4*c^4*f*g^2*j^2*k + 18*a^4*c^4*f*g^2*h \\
& ^2*m + 18*a^4*c^4*e*g^2*j^2*l + 18*a^4*c^4*e*f^2*k^2*m - 18*a^4*c^4*d*g^2*j \\
& ^2*m - 18*a^4*c^4*d*f^2*k^2*m + 18*a^3*c^5*d^2*f^2*k*m + 3*a^4*b^2*c^2*h^4* \\
& k*m - 3*a^3*b^3*c^2*g^4*l*m + 18*a^4*c^4*e*f^2*j*l^2 + 18*a^4*c^4*d*h^2*j^2 \\
& *k + 18*a^4*c^4*d*f^2*k*l^2 + 18*a^4*c^4*d*e^2*k*m^2 - 18*a^3*c^5*e^2*f^2*j \\
& *l + 12*a^5*b^2*c*g^2*k*m^3 - 9*a^5*b*c^2*h^3*j*m^2 - 9*a^5*b*c^2*f^2*l^3*m \\
& + 3*a^5*b*c^2*h^2*k^3*l + 3*a^4*b^3*c*h^3*j*m^2 + 3*a^4*b^3*c*f^2*l^3*m - \\
& 18*a^4*c^4*e^2*f*h*m^2 + 18*a^3*c^5*e^2*f^2*h*m + 15*a^5*b*c^2*e^2*l*m^3 - \\
& 15*a^4*b^3*c*e^2*l*m^3 - 9*a^5*b*c^2*g^2*k*l^3 - 9*a^4*b*c^3*g^3*j^2*m - 3* \\
& a^5*b^2*c*g*k^2*l^3 + 3*a^5*b*c^2*h*j^3*l^2 + 3*a^4*b^3*c*g^2*k*l^3 - 3*a^3 \\
& *b^4*c*g^3*j*m^2 + 36*a^4*c^4*e*f^2*g*m^2 + 36*a^4*c^4*d*f^2*h*m^2 + 18*a^4 \\
& *c^4*e*g*h^2*k^2 - 18*a^4*c^4*d*g^2*h*l^2 - 18*a^4*c^4*d*f*j^2*k^2 + 18*a^3 \\
& *c^5*e^2*g^2*h*k + 18*a^3*c^5*e^2*f*g^2*m - 18*a^3*c^5*d^2*g*h^2*l + 18*a^3 \\
& *c^5*d^2*f*j^2*k + 18*a^3*c^5*d^2*f*h^2*m + 18*a^3*c^5*d^2*e*j^2*l - 12*a^2 \\
& *b^2*c^4*e^4*k*m + 9*a^4*b^3*c*f*j^3*m^2 - 9*a^4*b^2*c^2*f*j^4*m - 6*a^5*b^ \\
& 2*c*f*j^2*m^3 + 6*a^5*b*c^2*f^2*j*m^3 - 6*a^5*b*c^2*f*j^3*m^2 - 6*a^4*b^3*c \\
& *f^2*j*m^3 + 6*a^4*b*c^3*f^3*j*m^2 - 6*a^4*b*c^3*f^2*j^3*m + 6*a^2*b^3*c^3* \\
& f^4*j*m + 3*a^3*b^2*c^3*g^4*j*l + 3*a^2*b^5*c*f^3*j*m^2 - 3*a^2*b^3*c^3*f^4 \\
& *k*l - 36*a^3*c^5*d^2*e*j*k^2 - 18*a^4*c^4*d*f*g^2*m^2 + 18*a^3*c^5*e*f^2*g \\
& ^2*l + 18*a^3*c^5*d*f^2*g^2*m + 18*a^3*c^5*d*e^2*j^2*k + 18*a^3*b^4*c*d^2*k \\
& *m^3 + 15*a^3*b*c^4*e^3*j^2*m + 12*a^5*b^2*c*d*k^2*m^3 - 9*a^5*b*c^2*f*j^2* \\
& l^3 - 9*a^4*b*c^3*e^2*k^3*l + 3*a^5*b*c^2*e*k^3*l^2 + 3*a^4*b^3*c*f*j^2*l^3 \\
& + 3*a^4*b*c^3*g^2*j^3*k - 3*a^3*b^4*c*f^2*j*l^3 + 3*a^3*b^2*c^3*g^4*h*m + \\
& 3*a*b^5*c^2*e^3*j^2*m - 36*a^3*c^5*d^2*f*h*k^2 - 21*a^3*b*c^4*d^3*j*m^2 - 2 \\
& 1*a*b^5*c^2*d^3*j*m^2 + 18*a^3*c^5*e^2*f*h*j^2 - 18*a^3*c^5*e*f^2*h^2*j + 1 \\
& 8*a^3*c^5*d*f^2*h^2*k + 18*a*b^4*c^3*d^3*j^2*m + 15*a^4*b*c^3*d^2*k*l^3 - 9 \\
& *a^5*b*c^2*d*k^2*l^3 - 9*a^4*b*c^3*g^3*h*l^2 - 9*a^4*b*c^3*f^2*j*k^3 + 3*a^ \\
& 4*b^3*c*d*k^2*l^3 + 3*a^2*b^5*c*d^2*k*l^3 - 18*a^3*c^5*d^2*e*g*l^2 + 18*a^3 \\
& *c^5*d*e^2*h*k^2 + 18*a^3*b^4*c*e^2*h*m^3 - 18*a^2*c^6*d^2*e^2*h*k + 18*a^2 \\
& *c^6*d^2*e^2*g*l + 18*a^2*c^6*d^2*e^2*f*m + 15*a^5*b*c^2*e*h^2*m^3 - 15*a^4 \\
& *b^3*c*e*h^2*m^3 - 9*a^4*b*c^3*f*g^3*m^2 - 9*a^3*b*c^4*f^3*h^2*l + 3*a^4*b^ \\
& 2*c^2*e*j*k^4 + 3*a^4*b*c^3*g*h^3*k^2 + 3*a^3*b*c^4*f^2*g^3*m + 36*a^3*c^5* \\
& d*e^2*f*l^2 + 18*a^3*c^5*d*f*g^2*j^2 + 18*a^2*c^6*d^2*f^2*g*j + 18*a^2*c^6* \\
& d^2*e*f^2*l - 9*a^3*b^2*c^3*e*h^4*l - 9*a^3*b*c^4*d^2*j^3*k + 6*a^4*b*c^3*e \\
& ^2*h*l^3 - 6*a^4*b*c^3*e*h^3*l^2 + 6*a^3*b*c^4*e^3*h*l^2 - 6*a^3*b*c^4*e^2*
\end{aligned}$$

$$\begin{aligned}
& h^3 * l + 3 * a^4 * b^2 * c^2 * f * h * k^4 + 3 * a^4 * b * c^3 * d * j^3 * k^2 - 3 * a^3 * b^4 * c * e * h^2 * l \\
& ^3 + 3 * a^2 * b^5 * c * e^2 * h * l^3 + 3 * a^2 * b^2 * c^4 * f^4 * h * k + 3 * a^2 * b^2 * c^4 * f^4 * g * l \\
& + 3 * a * b^5 * c^2 * e^3 * h * l^2 - 3 * a * b^4 * c^3 * e^3 * h^2 * l - 21 * a^4 * b * c^3 * d^2 * g * m^3 - \\
& 21 * a^2 * b^5 * c * d^2 * g * m^3 + 18 * a^3 * b^4 * c * d * g^2 * m^3 + 18 * a^2 * c^6 * d * e^2 * f^2 * k + \\
& 18 * a * b^4 * c^3 * d^3 * h * l^2 + 15 * a^3 * b * c^4 * e^3 * f * m^2 + 15 * a^2 * b * c^5 * d^3 * h^2 * l - \\
& 15 * a * b^3 * c^4 * d^3 * h^2 * l - 9 * a^4 * b * c^3 * e * h^2 * k^3 - 9 * a^3 * b * c^4 * f^3 * g * k^2 - 9 * \\
& a^2 * b * c^5 * e^3 * f^2 * m + 3 * a^3 * b * c^4 * f^2 * h^3 * j + 3 * a * b^5 * c^2 * e^3 * f * m^2 + 3 * a * b \\
& ^3 * c^4 * e^3 * f^2 * m + 18 * a * b^4 * c^3 * d^3 * f * m^2 + 15 * a^4 * b * c^3 * d * g^2 * l^3 + 12 * a * b \\
& ^2 * c^5 * d^3 * f^2 * m - 9 * a^3 * b * c^4 * e^2 * h * j^3 - 9 * a^3 * b * c^4 * e * f^3 * l^2 - 9 * a^2 * b * \\
& c^5 * e^3 * g^2 * k + 3 * a^3 * b * c^4 * f * g^3 * j^2 + 3 * a^2 * b^5 * c * d * g^2 * l^3 + 3 * a^2 * b * c^5 \\
& * e^2 * f^3 * l - 3 * a * b^4 * c^3 * e^3 * g * k^2 + 3 * a * b^3 * c^4 * e^3 * g^2 * k + 18 * a^2 * c^6 * d^2 \\
& * e * g * h^2 - 18 * a^2 * c^6 * d * e^2 * g^2 * h - 12 * a^4 * b^2 * c^2 * d * f * l^4 - 9 * a^2 * b^2 * c^4 * \\
& d * g^4 * k + 9 * a * b^3 * c^4 * d^2 * g^3 * k + 6 * a^3 * b^3 * c^2 * d * g * k^4 + 6 * a^3 * b * c^4 * d^2 * g \\
& * k^3 - 6 * a^3 * b * c^4 * d * g^3 * k^2 + 6 * a^2 * b * c^5 * d^3 * g * k^2 - 6 * a^2 * b * c^5 * d^2 * g^3 * \\
& k - 6 * a * b^3 * c^4 * d^3 * g * k^2 - 6 * a * b^2 * c^5 * d^3 * g^2 * k - 3 * a^3 * b^3 * c^2 * e * f * k^4 + \\
& 3 * a^3 * b^2 * c^3 * e * g * j^4 + 3 * a^3 * b^2 * c^3 * d * h * j^4 + 3 * a * b^5 * c^2 * d^2 * g * k^3 + 15 \\
& * a^2 * b * c^5 * d^3 * e * l^2 - 15 * a * b^3 * c^4 * d^3 * e * l^2 - 9 * a^3 * b * c^4 * d * g^2 * j^3 - 9 * a \\
& ^2 * b * c^5 * e^3 * f * j^2 - 3 * a * b^4 * c^3 * d^2 * g * j^3 + 3 * a * b^3 * c^4 * e^3 * f * j^2 - 3 * a * b^ \\
& 2 * c^5 * e^3 * f^2 * j + 12 * a * b^2 * c^5 * d^3 * f * j^2 - 9 * a^2 * b * c^5 * d * e^3 * k^2 + 3 * a^2 * b * \\
& c^5 * e^2 * g^3 * h + 3 * a * b^3 * c^4 * d * e^3 * k^2 - 9 * a^2 * b * c^5 * d^2 * g * h^3 - 3 * a^2 * b^3 * c \\
& ^3 * d * e * j^4 + 3 * a^2 * b * c^5 * e * f^3 * h^2 + 3 * a * b^3 * c^4 * d^2 * g * h^3 + 3 * a^2 * b^2 * c^4 * \\
& d * f * h^4 - 9 * a^7 * c * k^2 * l^2 * m^2 - 6 * a^6 * c^2 * j^2 * k^3 * m - 3 * a^6 * b^2 * h * l^2 * m^3 + \\
& 3 * a^5 * b^3 * h^2 * l * m^3 - 6 * a^6 * c^2 * g^2 * k * m^3 - 6 * a^6 * c^2 * h * k^3 * l^2 + 6 * a^5 * c^ \\
& 3 * h^3 * j^2 * m + 6 * a^6 * c^2 * g * k^2 * l^3 - 6 * a^6 * c^2 * f * k^3 * m^2 - 6 * a^5 * c^3 * h^2 * j^3 \\
& * l - 6 * a^5 * c^3 * g^3 * j * m^2 + 6 * a^5 * c^3 * f^2 * k^3 * m + 3 * a^5 * b^3 * g * k^2 * m^3 - 3 * a^ \\
& 4 * b^4 * g^2 * k * m^3 + 12 * a^6 * c^2 * f * j^2 * m^3 + 12 * a^4 * c^4 * f^3 * j^2 * m + 3 * a^5 * b^3 * e \\
& * l^2 * m^3 + 3 * a^3 * b^5 * e^2 * l * m^3 - 6 * a^6 * c^2 * d * k^2 * m^3 - 6 * a^5 * c^3 * f^2 * j * l^3 \\
& + 6 * a^5 * c^3 * d^2 * k * m^3 - 6 * a^5 * c^3 * g * j^3 * k^2 + 6 * a^4 * c^4 * e^3 * j * m^2 - 3 * b^6 * c \\
& ^2 * d^3 * j^2 * m - 3 * a^4 * b^4 * f * j^2 * m^3 + 3 * a^3 * b^5 * f^2 * j * m^3 + 6 * a^5 * c^3 * f * j^2 * \\
& k^3 + 6 * a^5 * c^3 * f * h^3 * m^2 - 6 * a^5 * c^3 * e * j^3 * l^2 + 6 * a^4 * c^4 * g^3 * h^2 * l - 6 * a \\
& ^4 * c^4 * f^2 * h^3 * m + 6 * a^4 * c^4 * e^2 * j^3 * l + 6 * a^3 * c^5 * d^3 * j^2 * m - 3 * a^4 * b^4 * d * \\
& k^2 * m^3 - 3 * a^2 * b^6 * d^2 * k * m^3 + 6 * a^5 * c^3 * e^2 * h * m^3 - 6 * a^4 * c^4 * g^2 * h^3 * k - \\
& 6 * a^4 * c^4 * f^3 * h * l^2 + 12 * a^5 * c^3 * e * h^2 * l^3 + 12 * a^3 * c^5 * e^3 * h^2 * l - 3 * b^6 * \\
& c^2 * d^3 * h * l^2 + 3 * b^5 * c^3 * d^3 * h^2 * l - 3 * a^5 * b^2 * c * j^4 * m^2 + 3 * a^3 * b^5 * e * h^2 \\
& * m^3 - 3 * a^2 * b^6 * e^2 * h * m^3 + 6 * a^5 * c^3 * d * g^2 * m^3 - 6 * a^4 * c^4 * e^2 * h * k^3 - 6 * \\
& a^4 * c^4 * f * h^3 * j^2 + 6 * a^4 * c^4 * e * g^3 * l^2 + 6 * a^3 * c^5 * f^3 * g^2 * k - 6 * a^3 * c^5 * e \\
& ^2 * g^3 * l + 6 * a^3 * c^5 * d^3 * h * l^2 - 3 * b^6 * c^2 * d^3 * f * m^2 - 3 * b^4 * c^4 * d^3 * f^2 * m \\
& + 6 * a^4 * c^4 * d^2 * g * l^3 + 6 * a^4 * c^4 * e * h^2 * j^3 - 6 * a^4 * c^4 * d * h^3 * k^2 - 6 * a^3 * c \\
& ^5 * f^2 * g^3 * j - 6 * a^3 * c^5 * e^3 * g * k^2 + 6 * a^3 * c^5 * d^3 * f * m^2 + 6 * a^3 * c^5 * d^2 * h^ \\
& 3 * k - 6 * a^2 * c^6 * d^3 * f^2 * m + 4 * a^5 * b^2 * c * h^3 * m^3 + 3 * b^5 * c^3 * d^3 * g * k^2 - 3 * b \\
& ^4 * c^4 * d^3 * g^2 * k - 3 * a^2 * b^6 * d * g^2 * m^3 + a^5 * b * c^2 * j^3 * k^3 + 12 * a^4 * c^4 * d * g \\
& ^2 * k^3 + 12 * a^2 * c^6 * d^3 * g^2 * k + 6 * a^5 * b * c^2 * h^3 * l^3 + 5 * a^5 * b * c^2 * g^3 * m^3 - \\
& 5 * a^4 * b^3 * c * g^3 * m^3 + 3 * b^5 * c^3 * d^3 * e * l^2 + 3 * b^3 * c^5 * d^3 * e^2 * l - 3 * a^5 * b^ \\
& 2 * c * h^2 * l^4 + a^4 * b^3 * c * h^3 * l^3 + 12 * a^5 * b^2 * c * f^2 * m^4 - 6 * a^3 * c^5 * d^2 * g * j^ \\
& 3 + 6 * a^3 * c^5 * d * f^3 * k^2 + 6 * a^3 * b^4 * c * f^3 * m^3 + 6 * a^2 * c^6 * e^3 * f^2 * j - 6 * a^2
\end{aligned}$$

$$\begin{aligned}
& c^6 d^2 f^3 k - 3 b^4 c^4 d^3 f^2 j^2 + 3 b^3 c^5 d^3 f^2 j - 3 a^2 b^2 c^4 f^5 m - 7 a^4 b^3 c^3 e^3 m^3 - 7 a^2 b^5 c^3 e^3 m^3 + 6 a^4 b^3 c^3 g^3 k^3 - 6 \\
& a^3 c^5 e^3 g^3 h^2 - 6 a^2 c^6 d^3 f^2 j^2 + 5 a^4 b^3 c^3 f^3 l^3 + a^4 b^3 c^3 h^3 j^3 + a^2 b^5 c^3 f^3 l^3 + 6 a^3 c^5 d^2 g^2 h^3 - 6 a^2 c^6 e^2 f^3 h - 3 \\
& a^3 b^4 c^3 e^2 l^4 - 3 a^2 b^4 c^3 e^4 l^2 - 7 a^3 b^3 c^4 d^3 l^3 - 7 a^2 b^5 c^2 d^3 l^3 + 6 a^3 b^3 c^4 f^3 j^3 + 5 a^3 b^3 c^4 e^3 k^3 + 3 b^3 c^5 d^3 e^3 h^2 \\
& - 3 b^2 c^6 d^3 e^2 h + a^2 b^5 c^2 e^3 k^3 + 12 a^2 b^2 c^5 d^4 k^2 - 6 a^2 c^6 d^3 f^3 g^2 + 6 a^2 b^4 c^3 d^3 k^3 - 3 a^4 b^2 c^2 d^2 k^5 + a^3 b^3 c^4 g^3 h^3 \\
& + 5 a^2 b^3 c^5 d^3 j^3 - 5 a^2 b^3 c^4 d^3 j^3 - 9 a^2 c^7 d^2 e^2 f^2 + 6 a^2 b^3 c^5 e^3 h^3 - 3 a^2 b^2 c^5 e^4 h^2 + a^2 b^3 c^5 f^3 g^3 + a^2 b^3 c^4 e^3 h^3 \\
& + 4 a^2 b^2 c^5 d^3 h^3 - 3 a^2 b^2 c^5 d^2 g^4 - 6 a^7 c^3 j^3 m^2 + 6 a^7 c^3 h^3 k^3 m^2 + 6 a^6 c^2 j^3 k^4 l + 6 a^6 c^2 h^3 k^4 m - 6 a^5 c^3 h^4 k^3 m + 3 a^6 b^2 h^3 k^3 m^4 \\
& + 3 a^6 b^2 g^3 l^3 m^4 - 3 b^5 c^3 d^4 l^3 m - 6 a^6 c^2 g^3 j^3 l^4 - 6 a^6 c^2 f^3 k^3 l^4 - 6 a^6 c^2 d^3 l^4 m + 6 a^5 c^3 h^3 j^4 k + 6 a^5 c^3 g^3 j^4 l + 6 a^5 c^3 f^3 j^4 m \\
& - 6 a^4 c^4 g^4 j^3 l + 6 a^3 c^5 e^4 k^3 m + 6 a^5 b^3 f^3 j^3 m^4 - 6 a^4 c^4 g^4 h^3 m + 3 b^7 c^3 d^3 j^3 m^2 - 3 a^5 b^3 e^3 k^3 m^4 - 3 a^5 b^3 d^3 l^3 m^4 + 3 b^4 c^4 d^4 j^3 l \\
& - 3 a^5 b^3 g^3 h^3 m^4 - 6 a^5 c^3 e^3 j^3 k^4 + 6 a^2 c^6 d^4 j^3 l + 3 b^4 c^4 d^4 h^3 m + 6 a^6 c^2 e^3 g^3 m^4 + 6 a^6 c^2 d^3 h^3 m^4 + 6 a^6 b^3 c^3 j^3 m^3 - 6 a^5 c^3 f^3 h^3 k^4 \\
& + 6 a^4 c^4 g^3 h^4 j + 6 a^4 c^4 f^3 h^4 k + 6 a^4 c^4 e^3 h^4 l + 6 a^4 c^4 d^3 h^4 m - 6 a^3 c^5 f^4 h^3 k - 6 a^3 c^5 f^4 g^3 l + 6 a^2 c^6 d^4 h^3 m + 3 a^5 b^3 c^2 j^5 m + a^6 b^3 c^3 k^3 l^3 + \\
& 3 a^4 b^4 e^3 g^3 m^4 + 3 a^4 b^4 d^3 h^3 m^4 + 6 b^3 c^5 d^4 g^3 k - 3 b^3 c^5 d^4 h^3 j - 3 b^3 c^5 d^4 f^3 l - 3 b^3 c^5 d^4 e^3 m + 3 a^2 b^7 d^2 g^3 m^3 + 6 a^5 c^3 d^3 f^3 l^4 \\
& - 6 a^4 c^4 e^3 g^3 j^4 - 6 a^4 c^4 d^3 h^3 j^4 + 6 a^3 c^5 e^3 g^4 j + 6 a^3 c^5 d^3 g^4 k - 6 a^2 c^6 e^4 g^3 j - 6 a^2 c^6 e^4 f^3 k - 6 a^2 c^6 d^3 e^4 m + 3 a^4 b^3 c^3 h^5 l \\
& + 6 a^3 c^5 f^3 g^4 h - 3 a^3 b^5 d^3 e^3 m^4 + 3 b^2 c^6 d^4 e^3 j + 3 a^5 b^3 c^2 g^3 k^5 + 3 a^3 b^3 c^4 g^5 k + 8 a^2 b^6 c^3 d^3 m^3 + 3 b^2 c^6 d^4 f^3 h - 3 a^5 b^2 c^3 e^3 l^5 \\
& - 3 a^2 b^2 c^5 e^5 l - 6 a^3 c^5 d^3 f^3 h^4 + 6 a^2 c^6 e^3 f^4 g + 6 a^2 c^6 d^3 f^4 h + 3 a^4 b^3 c^3 f^3 j^5 + 3 a^2 b^3 c^5 f^5 j + 6 a^2 c^7 d^3 e^2 h - 6 a^2 c^7 d^2 e^3 g + 3 a^3 b^3 c^4 e^3 h^5 \\
& + 6 a^2 b^3 c^6 d^3 g^3 + 3 a^2 b^3 c^5 d^3 g^5 + a^2 b^3 c^6 e^3 f^3 - 9 a^6 c^2 j^2 k^2 l^2 - 9 a^6 c^2 h^2 k^2 m^2 - 9 a^6 c^2 g^2 l^2 m^2 - 18 a^5 c^3 f^2 j^2 m^2 - 9 a^5 c^3 h^2 j^2 k^2 \\
& - 9 a^5 c^3 g^2 j^2 l^2 - 9 a^5 c^3 f^2 k^2 l^2 - 9 a^5 c^3 e^2 k^2 m^2 - 9 a^5 c^3 d^2 l^2 m^2 - 9 a^5 c^3 g^2 h^2 m^2 - 9 a^4 c^4 e^2 j^2 k^2 - 9 a^4 c^4 d^2 j^2 l^2 - 18 a^4 c^4 e^2 h^2 l^2 - 9 a^4 c^4 g^2 h^2 \\
& j^2 - 9 a^4 c^4 f^2 h^2 k^2 - 9 a^4 c^4 f^2 g^2 l^2 - 9 a^4 c^4 e^2 g^2 m^2 - 9 a^4 c^4 d^2 h^2 m^2 - 18 a^3 c^5 d^2 g^2 k^2 - 9 a^3 c^5 e^2 g^2 j^2 - 9 a^3 c^5 e^2 f^2 k^2 - 9 a^3 c^5 d^2 h^2 j^2 \\
& - 9 a^3 c^5 d^2 f^2 l^2 - 9 a^3 c^5 d^2 e^2 m^2 - 3 a^4 b^2 c^2 h^4 l^2 - 18 a^4 b^2 c^2 f^3 m^3 + 12 a^3 b^2 c^3 f^4 m^2 - 9 a^3 c^5 f^2 g^2 h^2 + 4 a^4 b^2 c^2 g^3 l^3 - 3 a^2 b^4 c^2 f^4 m^2 \\
& + 14 a^3 b^3 c^2 e^3 m^3 - 5 a^3 b^3 c^2 f^3 l^3 - 3 a^4 b^2 c^2 g^2 k^4 - 3 a^3 b^2 c^3 g^4 k^2 + a^3 b^3 c^2 g^3 k^3 - 20 a^2 b^4 c^2 d^3 m^3 - 18 a^3 b^2 c^3 e^3 l^3 + 16 a^3 b^2 c^3 d^3 m^3 + 12 a^4 b^2 c^2 e^2 l^4 \\
& + 12 a^2 b^2 c^4 e^4 l^2 - 9 a^2 c^6 d^2 e^2 j^2 + 6 a^2 b^4 c^2 e^3 l^3 + 4 a^3 b^2 c^3 f^3 k^3 + 14 a^2 b^3 c^3 d^3 l^3 - 9 a^2 c^6 e^2 f^3
\end{aligned}$$

$$\begin{aligned}
& ^2g^2 - 9a^2c^6d^2f^2h^2 - 5a^2b^3c^3e^3k^3 - 3a^3b^2c^3f^2j^4 \\
& j^4 - 3a^2b^2c^4f^4j^2 + a^2b^3c^3f^3j^3 - 18a^2b^2c^4d^3k^3 \\
& + 12a^3b^2c^3d^2k^4 + 4a^2b^2c^4e^3j^3 - 3a^2b^4c^2d^2k^4 - \\
& 3a^2b^2c^4e^2h^4 + 6a^7c^*k^*l^4m - 3a^7b^*k^*l^4m - 6a^7c^*h^*k^*m^4 \\
& - 6a^7c^*g^*l^4m + 3a^6b^*c^*h^*l^5 - 6a^*c^7d^4e^*j - 6a^*c^7d^4f^*h - \\
& 3b^*c^7d^4e^*f + 6a^*c^7d^4e^4f + 3a^*b^*c^6e^5h - a^5b^2c^*j^3l^3 - a^3b^4c^*g^3l^3 \\
& - a^*b^4c^3e^3j^3 - a^*b^2c^5e^3g^3 + 3a^7b^*j^*m^5 + 6a^7c^*f^*m^5 + 6a^*c^7d^5k \\
& + 3b^*c^7d^5g - 3a^6c^2j^4m^2 - 3a^6b^2j^2m^4 + 2a^6c^2j^3l^3 + a^5b^3j^3m^3 \\
& - 2a^6c^2h^3m^3 - 3a^6c^2h^2l^4 - 3a^5c^3h^4l^2 - a^*b^6c^*e^3l^3 + 20a^5c^3f^3m^3 - \\
& 15a^6c^2f^2m^4 - 15a^4c^4f^4m^2 + 2a^5c^3h^3k^3 - 2a^5c^3g^3l^3 + a^3b^5g^3m^3 \\
& - 3a^5c^3g^2k^4 - 3a^4c^4g^4k^2 - 3a^4b^4f^2m^4 + 20a^4c^4e^3l^3 - 15a^5c^3e^2l^4 \\
& - 15a^3c^5e^4l^2 + 2a^4c^4g^3j^3 - 2a^4c^4f^3k^3 - 2a^4c^4d^3m^3 - 3b^4c^4d^4k^2 \\
& - 3a^4c^4f^2j^4 - 3a^3c^5f^4j^2 + 20a^3c^5d^3k^3 - 15a^4c^4d^2k^4 - 15a^2c^6d^4k^2 \\
& - 2a^3c^5e^3j^3 + b^5c^3d^3j^3 + 2a^3c^5f^3h^3 - 3a^3c^5e^2h^4 - 3a^2c^6e^4h^2 \\
& - 3b^2c^6d^4g^2 + 2a^2c^6e^3g^3 - 2a^2c^6d^3h^3 + b^3c^5d^3g^3 - 3a^2c^6d^2g^4 \\
& - a^4b^2c^2h^3k^3 - a^3b^2c^3g^3j^3 - a^2b^4c^2f^3k^3 - a^2b^2c^4f^3h^3 \\
& + 2a^7c^*k^3m^3 + a^7b^*l^3m^3 - 3a^7c^*j^2m^4 + 6a^3c^5f^5m - 3a^6b^2f^*m^5 \\
& + 6a^6c^2e^*l^5 + 6a^2c^6e^5l + b^7c^*d^3l^3 + a^*b^7e^3m^3 - 3b^2c^6d^5k \\
& + 6a^5c^3d^*k^5 - 3a^*c^7d^4g^2 + 2a^*c^7d^3f^3 + b^*c^7d^3e^3 - a^6b^2k^3m^3 \\
& - a^4b^4h^3m^3 - a^2b^6f^3m^3 - b^6c^2d^3k^3 - b^4c^4d^3h^3 - b^2c^6d^3f^3 - b^8d^3m^3 \\
& - a^6c^2k^6 - a^5c^3j^6 - a^4c^4h^6 - a^3c^5g^6 - a^2c^6f^6 - a^7c^*l^6 - a^*c^7e^6 \\
& - a^8m^6 - c^8d^6, z, k1)*(root(34992a^4b^2c^8z^6 - 8748a^3b^4c^7z^6 + 729a^2b^6c^6z^6 \\
& - 46656a^5c^9z^6 + 34992a^4b^3c^6mz^5 - 8748a^3b^5c^5mz^5 + 729a^2b^7c^4mz^5 - 34992a^4b^2c^7jz^5 \\
& + 8748a^3b^4c^6jz^5 - 729a^2b^6c^5jz^5 - 46656a^5b^*c^7mz^5 + 46656a^5c^8jz^5 \\
& + 34992a^5b^*c^6j^*mz^4 - 11664a^5b^*c^6k^*l^z^4 + 3888a^4b^*c^7f^*jz^4 + 3888a^4b^*c^7e^*kz^4 \\
& + 3888a^4b^*c^7d^*l^z^4 + 3888a^4b^*c^7g^*hz^4 + 3888a^3b^*c^8d^*ez^4 + 243a^*b^5c^6d^*ez^4 \\
& - 25272a^4b^3c^5j^*mz^4 + 9720a^4b^3c^5k^*l^z^4 + 6075a^3b^5c^4j^*mz^4 - 2673a^3b^5c^4k^*l^z^4 \\
& - 486a^2b^7c^3j^*mz^4 + 243a^2b^7c^3k^*l^z^4 - 7776a^4b^2c^6h^*kz^4 - 7776a^4b^2c^6g^*l^z^4 \\
& - 7776a^4b^2c^6f^*mz^4 + 2430a^3b^4c^5h^*kz^4 + 2430a^3b^4c^5g^*l^z^4 + 2430a^3b^4c^5f^*mz^4 \\
& - 243a^2b^6c^4h^*kz^4 - 243a^2b^6c^4g^*l^z^4 - 243a^2b^6c^4f^*mz^4 - 1944a^3b^3c^6f^*jz^4 \\
& - 1944a^3b^3c^6e^*kz^4 - 1944a^3b^3c^6d^*l^z^4 + 243a^2b^5c^5f^*jz^4 + 243a^2b^5c^5e^*kz^4 \\
& + 243a^2b^5c^5d^*l^z^4 - 1944a^3b^3c^6g^*hz^4 + 243a^2b^5c^5g^*hz^4 + 3888a^3b^2c^7e^*gz^4 \\
& + 3888a^3b^2c^7d^*hz^4 - 486a^2b^4c^6e^*gz^4 - 486a^2b^4c^6d^*hz^4 - 1944a^2b^3c^7d^*ez^4 \\
& + 7776a^5c^7h^*kz^4 + 7776a^5c^7g^*l^z^4 + 7776a^5c^7f^*mz^4 - 7776a^4c^8e^*gz^4 \\
& - 7776a^4c^8d^*hz^4 - 13608a^5b^2c^5m^2z^4 + 11421a^4b^4c^4m^2z^4 - 2916a^3b^6c^3m^2z^4 \\
& + 243a^2b^8c
\end{aligned}$$

$$\begin{aligned}
&^2m^2z^4 + 13608a^4b^2c^6j^2z^4 - 3159a^3b^4c^5j^2z^4 + 243a^2 \\
&*b^6c^4j^2z^4 + 1944a^3b^2c^7f^2z^4 - 243a^2b^4c^6f^2z^4 - 388 \\
&8a^6c^6m^2z^4 - 19440a^5c^7j^2z^4 - 3888a^4c^8f^2z^4 + 3078a^4 \\
&*b^4c^3k^1mz^3 - 2592a^5b^2c^4k^1mz^3 - 891a^3b^6c^2k^1mz^3 \\
&- 4536a^4b^3c^4j^1k^1z^3 + 1053a^3b^5c^3j^1k^1z^3 - 81a^2b^7c^2 \\
&*j^1k^1z^3 - 2592a^4b^3c^4h^1k^1mz^3 - 2592a^4b^3c^4g^1mz^3 + 810 \\
&a^3b^5c^3h^1k^1mz^3 + 810a^3b^5c^3g^1mz^3 - 81a^2b^7c^2h^1k^1mz^3 \\
&- 81a^2b^7c^2g^1mz^3 + 7776a^4b^2c^5f^1j^1mz^3 + 3888a^4b^2c^5 \\
&h^1j^1k^1z^3 + 3888a^4b^2c^5g^1j^1z^3 - 3888a^4b^2c^5f^1k^1z^3 - 291 \\
&6a^3b^4c^4f^1j^1mz^3 + 1458a^3b^4c^4f^1k^1z^3 - 972a^3b^4c^4h^1j^1 \\
&k^1z^3 - 972a^3b^4c^4g^1j^1z^3 - 486a^3b^4c^4e^1k^1mz^3 - 486a^3b^4 \\
&*c^4d^1mz^3 + 324a^2b^6c^3f^1j^1mz^3 - 162a^2b^6c^3f^1k^1z^3 + 81 \\
&a^2b^6c^3h^1j^1k^1z^3 + 81a^2b^6c^3g^1j^1z^3 + 81a^2b^6c^3e^1k^1mz^3 \\
&+ 81a^2b^6c^3d^1mz^3 - 486a^3b^4c^4g^1h^1mz^3 + 81a^2b^6c^3g^1 \\
&*h^1mz^3 + 648a^3b^3c^5e^1j^1k^1z^3 + 648a^3b^3c^5d^1j^1z^3 - 81a^2b \\
&^5c^4e^1j^1k^1z^3 - 81a^2b^5c^4d^1j^1z^3 + 2592a^3b^3c^5e^1g^1mz^3 + \\
&2592a^3b^3c^5d^1h^1mz^3 - 1296a^3b^3c^5f^1h^1k^1z^3 - 1296a^3b^3c^5 \\
&f^1g^1z^3 - 1296a^3b^3c^5e^1h^1z^3 + 648a^3b^3c^5g^1h^1j^1z^3 - 324a^2 \\
&b^5c^4e^1g^1mz^3 - 324a^2b^5c^4d^1h^1mz^3 + 162a^2b^5c^4f^1h^1k^1z^3 \\
&+ 162a^2b^5c^4f^1g^1z^3 + 162a^2b^5c^4e^1h^1z^3 - 81a^2b^5c^4g^1 \\
&*h^1j^1z^3 + 5184a^3b^2c^6d^1e^1mz^3 - 2592a^3b^2c^6e^1g^1j^1z^3 - 2592a \\
&^3b^2c^6d^1h^1j^1z^3 - 2106a^2b^4c^5d^1e^1mz^3 + 1296a^3b^2c^6e^1f^1k^1 \\
&z^3 + 1296a^3b^2c^6d^1g^1k^1z^3 + 1296a^3b^2c^6d^1f^1z^3 + 324a^2b^4 \\
&*c^5e^1g^1j^1z^3 + 324a^2b^4c^5d^1h^1j^1z^3 - 162a^2b^4c^5e^1f^1k^1z^3 - 16 \\
&2a^2b^4c^5d^1g^1k^1z^3 - 162a^2b^4c^5d^1f^1z^3 + 1296a^3b^2c^6f^1g^1 \\
&h^1z^3 - 162a^2b^4c^5f^1g^1h^1z^3 + 1944a^2b^3c^6d^1e^1j^1z^3 - 1296a^2b \\
&^2c^7d^1e^1f^1z^3 + 81a^2b^8c^6k^1mz^3 + 6480a^5b^1c^5j^1k^1z^3 + 2592 \\
&a^5b^1c^5h^1k^1mz^3 + 2592a^5b^1c^5g^1mz^3 - 1296a^4b^1c^6e^1j^1k^1z^3 \\
&- 1296a^4b^1c^6d^1j^1z^3 - 5184a^4b^1c^6e^1g^1mz^3 - 5184a^4b^1c^6d^1h^1 \\
&mz^3 + 2592a^4b^1c^6f^1h^1k^1z^3 + 2592a^4b^1c^6f^1g^1z^3 + 2592a^4b^1c^6 \\
&e^1h^1z^3 - 1296a^4b^1c^6g^1h^1j^1z^3 + 243a^1b^6c^4d^1e^1mz^3 - 3888a^3 \\
&*b^1c^7d^1e^1j^1z^3 - 243a^1b^5c^5d^1e^1j^1z^3 + 162a^1b^4c^6d^1e^1f^1z^3 - 2592 \\
&a^6c^5k^1mz^3 - 5184a^5c^6h^1j^1k^1z^3 - 5184a^5c^6g^1j^1z^3 - 5184 \\
&a^5c^6f^1j^1mz^3 + 2592a^5c^6f^1k^1z^3 + 2592a^5c^6e^1k^1mz^3 + 2592 \\
&a^5c^6d^1mz^3 + 2592a^5c^6g^1h^1mz^3 + 5184a^4c^7e^1g^1j^1z^3 + 5184 \\
&a^4c^7d^1h^1j^1z^3 - 2592a^4c^7e^1f^1k^1z^3 - 2592a^4c^7d^1g^1k^1z^3 - 2592 \\
&a^4c^7d^1f^1z^3 - 2592a^4c^7d^1e^1mz^3 - 2592a^4c^7f^1g^1h^1z^3 + 2592 \\
&a^3c^8d^1e^1f^1z^3 + 6480a^5b^2c^4j^1m^2z^3 + 6480a^4b^3c^4j^2mz^3 \\
&- 5022a^4b^4c^3j^1m^2z^3 - 1296a^3b^5c^3j^2mz^3 + 1134a^3b^6c^2 \\
&j^1m^2z^3 + 81a^2b^7c^2j^2mz^3 + 2592a^4b^3c^4h^1l^2z^3 - 194 \\
&4a^4b^2c^5h^2l^1z^3 - 810a^3b^5c^3h^1l^2z^3 + 729a^3b^4c^4h^2l^1 \\
&z^3 + 81a^2b^7c^2h^1l^2z^3 - 81a^2b^6c^3h^2l^1z^3 - 5184a^4b^3c^4 \\
&>f^1m^2z^3 + 1620a^3b^5c^3f^1m^2z^3 + 1296a^3b^3c^5f^2mz^3 - 16 \\
&2a^2b^7c^2f^1m^2z^3 - 162a^2b^5c^4f^2mz^3 - 1944a^4b^2c^5g^1k^1 \\
&>2z^3 + 729a^3b^4c^4g^1k^2z^3 - 648a^3b^3c^5g^2k^1z^3 - 81a^2b^6*
\end{aligned}$$

$$\begin{aligned}
& c^3 g k^2 z^3 + 81 a^2 b^5 c^4 g^2 k z^3 - 1944 a^4 b^2 c^5 e^1 z^3 + 729 \\
& a^3 b^4 c^4 e^1 z^3 + 648 a^3 b^2 c^6 e^2 l z^3 - 81 a^2 b^6 c^3 e^1 z^3 \\
& - 81 a^2 b^4 c^5 e^2 l z^3 + 1296 a^3 b^3 c^5 f j^2 z^3 - 1296 a^3 b^2 c^6 f^2 j z^3 \\
& - 162 a^2 b^5 c^4 f j^2 z^3 + 162 a^2 b^4 c^5 f^2 j z^3 - 648 a^3 b^3 c^5 d k^2 z^3 \\
& + 81 a^2 b^5 c^4 d k^2 z^3 + 648 a^3 b^2 c^6 e h^2 z^3 - 81 a^2 b^4 c^5 e h^2 z^3 \\
& - 648 a^2 b^2 c^7 d^2 g z^3 - 10368 a^5 b c^5 j^2 m z^3 - 81 a^2 b^8 c^3 j m^2 z^3 \\
& - 2592 a^5 b c^5 h^1 z^3 + 5184 a^5 b c^5 f m^2 z^3 - 2592 a^4 b c^6 f^2 m z^3 \\
& + 1296 a^4 b c^6 g^2 k z^3 - 2592 a^4 b c^6 f j^2 z^3 + 1296 a^4 b c^6 d k^2 z^3 \\
& + 81 a b^4 c^6 d^2 g z^3 + 2592 a^6 c^5 j m^2 z^3 + 1296 a^5 c^6 h^2 l z^3 \\
& + 1296 a^5 c^6 g k^2 z^3 + 1296 a^5 c^6 e^1 z^3 - 1296 a^4 c^7 e^2 l z^3 \\
& + 2592 a^4 c^7 f^2 j z^3 - 2592 a^6 b c^4 m^3 z^3 - 324 a^3 b^7 c^3 m^3 z^3 \\
& - 27 a^2 b^8 c^1 z^3 - 1296 a^4 c^7 e h^2 z^3 - 864 a^5 b c^5 k^3 z^3 \\
& + 1296 a^3 c^8 d^2 g z^3 + 432 a^4 b c^6 h^3 z^3 + 27 a b^4 c^6 e^3 z^3 \\
& - 432 a^2 b c^8 d^3 z^3 + 216 a b^3 c^7 d^3 z^3 + 1134 a^4 b^5 c^2 m^3 z^3 \\
& - 432 a^5 b^3 c^3 m^3 z^3 + 1512 a^5 b^2 c^4 l^3 z^3 - 1107 a^4 b^4 c^3 l^3 z^3 \\
& + 297 a^3 b^6 c^2 l^3 z^3 + 864 a^4 b^3 c^4 k^3 z^3 - 270 a^3 b^5 c^3 k^3 z^3 \\
& + 27 a^2 b^7 c^2 k^3 z^3 - 2592 a^4 b^2 c^5 j^3 z^3 + 486 a^3 b^4 c^4 j^3 z^3 \\
& - 27 a^2 b^6 c^3 j^3 z^3 - 216 a^3 b^3 c^5 h^3 z^3 + 27 a^2 b^5 c^4 h^3 z^3 \\
& + 216 a^3 b^2 c^6 g^3 z^3 - 27 a^2 b^4 c^5 g^3 z^3 - 216 a^2 b^2 c^7 e^3 z^3 \\
& - 432 a^6 c^5 l^3 z^3 + 27 a^2 b^9 m^3 z^3 + 4320 a^5 c^6 j^3 z^3 - 432 a^4 c^7 g^3 z^3 \\
& + 432 a^3 c^8 e^3 z^3 - 27 b^5 c^6 d^3 z^3 + 81 a^3 b^6 c^3 j k l m z^2 - 1296 a^5 b c^4 h j k m z^2 \\
& - 1296 a^5 b c^4 g j l m z^2 + 1296 a^5 b c^4 f k l m z^2 - 81 a^2 b^7 c^3 f k l m z^2 \\
& + 2592 a^4 b c^5 e g j m z^2 + 2592 a^4 b c^5 d h j m z^2 - 1296 a^4 b c^5 f h j k z^2 \\
& - 1296 a^4 b c^5 f g j l z^2 - 1296 a^4 b c^5 e f k m z^2 - 1296 a^4 b c^5 d f l m z^2 \\
& - 648 a^4 b c^5 e h j l z^2 - 648 a^4 b c^5 e g k l z^2 - 648 a^4 b c^5 d h k l z^2 \\
& - 648 a^4 b c^5 d g k m z^2 - 1296 a^4 b c^5 f g h m z^2 - 162 a b^6 c^3 d e j m z^2 \\
& + 81 a b^6 c^3 d e k l z^2 + 1296 a^3 b c^6 d e f m z^2 - 648 a^3 b c^6 d f g k z^2 \\
& - 648 a^3 b c^6 d e h k z^2 - 648 a^3 b c^6 d e g l z^2 - 81 a b^5 c^4 d e h k z^2 \\
& - 81 a b^5 c^4 d e g l z^2 + 81 a b^5 c^4 d e f m z^2 - 81 a b^4 c^5 d e f j z^2 \\
& + 81 a b^4 c^5 d e g h z^2 + 648 a^5 b^2 c^3 j k l m z^2 - 567 a^4 b^4 c^2 j k l m z^2 \\
& - 1944 a^4 b^3 c^3 f k l m z^2 + 729 a^3 b^5 c^2 f k l m z^2 + 648 a^4 b^3 c^3 h j k m z^2 \\
& + 648 a^4 b^3 c^3 g j l m z^2 - 81 a^3 b^5 c^2 h j k m z^2 - 81 a^3 b^5 c^2 g j l m z^2 \\
& + 1944 a^4 b^2 c^4 f j k l m z^2 - 729 a^3 b^4 c^3 f j k l m z^2 + 648 a^4 b^2 c^4 e j k m z^2 \\
& + 648 a^4 b^2 c^4 d j l m z^2 - 81 a^3 b^4 c^3 e j k m z^2 - 81 a^3 b^4 c^3 d j l m z^2 \\
& + 81 a^2 b^6 c^2 f j k l m z^2 + 1296 a^4 b^2 c^4 f h k m z^2 + 1296 a^4 b^2 c^4 f g l m z^2 \\
& + 648 a^4 b^2 c^4 g h j m z^2 - 648 a^3 b^4 c^3 f h k m z^2 - 648 a^3 b^4 c^3 f g l m z^2 \\
& - 324 a^4 b^2 c^4 g h k l m z^2 - 324 a^4 b^2 c^4 e h l m z^2 + 81 a^3 b^4 c^3 g h k l m z^2 \\
& - 81 a^3 b^4 c^3 g h j m z^2 + 81 a^2 b^6 c^2 f h k m z^2 + 81 a^2 b^6 c^2 f g l m z^2 \\
& - 1296 a^3 b^3 c^4 e g j m z^2 - 1296 a^3 b^3 c^4 d h j m z^2 + 648 a^3 b^3 c^4 f h j k z^2 \\
& + 648 a^3 b^3 c^4 f g j l z^2 + 648 a^3 b^3 c^4 e f k m z^2 + 648 a^3 b^3 c^4 d f l m z^2 \\
& + 486 a^3 b^3 c^4 e g k l m z^2 + 486 a^3 b^3 c^4 d
\end{aligned}$$



$$\begin{aligned}
& *h*k*1*z^2 + 162*a^3*b^3*c^4*e*h*j*1*z^2 + 162*a^3*b^3*c^4*d*g*k*m*z^2 + 16 \\
& 2*a^2*b^5*c^3*e*g*j*m*z^2 + 162*a^2*b^5*c^3*d*h*j*m*z^2 - 81*a^2*b^5*c^3*f* \\
& h*j*k*z^2 - 81*a^2*b^5*c^3*f*g*j*1*z^2 - 81*a^2*b^5*c^3*e*g*k*1*z^2 - 81*a^ \\
& 2*b^5*c^3*e*f*k*m*z^2 - 81*a^2*b^5*c^3*d*h*k*1*z^2 - 81*a^2*b^5*c^3*d*f*1*m \\
& *z^2 + 648*a^3*b^3*c^4*f*g*h*m*z^2 - 81*a^2*b^5*c^3*f*g*h*m*z^2 - 3240*a^3* \\
& b^2*c^5*d*e*j*m*z^2 + 1620*a^3*b^2*c^5*d*e*k*1*z^2 + 1377*a^2*b^4*c^4*d*e*j \\
& *m*z^2 - 648*a^3*b^2*c^5*e*f*j*k*z^2 - 648*a^3*b^2*c^5*d*f*j*1*z^2 - 648*a^ \\
& 2*b^4*c^4*d*e*k*1*z^2 - 324*a^3*b^2*c^5*d*g*j*k*z^2 + 81*a^2*b^4*c^4*e*f*j* \\
& k*z^2 + 81*a^2*b^4*c^4*d*f*j*1*z^2 + 972*a^3*b^2*c^5*e*f*h*1*z^2 - 648*a^3* \\
& b^2*c^5*f*g*h*j*z^2 - 324*a^3*b^2*c^5*e*g*h*k*z^2 - 324*a^3*b^2*c^5*d*g*h*1 \\
& *z^2 - 162*a^2*b^4*c^4*e*f*h*1*z^2 + 81*a^2*b^4*c^4*f*g*h*j*z^2 + 81*a^2*b^ \\
& 4*c^4*e*g*h*k*z^2 + 81*a^2*b^4*c^4*d*g*h*1*z^2 - 648*a^2*b^3*c^5*d*e*f*m*z^ \\
& 2 + 486*a^2*b^3*c^5*d*e*h*k*z^2 + 486*a^2*b^3*c^5*d*e*g*1*z^2 + 162*a^2*b^3 \\
& *c^5*d*f*g*k*z^2 + 648*a^2*b^2*c^6*d*e*f*j*z^2 - 324*a^2*b^2*c^6*d*e*g*h*z^ \\
& 2 - 1296*a^6*b*c^3*k*1*m^2*z^2 - 81*a^4*b^5*c*k*1*m^2*z^2 - 1296*a^5*b*c^4* \\
& j^2*k*1*z^2 - 324*a^5*b*c^4*h^2*1*m*z^2 + 324*a^5*b*c^4*h*k^2*1*z^2 - 324*a \\
& ^5*b*c^4*g*k^2*m*z^2 + 972*a^5*b*c^4*h*j*1^2*z^2 + 324*a^5*b*c^4*g*k*1^2*z^ \\
& 2 - 324*a^5*b*c^4*e*1^2*m*z^2 - 324*a^4*b*c^5*e^2*1*m*z^2 - 1944*a^5*b*c^4* \\
& f*j*m^2*z^2 + 1296*a^5*b*c^4*e*k*m^2*z^2 + 1296*a^5*b*c^4*d*1*m^2*z^2 + 648 \\
& *a^4*b*c^5*f^2*j*m*z^2 + 81*a^2*b^7*c*f*j*m^2*z^2 + 1296*a^5*b*c^4*g*h*m^2* \\
& z^2 - 324*a^4*b*c^5*g^2*j*k*z^2 + 324*a^4*b*c^5*g^2*h*1*z^2 + 972*a^4*b*c^5 \\
& *f*h^2*1*z^2 + 324*a^4*b*c^5*g*h^2*k*z^2 - 324*a^4*b*c^5*e*h^2*m*z^2 - 324* \\
& a^4*b*c^5*d*j*k^2*z^2 - 324*a^3*b*c^6*d^2*j*k*z^2 + 972*a^4*b*c^5*f*g*k^2*z \\
& ^2 + 972*a^3*b*c^6*d^2*g*m*z^2 + 324*a^4*b*c^5*e*h*k^2*z^2 + 324*a^3*b*c^6* \\
& d^2*h*1*z^2 + 81*a*b^5*c^4*d^2*g*m*z^2 + 972*a^4*b*c^5*e*f*1^2*z^2 + 324*a^ \\
& 4*b*c^5*d*g*1^2*z^2 - 324*a^3*b*c^6*e^2*h*j*z^2 + 324*a^3*b*c^6*e^2*g*k*z^2 \\
& - 324*a^3*b*c^6*e^2*f*1*z^2 - 1296*a^4*b*c^5*d*e*m^2*z^2 + 81*a*b^7*c^2*d* \\
& e*m^2*z^2 - 324*a^3*b*c^6*d*g^2*j*z^2 - 81*a*b^4*c^5*d^2*g*j*z^2 + 81*a*b^4 \\
& *c^5*d^2*e*1*z^2 + 324*a^3*b*c^6*e*g^2*h*z^2 + 81*a*b^4*c^5*d*e^2*k*z^2 + 1 \\
& 296*a^3*b*c^6*d*e*j^2*z^2 - 324*a^3*b*c^6*e*f*h^2*z^2 + 324*a^3*b*c^6*d*g*h \\
& ^2*z^2 + 81*a*b^5*c^4*d*e*j^2*z^2 - 324*a^2*b*c^7*d^2*f*g*z^2 + 324*a^2*b*c \\
& ^7*d^2*e*h*z^2 + 81*a*b^3*c^6*d^2*f*g*z^2 - 81*a*b^3*c^6*d^2*e*h*z^2 + 324* \\
& a^2*b*c^7*d*e^2*g*z^2 - 81*a*b^3*c^6*d*e^2*g*z^2 + 1296*a^6*c^4*j*k*1*m*z^2 \\
& - 1296*a^5*c^5*f*j*k*1*z^2 - 1296*a^5*c^5*e*j*k*m*z^2 - 1296*a^5*c^5*d*j*1 \\
& *m*z^2 - 1296*a^5*c^5*g*h*j*m*z^2 + 1296*a^5*c^5*e*h*1*m*z^2 + 1296*a^4*c^6 \\
& *e*f*j*k*z^2 + 1296*a^4*c^6*d*g*j*k*z^2 + 1296*a^4*c^6*d*f*j*1*z^2 - 1296*a \\
& ^4*c^6*d*e*k*1*z^2 + 1296*a^4*c^6*d*e*j*m*z^2 + 1296*a^4*c^6*f*g*h*j*z^2 - \\
& 1296*a^4*c^6*e*f*h*1*z^2 - 1296*a^3*c^7*d*e*f*j*z^2 + 648*a^5*b^3*c^2*k*1*m \\
& ^2*z^2 + 648*a^4*b^3*c^3*j^2*k*1*z^2 + 486*a^5*b^2*c^3*h*1^2*m*z^2 - 81*a^4 \\
& *b^4*c^2*h*1^2*m*z^2 + 81*a^4*b^3*c^3*h^2*1*m*z^2 - 81*a^3*b^5*c^2*j^2*k*1* \\
& z^2 - 162*a^4*b^2*c^4*g^2*k*m*z^2 - 81*a^4*b^3*c^3*h*k^2*1*z^2 + 81*a^4*b^3 \\
& *c^3*g*k^2*m*z^2 - 567*a^4*b^3*c^3*h*j*1^2*z^2 + 486*a^4*b^2*c^4*h^2*j*1*z^ \\
& 2 - 81*a^4*b^3*c^3*g*k*1^2*z^2 + 81*a^4*b^3*c^3*e*1^2*m*z^2 + 81*a^3*b^5*c^ \\
& 2*h*j*1^2*z^2 - 81*a^3*b^4*c^3*h^2*j*1*z^2 + 81*a^3*b^3*c^4*e^2*1*m*z^2 + 2 \\
& 430*a^4*b^3*c^3*f*j*m^2*z^2 - 2268*a^4*b^2*c^4*f*j^2*m*z^2 - 810*a^3*b^5*c^
\end{aligned}$$

$$\begin{aligned}
& 2*f*j*m^2*z^2 + 810*a^3*b^4*c^3*f*j^2*m*z^2 - 648*a^4*b^3*c^3*e*k*m^2*z^2 - \\
& 648*a^4*b^3*c^3*d*l*m^2*z^2 - 648*a^4*b^2*c^4*h*j^2*k*z^2 - 648*a^4*b^2*c^4 \\
& 4*g*j^2*l*z^2 - 162*a^3*b^3*c^4*f^2*j*m*z^2 + 81*a^3*b^5*c^2*e*k*m^2*z^2 + \\
& 81*a^3*b^5*c^2*d*l*m^2*z^2 + 81*a^3*b^4*c^3*h*j^2*k*z^2 + 81*a^3*b^4*c^3*g* \\
& j^2*l*z^2 - 81*a^2*b^6*c^2*f*j^2*m*z^2 - 648*a^4*b^3*c^3*g*h*m^2*z^2 + 486* \\
& a^4*b^2*c^4*g*j*k^2*z^2 - 486*a^4*b^2*c^4*e*k^2*l*z^2 + 486*a^3*b^2*c^5*d^2 \\
& *k*m*z^2 - 162*a^4*b^2*c^4*d*k^2*m*z^2 + 81*a^3*b^5*c^2*g*h*m^2*z^2 - 81*a^ \\
& 3*b^4*c^3*g*j*k^2*z^2 + 81*a^3*b^4*c^3*e*k^2*l*z^2 + 81*a^3*b^3*c^4*g^2*j*k \\
& *z^2 - 81*a^2*b^4*c^4*d^2*k*m*z^2 + 486*a^4*b^2*c^4*e*j*l^2*z^2 - 486*a^4*b \\
& ^2*c^4*d*k*l^2*z^2 - 162*a^3*b^2*c^5*e^2*j*l*z^2 - 81*a^3*b^4*c^3*e*j*l^2*z \\
& ^2 + 81*a^3*b^4*c^3*d*k*l^2*z^2 - 81*a^3*b^3*c^4*g^2*h*l*z^2 - 1458*a^4*b^2 \\
& *c^4*f*h*l^2*z^2 + 648*a^3*b^4*c^3*f*h*l^2*z^2 - 567*a^3*b^3*c^4*f*h^2*l*z^ \\
& 2 + 486*a^3*b^2*c^5*e^2*h*m*z^2 - 81*a^3*b^3*c^4*g*h^2*k*z^2 + 81*a^3*b^3*c \\
& ^4*e*h^2*m*z^2 - 81*a^2*b^6*c^2*f*h*l^2*z^2 + 81*a^2*b^5*c^3*f*h^2*l*z^2 - \\
& 81*a^2*b^4*c^4*e^2*h*m*z^2 - 1296*a^4*b^2*c^4*e*g*m^2*z^2 - 1296*a^4*b^2*c^ \\
& 4*d*h*m^2*z^2 + 648*a^3*b^4*c^3*e*g*m^2*z^2 + 648*a^3*b^4*c^3*d*h*m^2*z^2 + \\
& 81*a^3*b^3*c^4*d*j*k^2*z^2 - 81*a^2*b^6*c^2*e*g*m^2*z^2 - 81*a^2*b^6*c^2*d \\
& *h*m^2*z^2 + 81*a^2*b^3*c^5*d^2*j*k*z^2 - 567*a^3*b^3*c^4*f*g*k^2*z^2 - 567 \\
& *a^2*b^3*c^5*d^2*g*m*z^2 + 486*a^3*b^2*c^5*f*g^2*k*z^2 - 486*a^3*b^2*c^5*e* \\
& g^2*l*z^2 + 486*a^3*b^2*c^5*d*g^2*m*z^2 - 81*a^3*b^3*c^4*e*h*k^2*z^2 + 81*a \\
& ^2*b^5*c^3*f*g*k^2*z^2 - 81*a^2*b^4*c^4*f*g^2*k*z^2 + 81*a^2*b^4*c^4*e*g^2* \\
& l*z^2 - 81*a^2*b^4*c^4*d*g^2*m*z^2 - 81*a^2*b^3*c^5*d^2*h*l*z^2 - 567*a^3*b \\
& ^3*c^4*e*f*l^2*z^2 - 486*a^3*b^2*c^5*d*h^2*k*z^2 - 162*a^3*b^2*c^5*e*h^2*j* \\
& z^2 - 81*a^3*b^3*c^4*d*g*l^2*z^2 + 81*a^2*b^5*c^3*e*f*l^2*z^2 + 81*a^2*b^4* \\
& c^4*d*h^2*k*z^2 + 81*a^2*b^3*c^5*e^2*h*j*z^2 - 81*a^2*b^3*c^5*e^2*g*k*z^2 + \\
& 81*a^2*b^3*c^5*e^2*f*l*z^2 + 1944*a^3*b^3*c^4*d*e*m^2*z^2 - 729*a^2*b^5*c^ \\
& 3*d*e*m^2*z^2 + 648*a^3*b^2*c^5*e*g*j^2*z^2 + 648*a^3*b^2*c^5*d*h*j^2*z^2 - \\
& 81*a^2*b^4*c^4*e*g*j^2*z^2 - 81*a^2*b^4*c^4*d*h*j^2*z^2 + 486*a^3*b^2*c^5* \\
& d*f*k^2*z^2 + 486*a^2*b^2*c^6*d^2*g*j*z^2 - 486*a^2*b^2*c^6*d^2*e*l*z^2 - 1 \\
& 62*a^2*b^2*c^6*d^2*f*k*z^2 - 81*a^2*b^4*c^4*d*f*k^2*z^2 + 81*a^2*b^3*c^5*d* \\
& g^2*j*z^2 - 486*a^2*b^2*c^6*d*e^2*k*z^2 - 81*a^2*b^3*c^5*e*g^2*h*z^2 - 648* \\
& a^2*b^3*c^5*d*e*j^2*z^2 - 162*a^2*b^2*c^6*e^2*f*h*z^2 + 81*a^2*b^3*c^5*e*f* \\
& h^2*z^2 - 81*a^2*b^3*c^5*d*g*h^2*z^2 - 162*a^2*b^2*c^6*d*f*g^2*z^2 - 189*a^ \\
& 5*b^3*c^2*l^3*m*z^2 + 162*a^5*b^2*c^3*k^3*m*z^2 - 27*a^4*b^4*c^2*k^3*m*z^2 \\
& - 702*a^4*b^3*c^3*j^3*m*z^2 - 81*a^3*b^6*c*j^2*m^2*z^2 + 81*a^3*b^5*c^2*j^3 \\
& *m*z^2 - 54*a^5*b^3*c^2*j*m^3*z^2 - 486*a^5*b^2*c^3*j*l^3*z^2 + 216*a^4*b^4 \\
& *c^2*j*l^3*z^2 - 189*a^4*b^3*c^3*j*k^3*z^2 - 54*a^4*b^2*c^4*h^3*m*z^2 + 27* \\
& a^3*b^5*c^2*j*k^3*z^2 + 27*a^3*b^3*c^4*g^3*m*z^2 - 810*a^4*b^4*c^2*f*m^3*z^ \\
& 2 + 540*a^5*b^2*c^3*f*m^3*z^2 - 324*a^3*b^2*c^5*f^3*m*z^2 + 54*a^2*b^4*c^4* \\
& f^3*m*z^2 + 675*a^4*b^3*c^3*f*l^3*z^2 - 243*a^3*b^5*c^2*f*l^3*z^2 - 189*a^2 \\
& *b^3*c^5*e^3*m*z^2 + 27*a^3*b^3*c^4*h^3*j*z^2 - 486*a^4*b^2*c^4*f*k^3*z^2 - \\
& 486*a^2*b^2*c^6*d^3*m*z^2 + 216*a^3*b^4*c^3*f*k^3*z^2 - 54*a^3*b^2*c^5*g^3 \\
& *j*z^2 - 27*a^2*b^6*c^2*f*k^3*z^2 - 270*a^3*b^3*c^4*f*j^3*z^2 - 54*a^2*b^3* \\
& c^5*f^3*j*z^2 + 27*a^2*b^5*c^3*f*j^3*z^2 + 162*a^2*b^2*c^6*e^3*j*z^2 + 162* \\
& a^3*b^2*c^5*f*h^3*z^2 - 27*a^2*b^4*c^4*f*h^3*z^2 + 27*a^2*b^3*c^5*f*g^3*z^2
\end{aligned}$$

$$\begin{aligned}
& + 81*a*b^2*c^7*d^2*e^2*z^2 - 648*a^6*c^4*h*l^2*m*z^2 + 648*a^5*c^5*g^2*k*m \\
& *z^2 - 648*a^5*c^5*h^2*j*l*z^2 + 1296*a^5*c^5*h*j^2*k*z^2 + 1296*a^5*c^5*g* \\
& j^2*l*z^2 + 1296*a^5*c^5*f*j^2*m*z^2 - 648*a^5*c^5*g*j*k^2*z^2 + 648*a^5*c^ \\
& 5*e*k^2*l*z^2 + 648*a^5*c^5*d*k^2*m*z^2 - 648*a^4*c^6*d^2*k*m*z^2 - 648*a^5 \\
& *c^5*e*j*l^2*z^2 + 648*a^5*c^5*d*k*l^2*z^2 + 648*a^4*c^6*e^2*j*l*z^2 + 324* \\
& a^6*b*c^3*l^3*m*z^2 + 27*a^4*b^5*c*l^3*m*z^2 + 648*a^5*c^5*f*h*l^2*z^2 - 64 \\
& 8*a^4*c^6*e^2*h*m*z^2 + 1512*a^5*b*c^4*j^3*m*z^2 + 1080*a^6*b*c^3*j*m^3*z^2 \\
& - 162*a^4*b^5*c*j*m^3*z^2 - 648*a^4*c^6*f*g^2*k*z^2 + 648*a^4*c^6*e*g^2*l* \\
& z^2 - 648*a^4*c^6*d*g^2*m*z^2 - 27*a^3*b^6*c*j*l^3*z^2 + 648*a^4*c^6*e*h^2* \\
& j*z^2 + 648*a^4*c^6*d*h^2*k*z^2 + 324*a^5*b*c^4*j*k^3*z^2 - 1296*a^4*c^6*e* \\
& g*j^2*z^2 - 1296*a^4*c^6*d*h*j^2*z^2 - 108*a^4*b*c^5*g^3*m*z^2 - 648*a^4*c^ \\
& 6*d*f*k^2*z^2 - 648*a^3*c^7*d^2*g*j*z^2 + 648*a^3*c^7*d^2*f*k*z^2 + 648*a^3 \\
& *c^7*d^2*e*l*z^2 + 270*a^3*b^6*c*f*m^3*z^2 + 648*a^3*c^7*d*e^2*k*z^2 - 540* \\
& a^5*b*c^4*f*l^3*z^2 + 324*a^3*b*c^6*e^3*m*z^2 - 108*a^4*b*c^5*h^3*j*z^2 + 2 \\
& 7*a^2*b^7*c*f*l^3*z^2 + 27*a*b^5*c^4*e^3*m*z^2 + 648*a^3*c^7*e^2*f*h*z^2 + \\
& 216*a*b^4*c^5*d^3*m*z^2 + 648*a^4*b*c^5*f*j^3*z^2 + 216*a^3*b*c^6*f^3*j*z^2 \\
& + 648*a^3*c^7*d*f*g^2*z^2 - 27*a*b^4*c^5*e^3*j*z^2 + 324*a^2*b*c^7*d^3*j*z \\
& ^2 - 189*a*b^3*c^6*d^3*j*z^2 - 108*a^3*b*c^6*f*g^3*z^2 - 108*a^2*b*c^7*e^3* \\
& f*z^2 + 27*a*b^3*c^6*e^3*f*z^2 + 162*a*b^2*c^7*d^3*f*z^2 - 1134*a^5*b^2*c^3 \\
& *j^2*m^2*z^2 + 648*a^4*b^4*c^2*j^2*m^2*z^2 + 81*a^5*b^2*c^3*k^2*l^2*z^2 + 1 \\
& 62*a^4*b^2*c^4*f^2*m^2*z^2 + 81*a^4*b^2*c^4*h^2*k^2*z^2 + 81*a^4*b^2*c^4*g^ \\
& 2*l^2*z^2 + 162*a^3*b^2*c^5*f^2*j^2*z^2 + 81*a^3*b^2*c^5*e^2*k^2*z^2 + 81*a \\
& ^3*b^2*c^5*d^2*l^2*z^2 + 81*a^3*b^2*c^5*g^2*h^2*z^2 + 81*a^2*b^2*c^6*e^2*g^ \\
& 2*z^2 + 81*a^2*b^2*c^6*d^2*h^2*z^2 - 216*a^6*c^4*k^3*m*z^2 + 216*a^6*c^4*j* \\
& l^3*z^2 + 27*a^3*b^7*j*m^3*z^2 + 216*a^5*c^5*h^3*m*z^2 + 432*a^6*c^4*f*m^3* \\
& z^2 + 432*a^4*c^6*f^3*m*z^2 - 27*b^6*c^4*d^3*m*z^2 - 27*a^2*b^8*f*m^3*z^2 + \\
& 216*a^5*c^5*f*k^3*z^2 + 216*a^4*c^6*g^3*j*z^2 + 216*a^3*c^7*d^3*m*z^2 + 21 \\
& 6*a^5*b^4*c*m^4*z^2 - 216*a^3*c^7*e^3*j*z^2 + 27*b^5*c^5*d^3*j*z^2 - 216*a^ \\
& 4*c^6*f*h^3*z^2 - 27*b^4*c^6*d^3*f*z^2 - 216*a^2*c^8*d^3*f*z^2 - 648*a^6*c^ \\
& 4*j^2*m^2*z^2 - 324*a^6*c^4*k^2*l^2*z^2 - 648*a^5*c^5*f^2*m^2*z^2 - 324*a^5 \\
& *c^5*h^2*k^2*z^2 - 324*a^5*c^5*g^2*l^2*z^2 - 648*a^4*c^6*f^2*j^2*z^2 - 324* \\
& a^4*c^6*e^2*k^2*z^2 - 324*a^4*c^6*d^2*l^2*z^2 - 405*a^6*b^2*c^2*m^4*z^2 - 3 \\
& 24*a^4*c^6*g^2*h^2*z^2 - 324*a^3*c^7*e^2*g^2*z^2 - 324*a^3*c^7*d^2*h^2*z^2 \\
& + 243*a^4*b^2*c^4*j^4*z^2 - 27*a^3*b^4*c^3*j^4*z^2 - 324*a^2*c^8*d^2*e^2*z^ \\
& 2 + 27*a^2*b^2*c^6*f^4*z^2 - 108*a^7*c^3*m^4*z^2 - 27*a^4*b^6*m^4*z^2 - 540 \\
& *a^5*c^5*j^4*z^2 - 108*a^3*c^7*f^4*z^2 - 216*a^5*b*c^3*f*j*k*l*m*z - 54*a^3 \\
& *b^5*c*f*j*k*l*m*z + 27*a^3*b^5*c*g*h*k*l*m*z - 27*a^2*b^6*c*e*g*k*l*m*z - \\
& 27*a^2*b^6*c*d*h*k*l*m*z + 432*a^4*b*c^4*d*g*j*k*m*z - 432*a^4*b*c^4*d*e*k* \\
& l*m*z + 216*a^4*b*c^4*e*g*j*k*l*z + 216*a^4*b*c^4*e*f*j*k*m*z + 216*a^4*b*c \\
& ^4*d*h*j*k*l*z + 216*a^4*b*c^4*d*f*j*l*m*z + 216*a^4*b*c^4*f*g*h*j*m*z - 27 \\
& *a*b^6*c^2*d*e*j*k*l*z - 27*a*b^6*c^2*d*e*h*k*m*z - 27*a*b^6*c^2*d*e*g*l*m* \\
& z + 216*a^3*b*c^5*d*e*h*j*k*z + 216*a^3*b*c^5*d*e*g*j*l*z - 216*a^3*b*c^5*d \\
& *e*f*j*m*z + 27*a*b^5*c^3*d*e*h*j*k*z + 27*a*b^5*c^3*d*e*g*j*l*z + 27*a*b^5 \\
& *c^3*d*e*g*h*m*z - 27*a*b^4*c^4*d*e*g*h*j*z + 27*a*b^7*c*d*e*k*l*m*z + 270* \\
& a^4*b^3*c^2*f*j*k*l*m*z - 108*a^4*b^3*c^2*g*h*k*l*m*z - 216*a^4*b^2*c^3*f*h
\end{aligned}$$

$$\begin{aligned}
& *j*k*m*z - 216*a^4*b^2*c^3*f*g*j*l*m*z - 216*a^4*b^2*c^3*e*g*k*l*m*z - 216* \\
& a^4*b^2*c^3*d*h*k*l*m*z + 162*a^3*b^4*c^2*e*g*k*l*m*z + 162*a^3*b^4*c^2*d*h \\
& *k*l*m*z + 108*a^4*b^2*c^3*g*h*j*k*l*z + 108*a^4*b^2*c^3*e*h*j*l*m*z + 54*a \\
& ^3*b^4*c^2*f*h*j*k*m*z + 54*a^3*b^4*c^2*f*g*j*l*m*z - 27*a^3*b^4*c^2*g*h*j* \\
& k*l*z + 540*a^3*b^3*c^3*d*e*k*l*m*z - 216*a^2*b^5*c^2*d*e*k*l*m*z - 162*a^3 \\
& *b^3*c^3*e*g*j*k*l*z - 162*a^3*b^3*c^3*d*h*j*k*l*z - 108*a^3*b^3*c^3*d*g*j* \\
& k*m*z - 54*a^3*b^3*c^3*e*f*j*k*m*z - 54*a^3*b^3*c^3*d*f*j*l*m*z + 27*a^2*b^ \\
& 5*c^2*e*g*j*k*l*z + 27*a^2*b^5*c^2*d*h*j*k*l*z - 108*a^3*b^3*c^3*e*g*h*k*m* \\
& z - 108*a^3*b^3*c^3*d*g*h*l*m*z - 54*a^3*b^3*c^3*f*g*h*j*m*z + 27*a^2*b^5*c \\
& ^2*e*g*h*k*m*z + 27*a^2*b^5*c^2*d*g*h*l*m*z - 540*a^3*b^2*c^4*d*e*j*k*l*z + \\
& 216*a^2*b^4*c^3*d*e*j*k*l*z - 216*a^3*b^2*c^4*d*e*h*k*m*z - 216*a^3*b^2*c^ \\
& 4*d*e*g*l*m*z + 162*a^2*b^4*c^3*d*e*h*k*m*z + 162*a^2*b^4*c^3*d*e*g*l*m*z + \\
& 108*a^3*b^2*c^4*e*g*h*j*k*z - 108*a^3*b^2*c^4*e*f*h*j*l*z + 108*a^3*b^2*c^ \\
& 4*d*g*h*j*l*z + 108*a^3*b^2*c^4*d*f*g*k*m*z - 27*a^2*b^4*c^3*e*g*h*j*k*z - \\
& 27*a^2*b^4*c^3*d*g*h*j*l*z - 162*a^2*b^3*c^4*d*e*h*j*k*z - 162*a^2*b^3*c^4* \\
& d*e*g*j*l*z + 54*a^2*b^3*c^4*d*e*f*j*m*z - 108*a^2*b^3*c^4*d*e*g*h*m*z + 10 \\
& 8*a^2*b^2*c^5*d*e*g*h*j*z + 324*a^6*b*c^2*j*k*l*m^2*z - 81*a^5*b^3*c*j*k*l* \\
& m^2*z + 27*a^4*b^4*c*j^2*k*l*m*z - 27*a^4*b^4*c*h*k^2*l*m*z - 27*a^4*b^4*c* \\
& g*k*l^2*m*z + 216*a^5*b*c^3*h*j^2*k*m*z + 216*a^5*b*c^3*g*j^2*l*m*z + 54*a^ \\
& 4*b^4*c*f*k*l*m^2*z + 27*a^4*b^4*c*h*j*k*m^2*z + 27*a^4*b^4*c*g*j*l*m^2*z + \\
& 27*a^2*b^6*c*f^2*k*l*m*z + 216*a^5*b*c^3*e*k^2*l*m*z - 108*a^5*b*c^3*h*j*k \\
& ^2*l*z + 27*a^3*b^5*c*e*k^2*l*m*z + 216*a^5*b*c^3*d*k*l^2*m*z + 216*a^4*b*c \\
& ^4*e^2*j*l*m*z - 108*a^5*b*c^3*g*j*k*l^2*z + 27*a^3*b^5*c*d*k*l^2*m*z - 324 \\
& *a^5*b*c^3*e*j*k*m^2*z - 324*a^5*b*c^3*d*j*l*m^2*z - 216*a^5*b*c^3*f*h*l^2* \\
& m*z - 108*a^4*b*c^4*f^2*j*k*l*z - 27*a^3*b^5*c*e*j*k*m^2*z - 27*a^3*b^5*c*d \\
& *j*l*m^2*z - 324*a^5*b*c^3*g*h*j*m^2*z + 216*a^5*b*c^3*f*h*k*m^2*z + 216*a^ \\
& 5*b*c^3*f*g*l*m^2*z + 216*a^5*b*c^3*e*h*l*m^2*z - 216*a^4*b*c^4*f^2*h*k*m*z \\
& - 216*a^4*b*c^4*f^2*g*l*m*z - 27*a^3*b^5*c*g*h*j*m^2*z + 216*a^4*b*c^4*e*g \\
& ^2*l*m*z - 108*a^4*b*c^4*g^2*h*j*l*z - 216*a^4*b*c^4*f*h^2*j*l*z + 216*a^4* \\
& b*c^4*e*h^2*j*m*z + 216*a^4*b*c^4*d*h^2*k*m*z - 108*a^4*b*c^4*g*h^2*j*k*z - \\
& 432*a^4*b*c^4*e*g*j^2*m*z - 432*a^4*b*c^4*d*h*j^2*m*z + 216*a^4*b*c^4*f*h* \\
& j^2*k*z + 216*a^4*b*c^4*f*g*j^2*l*z + 27*a^2*b^6*c*e*g*j*m^2*z + 27*a^2*b^6 \\
& *c*d*h*j*m^2*z - 432*a^3*b*c^5*d^2*g*j*m*z - 216*a^4*b*c^4*f*g*j*k^2*z + 21 \\
& 6*a^3*b*c^5*d^2*f*k*m*z + 216*a^3*b*c^5*d^2*e*l*m*z - 108*a^4*b*c^4*e*h*j*k \\
& ^2*z - 108*a^4*b*c^4*d*g*k^2*l*z - 108*a^3*b*c^5*d^2*h*j*l*z + 108*a^3*b*c^ \\
& 5*d^2*g*k*l*z - 54*a*b^5*c^3*d^2*g*j*m*z + 27*a*b^5*c^3*d^2*g*k*l*z + 27*a* \\
& b^5*c^3*d^2*e*l*m*z - 216*a^4*b*c^4*e*f*j*l^2*z + 216*a^3*b*c^5*d*e^2*k*m*z \\
& - 108*a^4*b*c^4*d*g*j*l^2*z - 108*a^3*b*c^5*e^2*g*j*k*z + 27*a*b^5*c^3*d*e \\
& ^2*k*m*z + 324*a^4*b*c^4*d*e*j*m^2*z + 216*a^3*b*c^5*e^2*f*h*m*z - 108*a^4* \\
& b*c^4*e*g*h*l^2*z + 108*a^3*b*c^5*e^2*g*h*l*z + 108*a^3*b*c^5*e*f^2*j*k*z + \\
& 108*a^3*b*c^5*d*f^2*j*l*z + 27*a*b^6*c^2*d*e*j^2*m*z - 216*a^3*b*c^5*e*f^2 \\
& *h*l*z + 108*a^3*b*c^5*f^2*g*h*j*z - 27*a*b^4*c^4*d^2*e*j*l*z + 216*a^3*b*c \\
& ^5*d*f*g^2*m*z - 108*a^3*b*c^5*e*g^2*h*j*z + 54*a*b^4*c^4*d^2*f*g*m*z - 27* \\
& a*b^4*c^4*d^2*g*h*k*z - 27*a*b^4*c^4*d^2*e*h*m*z - 27*a*b^4*c^4*d*e^2*j*k*z \\
& - 108*a^3*b*c^5*d*g*h^2*j*z + 54*a*b^4*c^4*d*e^2*h*l*z + 27*a*b^6*c^2*d*e
\end{aligned}$$

$$\begin{aligned}
& h*1^2*z - 27*a*b^5*c^3*d*e*h^2*1*z - 27*a*b^4*c^4*d*e^2*g*m*z - 27*a*b^4*c^4*d*e*f^2*m*z + 216*a^2*b*c^6*d^2*f*g*j*z - 108*a^3*b*c^5*d*e*g*k^2*z - 108 \\
& *a^2*b*c^6*d^2*e*h*j*z + 108*a^2*b*c^6*d^2*e*g*k*z - 54*a*b^3*c^5*d^2*f*g*j \\
& *z - 27*a*b^5*c^3*d*e*g*k^2*z + 27*a*b^4*c^4*d*e*g^2*k*z + 27*a*b^3*c^5*d^2 \\
& *e*h*j*z - 27*a*b^3*c^5*d^2*e*g*k*z - 108*a^2*b*c^6*d*e^2*g*j*z + 27*a*b^3*c^5 \\
& *d*e^2*g*j*z - 108*a^2*b*c^6*d*e*f^2*j*z + 27*a*b^3*c^5*d*e*f^2*j*z - 43 \\
& 2*a^5*c^4*e*h*j*1*m*z + 432*a^4*c^5*d*e*j*k*1*z + 432*a^4*c^5*e*f*h*j*1*z - \\
& 432*a^4*c^5*d*f*g*k*m*z - 27*a*b^7*c*d*e*j*m^2*z - 54*a^5*b^2*c^2*j^2*k*1* \\
& m*z + 108*a^5*b^2*c^2*h*k^2*1*m*z + 108*a^5*b^2*c^2*g*k*1^2*m*z - 54*a^5*b^2 \\
& *c^2*h*j*1^2*m*z + 378*a^4*b^2*c^3*f^2*k*1*m*z - 270*a^5*b^2*c^2*f*k*1*m^2 \\
& *z - 189*a^3*b^4*c^2*f^2*k*1*m*z - 108*a^5*b^2*c^2*h*j*k*m^2*z - 108*a^5*b^2 \\
& *c^2*g*j*1*m^2*z - 54*a^4*b^3*c^2*h*j^2*k*m*z - 54*a^4*b^3*c^2*g*j^2*1*m*z \\
& - 162*a^4*b^3*c^2*e*k^2*1*m*z + 54*a^4*b^2*c^3*g^2*j*k*m*z + 27*a^4*b^3*c^2 \\
& *h*j*k^2*1*z - 162*a^4*b^3*c^2*d*k*1^2*m*z + 108*a^4*b^2*c^3*g^2*h*1*m*z - \\
& 54*a^3*b^3*c^3*e^2*j*1*m*z + 27*a^4*b^3*c^2*g*j*k*1^2*z - 27*a^3*b^4*c^2*g \\
& ^2*h*1*m*z - 270*a^4*b^2*c^3*f*j^2*k*1*z + 189*a^4*b^3*c^2*e*j*k*m^2*z + 18 \\
& 9*a^4*b^3*c^2*d*j*1*m^2*z - 162*a^4*b^2*c^3*e*j^2*k*m*z - 162*a^4*b^2*c^3*d \\
& *j^2*1*m*z + 135*a^3*b^3*c^3*f^2*j*k*1*z + 108*a^4*b^2*c^3*g*h^2*k*m*z + 54 \\
& *a^4*b^3*c^2*f*h*1^2*m*z - 54*a^4*b^2*c^3*f*h^2*1*m*z + 54*a^3*b^4*c^2*f*j^2 \\
& *k*1*z - 27*a^3*b^4*c^2*g*h^2*k*m*z + 27*a^3*b^4*c^2*e*j^2*k*m*z + 27*a^3* \\
& b^4*c^2*d*j^2*1*m*z - 27*a^2*b^5*c^2*f^2*j*k*1*z - 270*a^3*b^2*c^4*d^2*j*k* \\
& m*z + 189*a^4*b^3*c^2*g*h*j*m^2*z - 162*a^4*b^2*c^3*g*h*j^2*m*z + 162*a^4*b \\
& ^2*c^3*e*j*k^2*1*z + 162*a^3*b^3*c^3*f^2*h*k*m*z + 162*a^3*b^3*c^3*f^2*g*1* \\
& m*z - 54*a^4*b^3*c^2*f*h*k*m^2*z - 54*a^4*b^3*c^2*f*g*1*m^2*z - 54*a^4*b^3* \\
& c^2*e*h*1*m^2*z + 54*a^4*b^2*c^3*d*j*k^2*m*z + 54*a^2*b^4*c^3*d^2*j*k*m*z + \\
& 27*a^3*b^4*c^2*g*h*j^2*m*z - 27*a^3*b^4*c^2*e*j*k^2*1*z - 27*a^2*b^5*c^2*f \\
& ^2*h*k*m*z - 27*a^2*b^5*c^2*f^2*g*1*m*z + 162*a^4*b^2*c^3*d*j*k*1^2*z - 162 \\
& *a^3*b^3*c^3*e*g^2*1*m*z + 108*a^4*b^2*c^3*e*h*k^2*m*z + 108*a^3*b^2*c^4*d^2 \\
& *h*1*m*z - 54*a^4*b^2*c^3*f*g*k^2*m*z - 27*a^3*b^4*c^2*e*h*k^2*m*z - 27*a^3 \\
& *b^4*c^2*d*j*k*1^2*z + 27*a^3*b^3*c^3*g^2*h*j*1*z + 27*a^2*b^5*c^2*e*g^2*1 \\
& *m*z - 27*a^2*b^4*c^3*d^2*h*1*m*z + 270*a^4*b^2*c^3*f*h*j*1^2*z - 270*a^3*b \\
& ^2*c^4*e^2*h*j*m*z - 162*a^4*b^2*c^3*e*h*k*1^2*z - 162*a^3*b^3*c^3*d*h^2*k* \\
& m*z + 162*a^3*b^2*c^4*e^2*h*k*1*z + 108*a^4*b^2*c^3*d*g*1^2*m*z + 108*a^3*b \\
& ^2*c^4*e^2*g*k*m*z - 54*a^4*b^2*c^3*e*f*1^2*m*z - 54*a^3*b^4*c^2*f*h*j*1^2* \\
& z + 54*a^3*b^3*c^3*f*h^2*j*1*z - 54*a^3*b^3*c^3*e*h^2*j*m*z + 54*a^3*b^2*c^4 \\
& *e^2*f*1*m*z + 54*a^2*b^4*c^3*e^2*h*j*m*z + 27*a^3*b^4*c^2*e*h*k*1^2*z - 2 \\
& 7*a^3*b^4*c^2*d*g*1^2*m*z + 27*a^3*b^3*c^3*g*h^2*j*k*z + 27*a^2*b^5*c^2*d*h \\
& ^2*k*m*z - 27*a^2*b^4*c^3*e^2*h*k*1*z - 27*a^2*b^4*c^3*e^2*g*k*m*z + 432*a^4 \\
& *b^2*c^3*e*g*j*m^2*z + 432*a^4*b^2*c^3*d*h*j*m^2*z - 270*a^4*b^2*c^3*d*g*k \\
& *m^2*z - 216*a^3*b^4*c^2*e*g*j*m^2*z - 216*a^3*b^4*c^2*d*h*j*m^2*z + 216*a^3 \\
& *b^3*c^3*e*g*j^2*m*z + 216*a^3*b^3*c^3*d*h*j^2*m*z - 162*a^3*b^2*c^4*e*f^2 \\
& *k*m*z - 162*a^3*b^2*c^4*d*f^2*1*m*z - 108*a^3*b^2*c^4*f^2*h*j*k*z - 108*a^3 \\
& *b^2*c^4*f^2*g*j*1*z + 54*a^4*b^2*c^3*e*f*k*m^2*z + 54*a^4*b^2*c^3*d*f*1*m \\
& ^2*z + 54*a^3*b^4*c^2*d*g*k*m^2*z - 54*a^3*b^3*c^3*f*h*j^2*k*z - 54*a^3*b^3 \\
& *c^3*f*g*j^2*1*z - 27*a^2*b^5*c^2*e*g*j^2*m*z - 27*a^2*b^5*c^2*d*h*j^2*m*z
\end{aligned}$$

$$\begin{aligned}
& + 27a^2b^4c^3f^2h^*jk^*z + 27a^2b^4c^3f^2g^*j^*l^*z + 27a^2b^4c^3e^*f^2k^*m^*z + 27a^2b^4c^3d^*f^2l^*m^*z + 324a^2b^3c^4d^2g^*j^*m^*z - 27 \\
& 0a^3b^2c^4d^*g^2j^*m^*z - 162a^3b^2c^4f^2g^*h^*m^*z + 162a^3b^2c^4e^*g^2j^*l^*z - 162a^2b^3c^4d^2e^*l^*m^*z - 135a^2b^3c^4d^2g^*k^*l^*z + 10 \\
& 8a^3b^2c^4d^*g^2k^*l^*z + 54a^4b^2c^3f^*g^*h^*m^2z + 54a^3b^3c^3f^*g^*j^*k^2z - 54a^3b^2c^4f^*g^2j^*k^*z + 54a^2b^4c^3d^*g^2j^*m^*z - 54a^2 \\
& b^3c^4d^2f^*k^*m^*z + 27a^3b^3c^3e^*h^*j^*k^2z + 27a^3b^3c^3d^*g^*k^2l^*z + 27a^2b^4c^3f^2g^*h^*m^*z - 27a^2b^4c^3e^*g^2j^*l^*z - 27a^2b^4c^3 \\
& d^*g^2k^*l^*z + 27a^2b^3c^4d^2h^*j^*l^*z + 162a^3b^2c^4d^*h^2j^*k^*z - 162a^2b^3c^4d^*e^2k^*m^*z + 108a^3b^2c^4e^*g^2h^*m^*z + 54a^3b^3c^3 \\
& e^*f^*j^*l^2z + 27a^3b^3c^3d^*g^*j^*l^2z - 27a^2b^4c^3e^*g^2h^*m^*z - 27a^2b^4c^3d^*h^2j^*k^*z + 27a^2b^3c^4e^2g^*j^*k^*z - 621a^3b^3c^3d^* \\
& e^*j^*m^2z + 594a^3b^2c^4d^*e^*j^2m^*z + 243a^2b^5c^2d^*e^*j^*m^2z - 243 \\
& a^2b^4c^3d^*e^*j^2m^*z + 135a^3b^3c^3e^*g^*h^*l^2z - 108a^3b^2c^4e^*g^*h^2l^*z + 108a^3b^2c^4d^*g^*h^2m^*z + 54a^3b^2c^4e^*f^*j^2k^*z + 54a^3 \\
& b^2c^4e^*f^*h^2m^*z + 54a^3b^2c^4d^*g^*j^2k^*z + 54a^3b^2c^4d^*f^*j^2l^*z - 54a^2b^3c^4e^2f^*h^*m^*z - 27a^2b^5c^2e^*g^*h^*l^2z + 27a^2b^4 \\
& c^3e^*g^*h^2l^*z - 27a^2b^4c^3d^*g^*h^2m^*z - 27a^2b^3c^4e^2g^*h^*l^*z - 27a^2b^3c^4e^2f^*g^*h^*l^*z - 27a^2b^3c^4e^2f^*j^*k^*z - 27a^2b^3c^4d^*d^*f^2j^*l^*z + 162a^2b^2c^ \\
& 5d^2e^*j^*l^*z + 54a^3b^2c^4f^*g^*h^*j^2z - 54a^3b^2c^4d^*f^*j^*k^2z + 5 \\
& 4a^2b^3c^4e^*f^2h^*l^*z + 54a^2b^2c^5d^2f^*j^*k^*z - 27a^2b^3c^4f^2 \\
& g^*h^*j^*z - 270a^2b^2c^5d^2f^*g^*m^*z - 162a^3b^2c^4d^*g^*h^*k^2z + 162a^2 \\
& b^2c^5d^2g^*h^*k^*z + 162a^2b^2c^5d^2e^2j^*k^*z + 108a^2b^2c^5d^2 \\
& e^*h^*m^*z - 54a^2b^3c^4d^*f^*g^2m^*z + 27a^2b^4c^3d^*g^*h^*k^2z + 27a^2 \\
& b^3c^4e^*g^2h^*j^*z + 270a^3b^2c^4d^*e^*h^*l^2z - 270a^2b^2c^5d^2e^2 \\
& h^*l^*z - 162a^2b^4c^3d^*e^*h^*l^2z + 108a^2b^3c^4d^*e^*h^2l^*z + 108a^2 \\
& b^2c^5d^2e^2g^*m^*z + 54a^2b^2c^5e^2f^*h^*j^*z + 27a^2b^3c^4d^*g^*h^2 \\
& j^*z + 162a^2b^2c^5d^2e^*f^2m^*z - 54a^3b^2c^4d^*e^*f^*m^2z - 54a^2b^2 \\
& c^5d^2f^2g^*k^*z + 135a^2b^3c^4d^*e^*g^*k^2z - 108a^2b^2c^5d^2e^*g^2k^* \\
& z + 54a^2b^2c^5d^2f^*g^2j^*z - 54a^2b^2c^5d^2e^*f^*j^2z - 9a^*b^7c^*d^*e^ \\
& *l^3z - 36a^*b^*c^7d^3e^*g^*z - 108a^6b^*c^2k^2l^2m^*z + 27a^5b^3c^*k^ \\
& ^2l^2m^*z - 18a^5b^2c^2j^*k^3m^*z - 27a^4b^3c^2j^3k^*l^*z - 108a^5b^ \\
& *c^3h^2k^2m^*z - 108a^5b^*c^3g^2l^2m^*z + 108a^5b^*c^3h^2k^*l^2z + \\
& 108a^5b^*c^3g^2k^*m^2z + 90a^5b^2c^2f^*l^3m^*z - 18a^5b^2c^2h^*k^*l^ \\
& ^3z + 18a^4b^2c^3h^3k^*l^*z + 18a^4b^2c^3h^3j^*m^*z - 108a^5b^*c^3 \\
& h^*j^2l^2z + 18a^4b^3c^2f^*k^3m^*z - 18a^3b^3c^3g^3j^*m^*z - 9a^4b^ \\
& ^3c^2g^*k^3l^*z + 9a^3b^3c^3g^3k^*l^*z + 252a^4b^2c^3f^*j^3m^*z + 21 \\
& 6a^5b^*c^3f^*j^2m^2z + 180a^3b^2c^4f^3j^*m^*z - 108a^4b^*c^4e^2k^2 \\
& *m^*z - 108a^4b^*c^4d^2l^2m^*z + 90a^5b^2c^2e^*k^*m^3z + 90a^5b^2c^ \\
& 2d^*l^*m^3z - 90a^3b^2c^4f^3k^*l^*z + 54a^3b^5c^*f^*j^2m^2z - 54a^3b^ \\
& ^4c^2f^*j^3m^*z + 36a^5b^2c^2f^*j^*m^3z + 36a^4b^2c^3h^*j^3k^*z + 3 \\
& 6a^4b^2c^3g^*j^3l^*z - 36a^2b^4c^3f^3j^*m^*z - 27a^2b^6c^*f^2j^*m^2 \\
& *z + 18a^2b^4c^3f^3k^*l^*z - 216a^4b^*c^4d^2k^*m^2z + 108a^5b^*c^3d^ \\
& *k^2m^2z - 108a^4b^3c^2f^*j^*l^3z - 108a^4b^*c^4g^2h^2m^*z + 108a^ \\
& 2b^3c^4e^3j^*m^*z + 90a^5b^2c^2g^*h^*m^3z + 54a^4b^3c^2e^*k^*l^3z -
\end{aligned}$$

$$\begin{aligned}
& 54a^2b^3c^4e^3k^1z + 234a^2b^2c^5d^3j^mz - 144a^2b^2c^5d^3 \\
& *k^1z + 90a^4b^2c^3f^j^k^3z - 72a^4b^2c^3d^k^3z + 27a^4b^3c \\
& ^2g^h^1^3z - 27a^3b^3c^3g^h^3z - 18a^3b^4c^2f^j^k^3z + 9a^3b \\
& b^4c^2d^k^3z + 216a^4b^3c^4f^2h^1^2z - 216a^4b^3c^4e^2h^m^2z + \\
& 108a^4b^3c^4g^2h^k^2z - 18a^4b^2c^3g^h^k^3z + 18a^3b^2c^4g^3 \\
& h^k^z + 18a^3b^2c^4f^g^3m^z + 9a^3b^4c^2g^h^k^3z - 9a^3b^3c^3e \\
& e^j^3k^z - 9a^3b^3c^3d^j^3z - 144a^4b^3c^2e^g^m^3z - 144a^4b \\
& ^3c^2d^h^m^3z - 108a^3b^3c^5e^2g^2m^z + 108a^3b^3c^5d^2j^2k^z - \\
& 108a^3b^3c^5d^2h^2m^z - 18a^2b^3c^4f^3h^k^z - 18a^2b^3c^4f^3g \\
& *l^z - 9a^3b^3c^3g^h^j^3z - 216a^4b^3c^4d^g^2m^2z + 144a^4b^2c^ \\
& 3e^g^1^3z - 126a^3b^2c^4d^h^3z - 108a^4b^3c^4d^h^2l^2z - 108a \\
& ^3b^3c^5f^2g^2k^z - 108a^3b^3c^5e^2h^2k^z - 90a^2b^2c^5e^3f^m^z \\
& + 72a^2b^2c^5e^3g^1z - 63a^3b^4c^2e^g^1^3z - 36a^3b^4c^2d^h \\
& *l^3z + 27a^2b^4c^3d^h^3z + 27a^2b^6c^2d^2g^m^2z - 18a^4b^2c \\
& ^3d^h^1^3z - 18a^3b^2c^4f^h^3j^z - 18a^3b^2c^4e^h^3k^z + 18a^2 \\
& *b^2c^5e^3h^k^z + 108a^3b^3c^5e^2h^j^2z + 54a^3b^3c^3d^h^k^3z + \\
& 27a^3b^3c^3e^g^k^3z - 27a^2b^3c^4e^g^3k^z + 27a^2b^3c^4d^g^3 \\
& *l^z - 27a^2b^4c^4d^2g^2l^z - 9a^2b^5c^2e^g^k^3z - 9a^2b^5c^2d \\
& *h^k^3z + 207a^3b^4c^2d^e^m^3z - 108a^2b^3c^6d^2e^2m^z - 90a^4b \\
& ^2c^3d^e^m^3z - 72a^3b^2c^4e^g^j^3z - 72a^3b^2c^4d^h^j^3z + 27 \\
& *a^2b^3c^5d^2e^2m^z + 18a^2b^2c^5e^ef^3k^z + 18a^2b^2c^5d^f^3l^z \\
& z + 9a^2b^4c^3e^g^j^3z + 9a^2b^4c^3d^h^j^3z - 216a^3b^3c^5d^e^2 \\
& *l^2z - 198a^3b^3c^3d^e^l^3z + 108a^3b^3c^5d^g^2j^2z - 108a^3b^3c \\
& ^5d^f^2k^2z + 72a^2b^5c^2d^e^l^3z - 27a^2b^5c^3d^e^2l^2z + 27a \\
& *b^4c^4d^2g^j^2z + 18a^2b^2c^5f^3g^h^z + 144a^3b^2c^4d^e^k^3z \\
& z - 63a^2b^4c^3d^e^k^3z + 27a^2b^4c^4d^2e^k^2z - 9a^2b^3c^4e^g \\
& *h^3z - 108a^2b^3c^6d^2g^2h^z + 81a^2b^3c^4d^e^j^3z + 27a^2b^3c^ \\
& 5d^2g^2h^z - 27a^2b^2c^6d^2e^2j^z - 18a^2b^2c^5d^g^3h^z + 108a \\
& ^2b^3c^6d^e^2h^2z - 27a^2b^3c^5d^e^2h^2z + 27a^2b^2c^6d^2f^2g^z \\
& - 18a^2b^2c^5d^e^h^3z - 216a^6c^3j^2k^1m^z + 216a^6c^3h^j^1^2m \\
& *z + 216a^6c^3f^k^1m^2z - 216a^5c^4f^2k^1m^z - 216a^5c^4g^2j \\
& *k^m^z + 216a^5c^4f^j^2k^1z + 216a^5c^4f^h^2l^1m^z + 216a^5c^4e^ \\
& j^2k^m^z + 216a^5c^4d^j^2l^1m^z + 216a^5c^4g^h^j^2m^z - 216a^5c^4 \\
& *e^j^k^2l^1z - 216a^5c^4d^j^k^2m^z + 216a^4c^5d^2j^k^m^z - 18a^6b \\
& ^2c^k^1m^3z + 216a^5c^4f^g^k^2m^z - 216a^5c^4d^j^k^1l^2z - 72a^6 \\
& *b^2c^2j^1^3m^z + 18a^5b^3c^j^1^3m^z - 216a^5c^4f^h^j^1^2z + 216a \\
& ^5c^4e^h^k^1l^2z + 216a^5c^4e^f^1l^2m^z - 216a^4c^5e^2h^k^1z + 21 \\
& 6a^4c^5e^2h^j^m^z - 216a^4c^5e^2f^1m^z - 216a^5c^4e^f^k^m^2z + \\
& 216a^5c^4d^g^k^m^2z - 216a^5c^4d^f^1m^2z + 216a^4c^5e^ef^2k^m^ \\
& z + 216a^4c^5d^f^2l^1m^z + 108a^5b^3c^j^3k^1z - 216a^5c^4f^g^h^m \\
& ^2z + 216a^4c^5f^2g^h^m^z + 216a^4c^5f^g^2j^k^z - 216a^4c^5e^g^ \\
& 2j^1z + 216a^4c^5d^g^2j^m^z - 72a^6b^3c^2h^k^m^3z - 72a^6b^3c^2g \\
& *l^m^3z + 54a^5b^3c^h^k^m^3z + 54a^5b^3c^g^1m^3z - 216a^4c^5d^ \\
& h^2j^k^z - 18a^4b^4c^f^1l^3m^z + 9a^4b^4c^h^k^1l^3z - 216a^4c^5e^ \\
& f^j^2k^z - 216a^4c^5e^f^h^2m^z - 216a^4c^5d^g^j^2k^z - 216a^4c^5
\end{aligned}$$

$$\begin{aligned}
& *d*f*j^2*1*z - 216*a^4*c^5*d*e*j^2*m*z - 72*a^5*b*c^3*f*k^3*m*z + 72*a^4*b*c^4*g^3*j*m*z + 36*a^5*b*c^3*g*k^3*1*z - 36*a^4*b*c^4*g^3*k*1*z - 216*a^4*c^5*f*g*h*j^2*z + 216*a^4*c^5*d*f*j*k^2*z - 216*a^3*c^6*d^2*f*j*k*z - 216*a^3*c^6*d^2*e*j*1*z + 72*a^4*b^4*c*f*j*m^3*z - 63*a^4*b^4*c*e*k*m^3*z - 63*a^4*b^4*c*d*1*m^3*z + 216*a^4*c^5*d*g*h*k^2*z - 216*a^3*c^6*d^2*g*h*k*z + 216*a^3*c^6*d^2*f*g*m*z - 216*a^3*c^6*d*e^2*j*k*z + 144*a^5*b*c^3*f*j*1^3*z - 144*a^3*b*c^5*e^3*j*m*z - 72*a^5*b*c^3*e*k*1^3*z + 72*a^3*b*c^5*e^3*k*1*z - 63*a^4*b^4*c*g*h*m^3*z + 18*a^3*b^5*c*f*j*1^3*z - 18*a*b^5*c^3*e^3*j*m*z - 9*a^3*b^5*c*e*k*1^3*z + 9*a*b^5*c^3*e^3*k*1*z - 216*a^4*c^5*d*e*h*1^2*z - 216*a^3*c^6*e^2*f*h*j*z + 216*a^3*c^6*d*e^2*h*1*z - 126*a*b^4*c^4*d^3*j*m*z + 108*a^4*b*c^4*g*h^3*1*z + 63*a*b^4*c^4*d^3*k*1*z + 36*a^5*b*c^3*g*h*1^3*z - 9*a^3*b^5*c*g*h*1^3*z + 216*a^4*c^5*d*e*f*m^2*z + 216*a^3*c^6*d*f^2*g*k*z - 216*a^3*c^6*d*e*f^2*m*z + 36*a^4*b*c^4*e*j^3*k*z + 36*a^4*b*c^4*d*j^3*1*z - 216*a^3*c^6*d*f*g^2*j*z + 72*a^3*b^5*c*e*g*m^3*z + 72*a^3*b^5*c*d*h*m^3*z + 72*a^3*b*c^5*f^3*h*k*z + 72*a^3*b*c^5*f^3*g*1*z + 36*a^4*b*c^4*g*h*j^3*z + 18*a*b^4*c^4*e^3*f*m*z + 9*a^2*b^6*c*e*g*1^3*z + 9*a^2*b^6*c*d*h*1^3*z - 9*a*b^4*c^4*e^3*h*k*z - 9*a*b^4*c^4*e^3*g*1*z + 216*a^3*c^6*d*e*f*j^2*z - 144*a^2*b*c^6*d^3*f*m*z + 108*a^3*b*c^5*e*g^3*k*z - 108*a^3*b*c^5*d*g^3*1*z + 108*a*b^3*c^5*d^3*f*m*z - 72*a^4*b*c^4*d*h*k^3*z + 72*a^2*b*c^6*d^3*h*k*z - 54*a*b^3*c^5*d^3*h*k*z + 36*a^4*b*c^4*e*g*k^3*z - 36*a^2*b*c^6*d^3*g*1*z - 27*a*b^3*c^5*d^3*g*1*z - 81*a^2*b^6*c*d*e*m^3*z + 216*a^4*b*c^4*d*e*1^3*z + 72*a^2*b*c^6*e^3*f*j*z + 72*a^2*b*c^6*d*e^3*1*z - 18*a*b^3*c^5*e^3*f*j*z - 18*a*b^3*c^5*d*e^3*1*z - 90*a*b^2*c^6*d^3*f*j*z + 72*a*b^2*c^6*d^3*e*k*z + 36*a^3*b*c^5*e*g*h^3*z - 36*a^2*b*c^6*e^3*g*h*z + 9*a*b^6*c^2*d*e*k^3*z + 9*a*b^3*c^5*e^3*g*h*z - 180*a^3*b*c^5*d*e*j^3*z + 18*a*b^2*c^6*d^3*g*h*z - 9*a*b^5*c^3*d*e*j^3*z + 18*a*b^2*c^6*d*e^3*h*z + 9*a*b^4*c^4*d*e*h^3*z + 36*a^2*b*c^6*d*e*g^3*z - 9*a*b^3*c^5*d*e*g^3*z - 18*a*b^2*c^6*d*e*f^3*z + 27*a^5*b^2*c^2*h^2*1*m^2*z - 27*a^5*b^2*c^2*j*k^2*1^2*z + 27*a^4*b^3*c^2*h^2*k^2*m*z + 27*a^4*b^3*c^2*g^2*1^2*m*z + 27*a^5*b^2*c^2*g*k^2*m^2*z - 27*a^4*b^3*c^2*h^2*k*1^2*z - 27*a^4*b^3*c^2*g^2*k*m^2*z - 135*a^4*b^2*c^3*e^2*1*m^2*z + 27*a^5*b^2*c^2*e*1^2*m^2*z + 27*a^4*b^3*c^2*h*j^2*1^2*z - 27*a^4*b^2*c^3*h^2*j^2*1*z + 27*a^3*b^4*c^2*e^2*1*m^2*z - 270*a^4*b^3*c^2*f*j^2*m^2*z - 270*a^4*b^2*c^3*f^2*j*m^2*z + 162*a^3*b^4*c^2*f^2*j*m^2*z - 108*a^3*b^3*c^3*f^2*j^2*m*z - 27*a^4*b^2*c^3*h^2*j*k^2*z - 27*a^4*b^2*c^3*g^2*j*1^2*z + 27*a^3*b^3*c^3*e^2*k^2*m*z + 27*a^3*b^3*c^3*d^2*1^2*m*z + 27*a^2*b^5*c^2*f^2*j^2*m*z + 162*a^3*b^3*c^3*d^2*k*m^2*z - 27*a^4*b^3*c^2*d*k^2*m^2*z - 27*a^4*b^2*c^3*g*j^2*k^2*z + 27*a^3*b^3*c^3*g^2*h^2*m*z - 27*a^2*b^5*c^2*d^2*k*m^2*z + 162*a^3*b^2*c^4*d^2*k^2*1*z - 108*a^4*b^2*c^3*g*h^2*1^2*z - 27*a^4*b^2*c^3*e*j^2*1^2*z + 27*a^3*b^4*c^2*g*h^2*1^2*z + 27*a^3*b^2*c^4*e^2*j^2*1*z - 27*a^2*b^4*c^3*d^2*k^2*1*z - 162*a^3*b^3*c^3*f^2*h*1^2*z + 162*a^3*b^3*c^3*e^2*h*m^2*z - 135*a^4*b^2*c^3*e*h^2*m^2*z + 135*a^3*b^2*c^4*f^2*h^2*1*z + 27*a^3*b^4*c^2*e*h^2*m^2*z - 27*a^3*b^3*c^3*g^2*h*k^2*z - 27*a^3*b^2*c^4*e^2*j*k^2*z - 27*a^3*b^2*c^4*d^2*j*1^2*z + 27*a^2*b^5*c^2*f^2*h*1^2*z - 27*a^2*b^5*c^2*e^2*h*m^2*z - 27*a^2*b^4*c^3*f^2*h^2*1*z - 27*a^3*b^2*c^4*g^2*h^2*j*z + 27*a^2*b^3*c^4*e^2*g^2*m*z - 27*a^2*b^3*c^4*d^2*j^2*k*z +
\end{aligned}$$



$$\begin{aligned}
& 27a^2b^3c^4d^2h^2m^2z + 351a^3b^2c^4d^2g^2m^2z - 189a^2b^4c^3d^2g^2m^2z + 162a^3b^3c^3d^2g^2m^2z - 162a^3b^2c^4e^2g^2l^2z + \\
& 135a^3b^3c^3d^2h^2l^2z + 135a^3b^2c^4f^2g^2k^2z - 27a^2b^5c^2d^2h^2l^2z - 27a^2b^4c^3f^2g^2k^2z + 27a^2b^4c^3e^2g^2l^2z + 27a^2b^3c^4f^2g^2k^2z + 27a^2b^3c^4e^2h^2k^2z + \\
& 135a^3b^2c^4e^2f^2l^2z - 108a^3b^2c^4e^2g^2k^2z + 108a^2b^2c^5d^2g^2l^2z + 27a^3b^2c^4e^2h^2j^2z + 27a^2b^4c^3e^2g^2k^2z - 27a^2b^4c^3e^2f^2l^2z - 27a^2b^3c^4e^2h^2j^2z - 27a^2b^2c^5e^2f^2l^2z - 27a^2b^2c^5e^2g^2j^2z - 27a^2b^2c^5d^2h^2j^2z + \\
& 162a^2b^3c^4d^2e^2l^2z - 135a^2b^2c^5d^2g^2j^2z - 27a^2b^3c^4d^2g^2j^2z + 27a^2b^3c^4d^2f^2k^2z - 162a^2b^2c^5d^2e^2k^2z - 27a^2b^2c^5e^2f^2h^2z - 72a^7c^2k^1m^3z + 9a^5b^4k^1m^3z + 72a^6c^3j^2k^3m^2z - 72a^6c^3h^2k^1m^3z - 72a^6c^3f^1l^3m^2z - 72a^5c^4h^3k^1m^2z - 72a^5c^4h^3j^2m^2z - 9a^4b^5h^2k^1m^3z - 9a^4b^5g^1m^3z - 144a^6c^3f^1j^2m^3z - 144a^5c^4h^2j^3k^2z - 144a^5c^4g^2j^3l^2z - 144a^5c^4f^2j^3m^2z - 144a^4c^5f^3j^2m^2z + 72a^6c^3e^2k^1m^3z + 72a^6c^3d^1m^3z + 72a^4c^5f^3k^1m^2z + 72a^6c^3g^2h^1m^3z + 18b^6c^3d^3j^2m^2z - 18a^3b^6f^2j^2m^3z - 9b^6c^3d^3k^1m^2z + 9a^3b^6e^2k^1m^3z + 9a^3b^6d^1m^3z + 144a^5c^4d^2k^3l^2z + 144a^3c^6d^3k^1m^2z - 72a^5c^4f^2j^2k^3z - 72a^3c^6d^3j^2m^2z + 9a^3b^6g^2h^1m^3z - 72a^5c^4g^2h^2k^3z - 72a^4c^5g^3h^2k^2z - 72a^4c^5f^2g^3m^2z - 108a^5b^3c^3j^4m^2z + 63a^6b^2c^2j^2m^4z + 36a^6b^2c^2k^1l^4z - 9a^5b^3c^2k^1l^4z - 144a^5c^4e^2g^2l^3z - 144a^3c^6e^3g^2l^2z + 72a^5c^4d^2h^1l^3z + 72a^4c^5f^2h^3j^2z + 72a^4c^5e^2h^3k^2z + 72a^4c^5d^2h^3l^2z + 72a^3c^6e^3h^2k^2z + 72a^3c^6e^3f^2m^2z - 18b^5c^4d^3f^2m^2z + 9b^5c^4d^3h^2k^2z + 9b^5c^4d^3g^2l^2z - 9a^2b^7e^2g^2m^3z - 9a^2b^7d^2h^1m^3z + 144a^4c^5e^2g^2j^3z + 144a^4c^5d^2h^1j^3z - 72a^5c^4d^2e^2m^3z - 72a^3c^6e^2f^3k^2z - 72a^3c^6d^2f^3l^2z + 144a^6b^2c^2f^2m^4z - 108a^5b^3c^2f^2m^4z - 72a^3c^6f^3g^2h^2z + 36a^5b^2c^3h^2k^4z - 36a^3b^2c^5f^4m^2z + 18b^4c^5d^3f^2j^2z - 9b^4c^5d^3e^2k^2z + 9a^4b^4c^2g^2l^4z - 144a^4c^5d^2e^2k^3z - 144a^2c^7d^3e^2k^2z + 72a^2c^7d^3f^2j^2z - 9b^4c^5d^3g^2h^2z + 72a^3c^6d^2g^3h^2z + 72a^2c^7d^3g^2h^2z - 72a^5b^2c^3d^1l^4z - 72a^4b^2c^4f^2j^4z + 45a^2b^2c^6d^4l^2z - 36a^2b^2c^6e^4k^2z - 9a^3b^5c^2d^1l^4z + 9a^2b^3c^5e^4k^2z - 72a^3c^6d^2e^2h^3z - 72a^2c^7d^2e^3h^2z + 9b^3c^6d^3e^2g^2z + 72a^2c^7d^2e^2f^3z + 36a^3b^2c^5d^2h^4z - 9a^2b^2c^6e^4g^2z + 36a^2b^2c^7d^3f^2z + 90a^5b^2c^2j^3m^2z + 45a^5b^2c^2j^2l^3z + 9a^4b^3c^2j^2k^3z - 9a^4b^3c^2h^3m^2z - 45a^4b^2c^3g^3m^2z + 9a^3b^4c^2g^3m^2z + 198a^4b^3c^2f^2m^3z - 108a^3b^3c^3f^3m^2z + 18a^2b^5c^2f^3m^2z - 117a^4b^2c^3f^2l^3z + 117a^3b^2c^4e^3m^2z + 63a^3b^4c^2f^2l^3z - 63a^2b^4c^3e^3m^2z - 171a^2b^3c^4d^3m^2z - 54a^3b^3c^3f^2k^3z + 9a^3b^2c^4g^3j^2z + 9a^2b^5c^2f^2k^3z + 18a^3b^2c^4f^2j^3z + 18a^2b^3c^4f^3j^2z - 9a^2b^4c^3f^2j^3z - 45a^2b^2c^5e^3j^2z + 9a^2b^3c^4f^2h^3z - 9a^2b^2c^5f^2g^3z + 9a^2b^8d^2e^2m^3z - 36a^2b^2c^7d^4h^2z - 108a^6c^3h^2l^1m^2z +
\end{aligned}$$

$$\begin{aligned}
& 108a^6c^3jk^2l^2z - 108a^6c^3gk^2m^2z - 108a^6c^3e*l^2m^2z \\
& z + 108a^5c^4h^2j^2l^2z + 108a^5c^4e^2l^2m^2z + 216a^5c^4f^2jm^2z \\
& + 108a^5c^4h^2jk^2z + 108a^5c^4g^2j^2l^2z + 108a^5c^4g^2j^2k^2z - 216a^4c^5d^2k^2l^2z \\
& + 108a^4c^5e^2j^2l^2z - 108a^4c^5e^2j^2m^2z + 108a^4c^5e^2j^2k^2z - 144a^6b^2c^2j^2m^3z \\
& + 108a^4c^5g^2h^2j^2z - 27a^4b^4c^2j^3m^2z + 27a^4b^3c^2j^4m^2z + 9a^5b^2c^2k^4l^2z \\
& + 216a^4c^5e^2g^2l^2z - 108a^4c^5f^2g^2k^2z - 108a^4c^5d^2g^2m^2z - 9a^4b^4c^2j^2l^3z \\
& - 108a^4c^5e^2h^2j^2z - 108a^4c^5e^2f^2l^2z + 108a^3c^6e^2f^2l^2z - 36a^5b^3c^3j^2k^3z \\
& + 36a^5b^3c^3h^3m^2z + 108a^3c^6e^2g^2j^2z + 108a^3c^6d^2h^2j^2z - 216a^5b^3c^3f^2m^3z \\
& + 144a^4b^3c^4f^3m^2z + 108a^3c^6d^2g^2j^2z - 72a^3b^5c^2f^2m^3z - 45a^5b^2c^2g^2l^4z \\
& - 9a^4b^3c^2h^2k^4z - 9a^3b^2c^4g^4l^2z + 9a^2b^3c^4f^4m^2z + 216a^3c^6d^2e^2k^2z \\
& - 9a^2b^6c^2f^2l^3z + 9a^2b^6c^2e^3m^2z + 108a^3c^6e^2f^2h^2z + 108a^3b^3c^5d^3m^2z \\
& + 108a^2c^7d^2e^2j^2z + 72a^4b^3c^4f^2k^3z + 72a^4b^5c^3d^3m^2z - 72a^3b^3c^5f^3j^2z \\
& + 54a^4b^3c^2d^4z - 45a^4b^2c^3e^2k^4z + 18a^3b^3c^3f^3j^4z + 9a^3b^4c^2e^2k^4z \\
& - 9a^2b^2c^5f^4j^2z - 108a^2c^7d^2f^2g^2z + 9a^3b^2c^4g^2h^4z + 9a^2b^4c^4e^3j^2z \\
& - 72a^2b^3c^6d^3j^2z + 54a^2b^3c^5d^3j^2z - 36a^3b^3c^5f^2h^3z - 9a^2b^3c^4d^4h^4z \\
& + 9a^2b^2c^5e^2g^4z + 9a^2b^2c^6e^3f^2z + 36a^7c^2l^3m^2z + 72a^6c^3j^3m^2z \\
& - 36a^6c^3j^2l^3z + 9a^4b^5j^2m^3z + 36a^5c^4g^3m^2z + 36a^5c^4f^2l^3z \\
& - 36a^4c^5e^3m^2z - 9b^7c^2d^3m^2z + 9a^2b^7f^2m^3z - 36a^4c^5g^3j^2z \\
& + 72a^4c^5f^2j^3z + 36a^3c^6e^3j^2z - 9b^5c^4d^3j^2z + 36a^3c^6f^2g^3z \\
& - 9a^4b^2c^3j^5z - 36a^2c^7e^3f^2z - 9b^3c^6d^3f^2z + 36a^7c^2jm^4z - 36a^6c^3k^4l^2z \\
& - 18a^5b^4jm^4z + 36a^6c^3g^2l^4z + 36a^4c^5g^4l^2z + 18a^4b^5f^2m^4z \\
& - 9b^4c^5d^4l^2z + 36a^5c^4e^2k^4z + 36a^3c^6f^4j^2z - 36a^2c^7d^4l^2z \\
& - 36a^4c^5g^2h^4z + 9b^3c^6d^4h^2z - 36a^3c^6e^2g^4z + 36a^2c^7e^4g^2z \\
& - 9b^2c^7d^4e^2z - 36a^7b^2c^5m^5z + 36a^5c^4j^5z + 9a^4b^3c^3g^2h^2jk^2l^2m \\
& - 9a^3b^4c^2e^2g^2jk^2l^2m - 9a^3b^4c^2d^2h^2jk^2l^2m - 9a^3b^4c^2f^2g^2h^2k^2l^2m \\
& + 36a^4b^3c^3d^2e^2jk^2l^2m + 9a^2b^5c^2d^2e^2jk^2l^2m + 36a^4b^3c^3e^2f^2h^2jk^2l^2m \\
& + 36a^4b^3c^3e^2f^2g^2k^2l^2m + 36a^4b^3c^3d^2f^2h^2k^2l^2m + 9a^2b^5c^2e^2f^2g^2k^2l^2m \\
& + 9a^2b^5c^2d^2e^2f^2h^2k^2l^2m + 36a^3b^3c^4d^2e^2f^2jk^2l^2m + 9a^2b^5c^2d^2e^2f^2jk^2l^2m \\
& + 36a^3b^3c^4d^2e^2g^2h^2k^2l^2m + 36a^3b^3c^4d^2e^2f^2h^2k^2l^2m + 36a^3b^3c^4d^2e^2f^2g^2l^2m \\
& + 9a^2b^5c^2d^2e^2f^2h^2k^2l^2m + 9a^2b^5c^2d^2e^2f^2g^2h^2k^2l^2m + 9a^2b^5c^2d^2e^2f^2g^2l^2m \\
& - 9a^2b^4c^3d^2e^2f^2h^2jk^2l^2m - 9a^2b^4c^3d^2e^2f^2g^2j^2l^2m - 9a^2b^4c^3d^2e^2f^2g^2h^2m \\
& + 9a^2b^3c^4d^2e^2f^2g^2h^2j^2k^2l^2m + 18a^4b^2c^2d^2h^2jk^2l^2m + 18a^4b^2c^2f^2g^2h^2k^2l^2m \\
& - 36a^3b^3c^2d^2e^2jk^2l^2m - 36a^3b^3c^2d^2e^2f^2g^2k^2l^2m - 36a^3b^3c^2d^2e^2f^2h^2k^2l^2m \\
& + 9a^3b^3c^2d^2e^2f^2g^2h^2jk^2l^2m + 9a^3b^3c^2d^2e^2f^2g^2h^2jk^2l^2m + 9a^3b^3c^2d^2e^2f^2g^2h^2jk^2l^2m \\
& - 108a^3b^2c^3d^2e^2f^2k^2l^2m + 54a^2b^4c^2d^2e^2f^2k^2l^2m - 36a^3b^2c^3d^2e^2f^2g^2jk^2l^2m \\
& + 18a^3b^2c^3e^2f^2g^2jk^2l^2m + 18a^3b^2c^3e^2f^2g^2jk^2l^2m + 18a^3b^2c^3e^2f^2g^2jk^2l^2m
\end{aligned}$$



$$\begin{aligned}
& 5*d^e^2*f*h*1 + 18*a^2*b*c^5*d^e^2*g*h*k - 18*a^2*b*c^5*d^e^2*f*g*m - 18*a* \\
& b^3*c^4*d^e^2*f*h*1 - 9*a*b^5*c^2*d^e*f*h*1^2 + 9*a*b^4*c^3*d^e*f*h^2*1 + 9 \\
& *a*b^3*c^4*d^e^2*f*g*m - 18*a^2*b*c^5*d^e*f^2*h*k - 18*a^2*b*c^5*d^e*f^2*g* \\
& 1 + 9*a*b^3*c^4*d^e*f^2*h*k + 9*a*b^3*c^4*d^e*f^2*g*1 + 27*a*b^2*c^5*d^2*e* \\
& f*g*k + 9*a*b^4*c^3*d^e*f*g*k^2 - 9*a*b^3*c^4*d^e*f*g^2*k - 9*a*b^2*c^5*d^2 \\
& *e*f*h*j - 9*a*b^2*c^5*d^e^2*f*g*j - 9*a*b^2*c^5*d^e*f^2*g*h + 72*a^4*c^4*d \\
& *f*g*j*k*m + 72*a^4*c^4*d^e*f*k*1*m + 9*a*b^6*c*d^2*g*k*1*m + 9*a*b^6*c*d^e \\
& *f*j*m^2 - 27*a^4*b^2*c^2*f^2*j*k*1*m - 9*a^4*b^2*c^2*g^2*h*j*1*m + 36*a^3* \\
& b^3*c^2*e^2*h*k*1*m - 18*a^4*b^2*c^2*e*h^2*k*1*m - 9*a^4*b^2*c^2*g*h^2*j*k* \\
& m + 18*a^4*b^2*c^2*f*h*j^2*k*m + 18*a^4*b^2*c^2*f*g*j^2*1*m - 18*a^4*b^2*c^ \\
& 2*e*h*j^2*1*m - 9*a^4*b^2*c^2*g*h*j^2*k*1 - 9*a^3*b^3*c^2*f^2*h*j*k*m - 9*a \\
& ^3*b^3*c^2*f^2*g*j*1*m - 63*a^4*b^2*c^2*d*g*k^2*1*m + 63*a^3*b^2*c^3*d^2*g* \\
& k*1*m - 45*a^2*b^4*c^2*d^2*g*k*1*m + 36*a^4*b^2*c^2*e*f*k^2*1*m + 27*a^3*b^ \\
& 3*c^2*d*g^2*k*1*m - 9*a^4*b^2*c^2*f*h*j*k^2*1 - 9*a^4*b^2*c^2*e*h*j*k^2*m + \\
& 9*a^3*b^3*c^2*e*g^2*j*1*m - 9*a^3*b^2*c^3*d^2*h*j*1*m + 36*a^4*b^2*c^2*d*f \\
& *k*1^2*m + 27*a^4*b^2*c^2*e*h*j*k*1^2 - 27*a^3*b^2*c^3*e^2*h*j*k*1 - 18*a^3 \\
& *b^2*c^3*e^2*f*j*1*m - 9*a^4*b^2*c^2*f*g*j*k*1^2 - 9*a^4*b^2*c^2*d*g*j*1^2* \\
& m + 9*a^3*b^3*c^2*f*g^2*h*1*m - 9*a^3*b^3*c^2*e*h^2*j*k*1 + 9*a^3*b^3*c^2*d \\
& *h^2*j*k*m - 9*a^3*b^2*c^3*e^2*g*j*k*m + 9*a^2*b^4*c^2*e^2*h*j*k*1 + 72*a^4 \\
& *b^2*c^2*d*g*j*k*m^2 + 36*a^4*b^2*c^2*d*e*k*1*m^2 + 27*a^4*b^2*c^2*e*g*h*1^ \\
& 2*m - 27*a^4*b^2*c^2*e*f*j*k*m^2 - 27*a^4*b^2*c^2*d*f*j*1*m^2 - 27*a^3*b^2* \\
& c^3*e^2*g*h*1*m + 27*a^3*b^2*c^3*e*f^2*j*k*m + 27*a^3*b^2*c^3*d*f^2*j*1*m + \\
& 18*a^3*b^3*c^2*d*g*j^2*k*m + 9*a^3*b^3*c^2*f*g*h^2*k*m + 9*a^3*b^3*c^2*e*g \\
& *j^2*k*1 - 9*a^3*b^3*c^2*e*g*h^2*1*m - 9*a^3*b^3*c^2*e*f*j^2*k*m + 9*a^3*b^ \\
& 3*c^2*d*h*j^2*k*1 - 9*a^3*b^3*c^2*d*f*j^2*1*m + 9*a^2*b^4*c^2*e^2*g*h*1*m + \\
& 36*a^2*b^3*c^3*d^2*g*j*k*1 - 27*a^4*b^2*c^2*f*g*h*j*m^2 + 27*a^3*b^2*c^3*f \\
& ^2*g*h*j*m - 18*a^4*b^2*c^2*e*f*h*1*m^2 - 18*a^3*b^3*c^2*d*g*j*k^2*1 - 18*a \\
& ^3*b^2*c^3*d*g^2*j*k*1 + 18*a^2*b^3*c^3*d^2*f*j*k*m - 9*a^4*b^2*c^2*e*g*h*k \\
& *m^2 - 9*a^4*b^2*c^2*d*g*h*1*m^2 - 9*a^3*b^3*c^2*f*g*h*j^2*m + 9*a^3*b^3*c^ \\
& 2*e*f*j*k^2*1 - 9*a^3*b^2*c^3*f^2*g*h*k*1 + 9*a^2*b^4*c^2*d*g^2*j*k*1 + 9*a \\
& ^2*b^3*c^3*d^2*e*j*1*m + 36*a^3*b^2*c^3*e*f*g^2*1*m + 36*a^2*b^3*c^3*d^2*g* \\
& h*k*m - 18*a^3*b^3*c^2*d*g*h*k^2*m - 18*a^3*b^2*c^3*d*g^2*h*k*m + 9*a^3*b^3 \\
& *c^2*e*f*h*k^2*m + 9*a^3*b^3*c^2*d*f*j*k*1^2 - 9*a^3*b^2*c^3*f*g^2*h*j*1 - \\
& 9*a^3*b^2*c^3*e*g^2*h*j*m - 9*a^2*b^4*c^2*e*f*g^2*1*m + 9*a^2*b^4*c^2*d*g^2 \\
& *h*k*m + 9*a^2*b^3*c^3*d^2*f*h*1*m + 9*a^2*b^3*c^3*d^e^2*j*k*m + 36*a^3*b^2 \\
& *c^3*d*f*h^2*k*m + 36*a^3*b^2*c^3*d^e*j^2*k*1 + 18*a^3*b^3*c^2*d*g*h*k*1^2 \\
& + 18*a^3*b^2*c^3*e*g*h^2*j*1 + 18*a^3*b^2*c^3*e*f*h^2*k*1 - 18*a^3*b^2*c^3* \\
& e*f*h^2*j*m - 18*a^3*b^2*c^3*d*g*h^2*k*1 + 18*a^3*b^2*c^3*d^e*h^2*1*m + 18* \\
& a^2*b^3*c^3*e^2*f*h*j*m - 9*a^3*b^3*c^2*e*g*h*j*1^2 - 9*a^3*b^3*c^2*e*f*h*k \\
& *1^2 + 9*a^3*b^3*c^2*d*f*g*1^2*m - 9*a^3*b^3*c^2*d^e*h*1^2*m - 9*a^3*b^2*c^ \\
& 3*f*g*h^2*j*k - 9*a^3*b^2*c^3*d*g*h^2*j*m - 9*a^2*b^4*c^2*d*f*h^2*k*m - 9*a \\
& ^2*b^4*c^2*d^e*j^2*k*1 - 9*a^2*b^3*c^3*e^2*g*h*j*1 - 9*a^2*b^3*c^3*e^2*f*h* \\
& k*1 + 9*a^2*b^3*c^3*e^2*f*g*k*m - 9*a^2*b^3*c^3*d^e^2*h*1*m + 36*a^3*b^3*c^ \\
& 2*e*f*g*j*m^2 + 36*a^3*b^3*c^2*d*f*h*j*m^2 + 18*a^3*b^3*c^2*d*f*g*k*m^2 - 1 \\
& 8*a^3*b^2*c^3*e*f*g*j^2*m - 18*a^3*b^2*c^3*d*f*h*j^2*m - 18*a^2*b^3*c^3*e*f
\end{aligned}$$

$$\begin{aligned}
& 2*g*j*m - 18*a^2*b^3*c^3*d*f^2*h*j*m + 9*a^3*b^3*c^2*d*e*h*k*m^2 + 9*a^3*b^3*c^2*d*e*g*k^1*m^2 - 9*a^3*b^2*c^3*e*g*h*j^2*k - 9*a^3*b^2*c^3*d*g*h*j^2*k \\
& + 9*a^2*b^4*c^2*e*f*g*j^2*m + 9*a^2*b^4*c^2*d*f*h*j^2*m + 9*a^2*b^3*c^3*e*f^2*g*k^1 + 9*a^2*b^3*c^3*d*f^2*h*k^1 + 72*a^2*b^2*c^4*d^2*f*g*j*m + 36*a^2*b^2*c^4*d^2*e*f*k^1 \\
& + 27*a^3*b^2*c^3*d*g*h*j*k^2 + 27*a^3*b^2*c^3*d*f*g*k^2 * 1 + 27*a^3*b^2*c^3*d*e*g*k^2*m - 27*a^2*b^2*c^4*d^2*g*h*j*k - 27*a^2*b^2*c^4*d^2*f*g*k^1 \\
& - 27*a^2*b^2*c^4*d^2*e*g*k^1 + 18*a^2*b^3*c^3*d*f*g^2*j*m - 18*a^2*b^2*c^4*d^2*e*h*k^1 - 9*a^3*b^2*c^3*e*f*h*j*k^2 + 9*a^2*b^3*c^3*e*f*g^2*j*k^1 \\
& - 9*a^2*b^3*c^3*d*g^2*h*j*k - 9*a^2*b^3*c^3*d*f*g^2*k^1 - 9*a^2*b^3*c^3*d*e*g^2*k^1 - 9*a^2*b^2*c^4*d^2*f*h*j^1 - 9*a^2*b^2*c^4*d^2*e*h*j^1 \\
& + 36*a^2*b^2*c^4*d*e^2*f*k^1 - 27*a^3*b^2*c^3*d*e*h*j^1^2 + 27*a^2*b^2*c^4*d*e^2*h*j^1 - 18*a^3*b^2*c^3*d*e*g*k^1^2 - 9*a^3*b^2*c^3*d*f*g*j^1^2 \\
& + 9*a^2*b^4*c^2*d*e*h*j^1^2 + 9*a^2*b^3*c^3*e*f*g^2*h^1 + 9*a^2*b^3*c^3*d*f*h^2*j*k - 9*a^2*b^3*c^3*d*e*h^2*j^1 - 9*a^2*b^2*c^4*e^2*f*g*j*k \\
& - 9*a^2*b^2*c^4*d*e^2*g*j^1 + 63*a^3*b^2*c^3*d*e*f*j^1*m^2 - 63*a^2*b^2*c^4*d*e*f^2*j^1*m - 45*a^2*b^4*c^2*d*e*f*j^1*m^2 + 36*a^2*b^2*c^4*d*e*f^2*k^1 \\
& - 27*a^3*b^2*c^3*e*f*g*h^1^2 + 27*a^2*b^3*c^3*d*e*f*j^2*m + 27*a^2*b^2*c^4*e^2*f*g*h^1 + 9*a^2*b^4*c^2*e*f*g*h^1^2 - 9*a^2*b^3*c^3*e*f*g*h^2*1 \\
& + 9*a^2*b^3*c^3*d*f*g*h^2*m + 9*a^2*b^3*c^3*d*e*h*j^2*k + 9*a^2*b^3*c^3*d*e*g*j^2*1 + 18*a^2*b^2*c^4*d*e*g^2*j*k - 9*a^3*b^2*c^3*d*e*g*h^1*m^2 \\
& - 9*a^2*b^3*c^3*d*e*g*j*k^2 - 9*a^2*b^2*c^4*e*f^2*g*h*k - 9*a^2*b^2*c^4*d*f^2*g*h^1 + 18*a^2*b^2*c^4*d*f*g^2*h*k - 18*a^2*b^2*c^4*d*e*g^2*h^1 \\
& - 9*a^2*b^3*c^3*d*f*g*h*k^2 - 9*a^2*b^2*c^4*e*f*g^2*h*j + 36*a^2*b^3*c^3*d*e*f*h^1^2 - 18*a^2*b^2*c^4*d*e*f*h^2*1 - 9*a^2*b^2*c^4*d*f*g*h^2*j \\
& - 9*a^2*b^2*c^4*d*e*g*h^2*j - 27*a^2*b^2*c^4*d*e*f*g*k^2 + 18*a^2*b^2*c^4*d^2*f*h*k^2 - 9*a^2*b^3*c^3*e*f*g^2*k^2 - 9*a^2*b^2*c^4*e^2*f*h*j^2 \\
& - 9*a^2*b^2*c^4*d*f^2*h^2*k + 45*a^2*b^3*c^3*d*e*f^2*m^2 + 36*a^2*b^2*c^4*d^2*e*g^1^2 + 9*a^2*b^3*c^3*d*e*g^2*1^2 + 9*a^2*b^2*c^4*e*f^2*g*j^2 \\
& + 9*a^2*b^2*c^4*d*f^2*h*j^2 - 9*a^2*b^2*c^4*d*e^2*h*k^2 - 36*a^2*b^2*c^4*d*e^2*f^1^2 - 9*a^2*b^2*c^4*d*f*g^2*j^2 - 12*a^6*b*c^3*d^2*k^2*1^3*m \\
& + 3*a*b^6*c^3*d^2*k^2*1^3*m + 3*a*b^6*c^3*d*e*f^1^3 - 12*a*b^6*c^3*d^2*k^2*1^3*m + 9*a^5*b^2*c^3*h^2*k^1^2*m + 18*a^5*b^2*c^3*g^2*k^2*1^2*m \\
& - 9*a^5*b^2*c^3*h^2*j^1^2*m + 9*a^5*b^2*c^3*h^2*j^1^2*m - 9*a^4*b^3*c^3*g^2*k^2*1^2*m - 3*a^4*b^2*c^2*g^3*k^1^2*m + 18*a^5*b^2*c^3*f^2*k^1^2*m \\
& + 15*a^3*b^3*c^2*f^3*k^1^2*m + 9*a^5*b^2*c^3*h^2*j^2*k^1^2*m + 9*a^5*b^2*c^3*g^2*j^2*k^1^2*m - 9*a^5*b^2*c^3*f^2*k^1^2*m + 36*a^3*b^2*c^3*e^3*k^1^2*m \\
& - 27*a^5*b^2*c^3*g^2*j^2*k^1^2*m - 18*a^5*b^2*c^3*h^2*j^2*k^1^2*m - 18*a^2*b^4*c^2*e^3*k^1^2*m - 9*a^5*b^2*c^3*g^2*j^2*k^1^2*m - 9*a^5*b^2*c^3*e^3*k^1^2*m \\
& + 9*a^5*b^2*c^3*g^2*j^2*k^1^2*m - 9*a^5*b^2*c^3*e^3*k^1^2*m + 9*a^5*b^2*c^3*h^2*j^2*k^1^2*m + 9*a^5*b^2*c^3*g^2*j^2*k^1^2*m + 9*a^3*b^4*c^3*e^2*k^1^2*m \\
& + 3*a^4*b^2*c^2*h^3*j^2*k^1 - 54*a^4*b^2*c^3*d^2*k^2*1^2*m - 51*a^2*b^3*c^3*d^3*k^1^2*m - 27*a^4*b^2*c^3*e^2*j^2*1^2*m - 18*a^5*b^2*c^3*g^2*h^2*1^2*m \\
& - 9*a^5*b^2*c^3*e^2*j^2*1^2*m - 9*a^5*b^2*c^3*d^2*k^2*1^2*m + 9*a^5*b^2*c^3*d^2*k^2*1^2*m + 9*a^5*b^2*c^3*g^2*h^2*1^2*m + 9*a^5*b^2*c^3*g^2*j^2*k^1^2 \\
& + 9*a^5*b^2*c^3*e^2*j^2*1^2*m - 9*a^3*b^4*c^3*e^2*j^2*1^2*m - 9*a^2*b^5*c^3*d^2*k^2*1^2*m + 3*a^4*b^2*c^2*g^3*h^3*1^2*m - 3*a^3*b^3*c^2*g^3*j^2*k^1 \\
& + 18*a^5*b^2*c^3*d^2*j^2*k^1^2*m + 18*a^5*b^2*c^3*d^2*j^2*1^2*m + 18*a^4*b^2*c^3*f^2*j^2*k^1 + 9*a^5*b^2*c^3*g^2*h^2*k^1^2*m + 9*a^5*b^2*c^3*f^2*h^2*1^2*m \\
& + 9*a^5*b^2*c^3
\end{aligned}$$

$$\begin{aligned}
& 2*f*j*k^2*m^2 - 9*a^4*b^3*c*e*j^2*k*m^2 - 9*a^4*b^3*c*d*j^2*m^2 + 9*a^4*b^3*c^2*f*j^3*k*m^2 + 9*a^4*b^3*c^2*e*j^3*k*m^2 + 9*a^4*b^3*c^2*d*j^3*m^2 + 9*a^4*b^3*c^2*f^2*h^2*m^2 + 9*a^4*b^3*c^2*e^2*j*k^2*m^2 + 9*a^4*b^3*c^2*d^2*j*m^2 - 3*a^3*b^3*c^2*g^3*h*k*m^2 - 3*a^3*b^2*c^3*f^3*j*k*m^2 + 3*a^2*b^4*c^2*f^3*j*k*m^2 + 45*a^4*b^3*c^3*d^2*j*k*m^2 - 27*a^5*b^3*c^2*d*j*k^2*m^2 + 18*a^5*b^3*c^2*g*h*j^2*m^2 + 18*a^4*b^3*c^3*e^2*j*k*m^2 + 15*a^2*b^3*c^3*e^3*j*k*m^2 - 12*a^3*b^2*c^3*f^3*h*k*m^2 - 12*a^3*b^2*c^3*f^3*g*l*m^2 + 9*a^5*b^3*c^2*g*h*k^2*m^2 - 9*a^4*b^3*c*g*h*j^2*m^2 + 9*a^4*b^3*c*d*j*k^2*m^2 + 9*a^4*b^2*c^2*g*h*j^3*m^2 + 9*a^4*b^3*c^3*g^2*h^2*k*m^2 + 9*a^4*b^3*c^3*g^2*h^2*j*m^2 + 9*a^2*b^5*c*d^2*j*k*m^2 + 3*a^2*b^4*c^2*f^3*h*k*m^2 + 3*a^2*b^4*c^2*f^3*g*l*m^2 + 36*a^2*b^2*c^4*d^3*j*k*m^2 + 18*a^4*b^3*c^3*e^2*g*l^2*m^2 + 15*a^2*b^3*c^3*e^3*g*l*m^2 + 12*a^4*b^2*c^2*d*j*k^3*m^2 + 9*a^5*b^3*c^2*f*g*k^2*m^2 + 9*a^5*b^3*c^2*e*h*k^2*m^2 + 9*a^4*b^3*c^3*g^2*h*j^2*m^2 + 9*a^4*b^3*c^3*f^2*h*k^2*m^2 + 9*a^4*b^3*c^3*f^2*g*k^2*m^2 + 9*a^4*b^3*c^3*d^2*h*l*m^2 - 9*a^3*b^3*c^2*e*h^3*k*m^2 + 6*a^2*b^3*c^3*e^3*h*k*m^2 + 45*a^4*b^3*c^3*e^2*h*j*m^2 + 36*a^2*b^2*c^4*d^3*h*k*m^2 - 33*a^3*b^2*c^3*d*g^3*l*m^2 - 27*a^4*b^3*c^3*f^2*h*j*m^2 - 27*a^4*b^3*c^3*e^2*f*l*m^2 - 27*a^4*b^3*c^3*e*h^2*j^2*m^2 - 18*a^4*b^3*c^3*g^2*h*j*k^2 - 18*a^4*b^3*c^3*f*g^2*k^2*m^2 - 18*a^4*b^3*c^3*e*g^2*k^2*m^2 - 18*a^3*b^3*c^4*d^2*g^2*l*m^2 + 12*a^4*b^2*c^2*d*h*k^3*m^2 + 9*a^5*b^3*c^2*e*f*l^2*m^2 + 9*a^5*b^3*c^2*d*g*l^2*m^2 + 9*a^4*b^3*c^3*f^2*g*k^2*m^2 + 9*a^4*b^3*c^3*e^2*g*k^2*m^2 + 9*a^4*b^3*c^3*g*h^2*j^2*k^2 + 9*a^4*b^3*c^3*f*h^2*j^2*m^2 + 9*a^4*b^3*c^3*e*f^2*m^2 - 9*a^3*b^4*c*e*h^2*j*m^2 + 9*a^3*b^3*c^4*e^2*f^2*m^2 + 9*a^2*b^5*c*e^2*h*j*m^2 + 9*a^2*b^4*c^2*d*g^3*l*m^2 - 9*a^2*b^2*c^4*d^3*g*l*m^2 - 9*a*b^5*c^2*d^2*g^2*l*m^2 - 6*a^4*b^2*c^2*e*h*k^3*m^2 - 6*a^3*b^2*c^3*f*g^3*j*m^2 + 3*a^4*b^2*c^2*g*h*j*k^3 + 3*a^4*b^2*c^2*f*g*k^3*m^2 + 3*a^4*b^2*c^2*e*g*k^3*m^2 + 3*a^3*b^2*c^3*g^3*h*j*k^2 + 3*a^3*b^2*c^3*f*g^3*k^2*m^2 + 3*a^3*b^2*c^3*e*g^3*k^2*m^2 - 27*a^3*b^3*c^4*d^2*h^2*k^2*m^2 + 18*a^4*b^3*c^3*e*f^2*k^2*m^2 + 18*a^4*b^3*c^3*d*f^2*m^2 + 9*a^4*b^3*c^3*f*h^2*j*k^2 + 9*a^4*b^3*c^3*f*g^2*j^2*m^2 + 9*a^4*b^3*c^3*e*g^2*k^2*m^2 + 9*a^4*b^3*c^3*d*h^2*k^2*m^2 + 9*a^3*b^4*c*e*g*j^2*m^2 + 9*a^3*b^4*c*d*h*j^2*m^2 - 9*a^3*b^3*c^2*e*g*j^3*m^2 - 9*a^3*b^3*c^2*d*h*j^3*m^2 + 9*a^3*b^3*c^4*e^2*g^2*k^2*m^2 + 9*a^3*b^3*c^4*e^2*g^2*j^2*m^2 + 9*a^3*b^3*c^4*d^2*h^2*j^2*m^2 - 3*a^2*b^3*c^3*f^3*h*j*k^2 - 3*a^2*b^3*c^3*f^3*g*j^2*m^2 - 3*a^2*b^3*c^3*e*f^3*k^2*m^2 - 3*a^2*b^3*c^3*d*f^3*l^2*m^2 + 45*a^4*b^3*c^3*d*g^2*j^2*m^2 + 45*a^3*b^3*c^4*d^2*g*j^2*m^2 + 24*a^4*b^2*c^2*d*g*k^2*m^2 + 24*a^2*b^2*c^4*e^3*f*j^2*m^2 + 18*a^4*b^3*c^3*f^2*g*h^2*m^2 + 18*a^4*b^3*c^3*d*h^2*j^2*m^2 + 18*a^3*b^3*c^4*e^2*h^2*j^2*k^2 - 12*a^4*b^2*c^2*e*g*j^2*m^2 - 12*a^4*b^2*c^2*e*f*k^2*m^2 - 12*a^4*b^2*c^2*d*e*l^3*m^2 - 12*a^2*b^2*c^4*e^3*g*j^2*m^2 - 12*a^2*b^2*c^4*e^3*f*k^2*m^2 - 12*a^2*b^2*c^4*d*e^3*l^2*m^2 + 9*a^4*b^3*c^3*f*g*j^2*k^2 + 9*a^4*b^3*c^3*e*h*j^2*k^2 + 9*a^3*b^2*c^3*e*h^3*j*k^2 + 9*a^3*b^2*c^3*d*h^3*j^2*m^2 + 9*a^3*b^3*c^4*f^2*g^2*j^2*k^2 + 9*a^3*b^3*c^4*d^2*h*j^2*m^2 + 9*a^2*b^5*c*d*g^2*j^2*m^2 + 9*a*b^5*c^2*d^2*g*j^2*m^2 - 3*a^4*b^2*c^2*d*h*j^2*m^2 - 3*a^2*b^3*c^3*f^3*g*h^2*m^2 - 3*a^2*b^2*c^4*e^3*h*j^2*k^2 + 18*a^4*b^3*c^3*f*g*h^2*m^2 + 18*a^3*b^3*c^4*d^2*h*j^2*k^2 + 18*a^3*b^3*c^4*d^2*f*k^2*m^2 + 18*a^3*b^3*c^4*d^2*e*k^2*m^2 + 9*a^4*b^3*c^3*e*g^2*h^2*m^2 + 9*a^4*b^3*c^3*e*f*j^2*m^2 + 9*a^4*b^3*c^3*d*g*j^2*m^2 + 9*a^3*b^2*c^3*f*g*h^3*m^2 + 9*a^3*b^3*c^4*f^2*g^2*h^2*m^2 + 9*a^3*b^3*c^4*e^2*g*j^2*k^2 + 9*a^3*b^3*c^4*e^2*f*j^2*m^2 - 9*a^2*b^3*c^3*d*g^3*j^2*m^2 + 9*a*b^4*c^3*d^2
\end{aligned}$$

$$\begin{aligned}
& 2*g^2*j^1 - 3*a^4*b^2*c^2*f*g*h^1^3 - 3*a^3*b^3*c^2*e*g*j*k^3 - 3*a^3*b^3*c^2*d*h*j*k^3 - 3*a^3*b^3*c^2*d*f*k^3*1 - 3*a^3*b^3*c^2*d*e*k^3*m - 3*a^2*b^2*c^4*e^3*g*h*m - 33*a^3*b^2*c^3*d*e*j^3*m - 27*a^4*b*c^3*e*f*h^2*m^2 - 27*a^3*b*c^4*d^2*e*k^1^2 - 18*a^4*b*c^3*d*e*j^2*m^2 - 18*a^3*b*c^4*e*f^2*j^2*k - 18*a^3*b*c^4*d*f^2*j^2*1 - 9*a^4*b^2*c^2*d*e*j*m^3 + 9*a^4*b*c^3*d*g*h^2*m^2 + 9*a^4*b*c^3*d*e*k^2*1^2 + 9*a^3*b*c^4*f^2*g*h^2*k + 9*a^3*b*c^4*e^2*f*j*k^2 + 9*a^3*b*c^4*d^2*f*j*1^2 + 9*a^3*b*c^4*e*f^2*h^2*m + 9*a^3*b*c^4*d*e^2*k^2*1 - 9*a^2*b^5*c*d*e*j^2*m^2 + 9*a^2*b^4*c^2*d*e*j^3*m - 9*a^2*b^3*c^3*d*g^3*h*m + 9*a^2*b*c^5*d^2*e^2*k^1 + 9*a^2*b*c^5*d^2*e^2*j*m + 9*a*b^4*c^3*d^2*g^2*h*m - 6*a^3*b^2*c^3*d*g*j^3*k - 3*a^3*b^3*c^2*f*g*h*k^3 + 3*a^3*b^2*c^3*e*f*j^3*k + 3*a^3*b^2*c^3*d*f*j^3*1 + 3*a^2*b^2*c^4*e*f^3*j*k + 3*a^2*b^2*c^4*d*f^3*j*1 + 45*a^3*b*c^4*d^2*g*h^1^2 + 36*a^4*b^2*c^2*e*f*g*m^3 + 36*a^4*b^2*c^2*d*f*h*m^3 - 27*a^3*b*c^4*e^2*g*h*k^2 - 27*a^3*b*c^4*d*g^2*h^2*1 - 18*a^3*b*c^4*f^2*g*h*j^2 + 18*a^3*b*c^4*d*e^2*j*1^2 + 15*a^3*b^3*c^2*d*e*j*1^3 + 12*a^2*b^2*c^4*e*f^3*g*m + 12*a^2*b^2*c^4*d*f^3*h*m + 9*a^3*b*c^4*f*g^2*h^2*j + 9*a^3*b*c^4*e*g^2*h^2*k + 9*a^3*b*c^4*d*f^2*j*k^2 + 9*a^2*b*c^5*d^2*f^2*j*k + 9*a*b^5*c^2*d^2*g*h^1^2 - 9*a*b^4*c^3*d^2*g*h^2*1 - 6*a^2*b^2*c^4*e*f^3*h*1 + 3*a^3*b^2*c^3*f*g*h*j^3 + 3*a^2*b^2*c^4*f^3*g*h*j + 45*a^3*b*c^4*d^2*f*g*m^2 - 27*a^2*b*c^5*d^2*f^2*g*m + 18*a^3*b*c^4*e^2*f*g*1^2 + 15*a^3*b^3*c^2*e*f*g*1^3 - 12*a^3*b^2*c^3*d*e*j*k^3 + 9*a^3*b*c^4*d^2*e*h*m^2 + 9*a^3*b*c^4*e*g^2*h*j^2 + 9*a^3*b*c^4*e*f^2*h*k^2 - 9*a^2*b^3*c^3*d*f*h^3*1 + 9*a^2*b*c^5*d^2*f^2*h*1 + 9*a*b^5*c^2*d^2*f*g*m^2 + 9*a*b^3*c^4*d^2*f^2*g*m + 6*a^3*b^3*c^2*d*f*h^1^3 + 3*a^2*b^4*c^2*d*e*j*k^3 + 18*a^3*b*c^4*e*f*g^2*k^2 + 18*a^2*b*c^5*d^2*g^2*h*j + 18*a^2*b*c^5*d^2*f*g^2*1 + 18*a^2*b*c^5*d^2*e*g^2*m - 12*a^3*b^2*c^3*d*f*h*k^3 + 9*a^3*b*c^4*e*f*h^2*j^2 + 9*a^3*b*c^4*d*f^2*g*1^2 + 9*a^3*b*c^4*d*e^2*g*m^2 + 9*a^3*b*c^4*d*g*h^2*j^2 + 9*a^2*b^2*c^4*e*f*g^3*k + 9*a^2*b^2*c^4*d*g^3*h*j + 9*a^2*b^2*c^4*d*f*g^3*1 + 9*a^2*b^2*c^4*d*e*g^3*m + 9*a^2*b*c^5*e^2*f^2*h*j + 9*a^2*b*c^5*e^2*f^2*g*k - 9*a*b^3*c^4*d^2*g^2*h*j - 9*a*b^3*c^4*d^2*f*g^2*1 - 9*a*b^3*c^4*d^2*e*g^2*m - 3*a^3*b^2*c^3*e*f*g*k^3 + 3*a^2*b^4*c^2*e*f*g*k^3 + 3*a^2*b^4*c^2*d*f*h*k^3 - 54*a^3*b*c^4*d*e*f^2*m^2 - 51*a^3*b^3*c^2*d*e*f*m^3 - 27*a^3*b*c^4*d*e*g^2*1^2 + 9*a^3*b*c^4*d*e*h^2*k^2 + 9*a^2*b*c^5*e^2*f*g^2*j + 9*a^2*b*c^5*d^2*f*h^2*j + 9*a^2*b*c^5*d^2*e*h^2*k + 9*a^2*b*c^5*d*e^2*g^2*1 - 9*a*b^5*c^2*d*e*f^2*m^2 - 9*a*b^4*c^3*d^2*e*g*1^2 - 9*a*b^2*c^5*d^2*e^2*g*1 - 9*a*b^2*c^5*d^2*e^2*f*m - 3*a^2*b^3*c^3*e*f*g*j^3 - 3*a^2*b^3*c^3*d*f*h*j^3 + 36*a^3*b^2*c^3*d*e*f*1^3 - 27*a^2*b*c^5*d^2*f*g*j^2 - 18*a^2*b^4*c^2*d*e*f*1^3 - 18*a^2*b*c^5*d*e^2*h^2*j + 9*a^2*b*c^5*d^2*e*h*j^2 + 9*a^2*b*c^5*d*f^2*g^2*j + 9*a*b^4*c^3*d*e^2*f*1^2 + 9*a*b^3*c^4*d^2*f*g*j^2 - 9*a*b^2*c^5*d^2*f^2*g*j - 9*a*b^2*c^5*d^2*e*f^2*1 + 3*a^2*b^2*c^4*d*e*h^3*j - 18*a^2*b*c^5*e^2*f*g*h^2 + 18*a^2*b*c^5*d^2*e*f*k^2 + 15*a^2*b^3*c^3*d*e*f*k^3 + 9*a^2*b*c^5*e*f^2*g^2*h + 9*a^2*b*c^5*d*e^2*g*j^2 - 9*a*b^3*c^4*d^2*e*f*k^2 + 9*a*b^2*c^5*d^2*e*g^2*j - 9*a*b^2*c^5*d*e^2*f^2*k + 3*a^2*b^2*c^4*e*f*g*h^3 + 18*a^2*b*c^5*d*e*f^2*j^2 + 9*a^2*b*c^5*d*f^2*g*h^2 - 9*a*b^3*c^4*d*e*f^2*j^2 + 9*a*b^2*c^5*d^2*f*g^2*h - 3*a^2*b^2*c^4*d*e*f*j^3 + 9*a^2*b*c^5*d*e*g^2*h^2 - 9*a*b^2*c^5*d^2*e*g*h^2 + 9*a*b^2*c^5*d*e^2*f*h^2
\end{aligned}$$

$$\begin{aligned}
& - 36a^6c^2f^2j^2k^2m^2 + 36a^5c^3f^2j^2k^2m - 36a^5c^3f^2h^2j^2m \\
& + 36a^5c^3e^2h^2j^2m - 18a^6b^2c^2j^2k^2m^2 + 9a^6b^2c^2j^2k^2m^2 + \\
& \quad 3a^5b^2c^2j^2k^2m - 36a^5c^3f^2g^2j^2k^2m - 36a^5c^3e^2f^2k^2m + \\
& 36a^5c^3d^2g^2k^2m - 36a^4c^4d^2g^2k^2m - 36a^5c^3e^2h^2j^2k^2m - \\
& 36a^5c^3e^2f^2j^2m - 36a^5c^3d^2f^2k^2m + 36a^4c^4e^2h^2j^2k^2m + \\
& 36a^4c^4e^2f^2j^2m + 9a^6b^2c^2h^2k^2m^2 - 3a^4b^3c^2h^3k^2m - 36 \\
& a^5c^3e^2g^2h^2m + 36a^5c^3e^2f^2j^2k^2m - 36a^5c^3d^2g^2j^2k^2m + 36 \\
& a^5c^3d^2f^2j^2m - 36a^5c^3d^2e^2k^2m + 36a^4c^4e^2g^2h^2m - 36 \\
& a^4c^4e^2f^2j^2k^2m - 36a^4c^4d^2f^2j^2m + 9a^6b^2c^2h^2j^2m^2 + 9a \\
& ^6b^2c^2g^2k^2m^2 + 9a^5b^2c^2g^2k^3m + 3a^3b^4c^2g^3k^2m + 36a^5 \\
& c^3f^2g^2h^2j^2m + 36a^5c^3e^2f^2h^2m - 36a^4c^4f^2g^2h^2j^2m - 36a^4 \\
& c^4e^2f^2h^2m - 24a^4b^2c^3f^3k^2m - 12a^5b^2c^2h^2j^3k^2m - 12a^5 \\
& b^2c^2g^2j^3m - 3a^2b^5c^2f^3k^2m - 36a^4c^4e^2g^2h^2k^2m - 36a^4c^4 \\
& e^2f^2g^2m + 12a^5b^2c^2e^2k^2m - 6a^5b^2c^2f^2j^2m^3 + 3a^5b^2 \\
& c^2h^2j^2k^2m^3 + 48a^3b^2c^4d^3k^2m + 36a^4c^4e^2f^2h^2j^2m + 36a^4c^4 \\
& d^2g^2h^2k^2m - 36a^4c^4d^2f^2h^2k^2m - 36a^4c^4d^2e^2j^2k^2m + 24a^5b^2 \\
& c^2d^2k^3m + 21a^4b^5c^2d^3k^2m - 12a^5b^2c^2g^2j^2k^3m - 9a^4b^3 \\
& c^2d^2k^3m + 6a^5b^2c^2f^2j^2k^3m + 3a^5b^2c^2g^2h^2m^3 - 36a^4c^4e \\
& f^2h^2j^2m - 12a^5b^2c^2g^2h^2k^3m - 3a^5b^2c^2e^2j^2k^2m^3 - 3a^5b^2c^2d \\
& j^2m^3 - 36a^4c^4d^2g^2h^2j^2k^2 - 36a^4c^4d^2f^2g^2k^2m - 36a^4c^4d^2e \\
& h^2k^2m - 36a^4c^4d^2e^2g^2k^2m + 36a^3c^5d^2g^2h^2j^2k + 36a^3c^5d^2 \\
& f^2g^2k^2m - 36a^3c^5d^2f^2g^2j^2m + 36a^3c^5d^2e^2h^2k^2m + 36a^3c^5d^2 \\
& e^2g^2k^2m - 36a^3c^5d^2e^2f^2m + 24a^5b^2c^2e^2h^2m^3 - 24a^3b^2c^4e \\
& ^3j^2k^2m - 12a^5b^2c^2f^2h^2k^2m^3 - 12a^5b^2c^2f^2g^2m^3 - 3a^5b^2c^2g^2 \\
& h^2j^2m^3 - 3a^4b^3c^2e^2j^2k^2m^3 - 3a^4b^5c^2e^3j^2k^2m + 36a^4c^4d^2e^2h^2 \\
& j^2m + 36a^4c^4d^2e^2g^2k^2m - 36a^3c^5d^2e^2h^2j^2m - 36a^3c^5d^2e^2 \\
& g^2k^2m - 36a^3c^5d^2e^2f^2k^2m + 24a^4b^2c^3e^2h^3k^2m - 24a^3b^2c^4e^3 \\
& g^2m - 18a^4b^2c^3d^3j^2k^2m - 12a^4b^2c^3g^2h^3j^2m - 12a^4b^2c^3f^2h^3 \\
& k^2m - 12a^4b^2c^3d^2h^3m + 12a^3b^2c^4e^3h^2k^2m + 6a^4b^2c^3f^2h^3 \\
& j^2m - 3a^4b^3c^2g^2h^2j^2m^3 - 3a^4b^3c^2f^2h^2k^2m^3 - 3a^4b^3c^2e^2g^2m^3 \\
& m - 3a^4b^3c^2d^2h^2m^3 - 3a^4b^5c^2e^3h^2k^2m - 3a^4b^5c^2e^3g^2m + \\
& 36a^4c^4e^2f^2g^2h^2m - 36a^4c^4d^2e^2f^2j^2m - 36a^3c^5e^2f^2g^2h^2m - \\
& 36a^3c^5d^2f^2g^2j^2k - 36a^3c^5d^2e^2f^2k^2m + 36a^3c^5d^2e^2f^2j^2m - \\
& 18a^4b^4c^3d^3h^2k^2m - 9a^4b^4c^3d^3g^2m + 30a^5b^2c^2d^2g^2k^2m^3 - \\
& 30a^4b^3c^2d^2g^2k^2m^3 - 24a^5b^2c^2e^2f^2k^2m^3 - 24a^5b^2c^2d^2f^2m^3 + \\
& 24a^4b^2c^3e^2g^2j^3m + 24a^4b^2c^3d^2h^2j^3m + 15a^4b^3c^2e^2f^2k^2m^3 + \\
& 15a^4b^3c^2d^2f^2m^3 + 12a^5b^2c^2e^2g^2j^2m^3 + 12a^5b^2c^2d^2h^2j^2m^3 - \\
& 12a^4b^2c^3f^2h^2j^3k - 12a^4b^2c^3f^2g^2j^3m + 6a^4b^3c^2e^2g^2j^2m^3 + 6 \\
& a^4b^3c^2d^2h^2j^2m^3 + 6a^4b^2c^3e^2h^2j^3m + 36a^3c^5d^2e^2g^2h^2m - 24a \\
& ^5b^2c^2f^2g^2h^2m^3 + 15a^4b^3c^2f^2g^2h^2m^3 - 9a^4b^6c^2d^2g^2j^2m^2 - 6a^4 \\
& b^4c^2d^2g^2k^2m^3 - 6a^4b^4c^3e^3f^2j^2m + 3a^3b^4c^2e^2g^2j^2m^3 + 3a^3b^4 \\
& c^4e^2f^2k^2m^3 + 3a^3b^4c^2d^2h^2j^2m^3 + 3a^3b^4c^2d^2e^2m^3 + 3a^4b^4c^3 \\
& e^3h^2j^2k + 3a^4b^4c^3e^3g^2j^2m + 3a^4b^4c^3e^3f^2k^2m + 3a^4b^4c^3d \\
& e^3m - 36a^3c^5d^2e^2g^2h^2k + 30a^2b^2c^5d^3f^2j^2m - 30a^4b^3c^4d \\
& ^3f^2j^2m + 24a^3b^2c^4d^2g^3j^2m - 24a^2b^2c^5d^3h^2j^2k - 24a^2b^2c^5d
\end{aligned}$$



$$\begin{aligned}
& ^3f*k*1 - 24*a^2*b*c^5*d^3*e*k*m + 15*a*b^3*c^4*d^3*h*j*k + 15*a*b^3*c^4*d \\
& ^3*f*k*1 + 15*a*b^3*c^4*d^3*e*k*m - 12*a^3*b*c^4*e*g^3*j*k + 12*a^2*b*c^5*d \\
& ^3*g*j*1 + 6*a*b^3*c^4*d^3*g*j*1 + 3*a^3*b^4*c*f*g*h*1^3 + 3*a*b^4*c^3*e^3* \\
& g*h*m + 24*a^3*b*c^4*d*g^3*h*m - 12*a^3*b*c^4*f*g^3*h*k + 12*a^2*b*c^5*d^3* \\
& g*h*m - 9*a^3*b^4*c*d*e*j*m^3 + 6*a^3*b*c^4*e*g^3*h*1 + 6*a*b^3*c^4*d^3*g*h \\
& *m + 36*a^3*c^5*d*e*f*g*k^2 - 36*a^2*c^6*d^2*e*f*g*k - 24*a^4*b*c^3*d*e*j*1 \\
& ^3 - 18*a^3*b^4*c*e*f*g*m^3 - 18*a^3*b^4*c*d*f*h*m^3 - 3*a^2*b^5*c*d*e*j*1^ \\
& 3 - 3*a*b^3*c^4*d*e^3*j*1 - 24*a^4*b*c^3*e*f*g*1^3 + 24*a^3*b*c^4*d*f*h^3*1 \\
& + 12*a^4*b*c^3*d*f*h*1^3 - 12*a^3*b*c^4*e*g*h^3*j - 12*a^3*b*c^4*e*f*h^3*k \\
& - 12*a^3*b*c^4*d*e*h^3*m - 12*a*b^2*c^5*d^3*e*j*k + 6*a^3*b*c^4*d*g*h^3*k \\
& - 3*a^2*b^5*c*e*f*g*1^3 - 3*a^2*b^5*c*d*f*h*1^3 - 3*a*b^3*c^4*e^3*g*h*j - 3 \\
& *a*b^3*c^4*e^3*f*h*k - 3*a*b^3*c^4*e^3*f*g*1 - 3*a*b^3*c^4*d*e^3*h*m + 24*a \\
& *b^2*c^5*d^3*e*h*1 - 12*a*b^2*c^5*d^3*f*h*k - 3*a*b^2*c^5*d^3*g*h*j - 3*a*b \\
& ^2*c^5*d^3*f*g*1 - 3*a*b^2*c^5*d^3*e*g*m + 48*a^4*b*c^3*d*e*f*m^3 + 24*a^2* \\
& b*c^5*d*e*f^3*m + 21*a^2*b^5*c*d*e*f*m^3 - 12*a^2*b*c^5*e*f^3*g*j - 12*a^2* \\
& b*c^5*d*f^3*h*j - 9*a*b^3*c^4*d*e*f^3*m + 6*a^2*b*c^5*d*f^3*g*k + 12*a*b^2*c \\
& ^5*d*e^3*f*1 - 6*a*b^2*c^5*d*e^3*g*k + 3*a*b^2*c^5*d*e^3*h*j - 24*a^3*b*c^ \\
& 4*d*e*f*k^3 - 12*a^2*b*c^5*d*e*g^3*j - 3*a*b^5*c^2*d*e*f*k^3 + 3*a*b^2*c^5* \\
& e^3*f*g*h - 12*a^2*b*c^5*d*f*g^3*h + 9*a*b^2*c^5*d*e*f^3*j + 9*a*b*c^6*d^2* \\
& e^2*f*j + 3*a*b^4*c^3*d*e*f*j^3 + 9*a*b*c^6*d^2*e^2*g*h + 9*a*b*c^6*d^2*e*f \\
& ^2*h - 3*a*b^3*c^4*d*e*f*h^3 - 18*a*b*c^6*d^2*e*f*g^2 + 9*a*b*c^6*d*e^2*f^2 \\
& *g + 3*a*b^2*c^5*d*e*f*g^3 - 36*a^4*b^2*c^2*e^2*k*1^2*m - 9*a^4*b^2*c^2*g^2 \\
& *j^2*k*m + 45*a^3*b^3*c^2*d^2*k^2*1*m + 36*a^4*b^2*c^2*e^2*j*1*m^2 + 9*a^4* \\
& b^2*c^2*g^2*j*k^2*1 + 9*a^3*b^3*c^2*e^2*j^2*1*m + 9*a^4*b^2*c^2*g^2*h*k^2*m \\
& - 9*a^4*b^2*c^2*f^2*h*1^2*m - 9*a^3*b^3*c^2*f^2*j^2*k*1 - 45*a^3*b^3*c^2*d \\
& ^2*j*k*m^2 + 36*a^3*b^2*c^3*d^2*j^2*k*m + 18*a^4*b^2*c^2*f^2*h*k*m^2 + 18*a \\
& ^4*b^2*c^2*f^2*g*1*m^2 - 9*a^4*b^2*c^2*g^2*h*k*1^2 - 9*a^4*b^2*c^2*f*h^2*k^ \\
& 2*m - 9*a^4*b^2*c^2*f*g^2*1^2*m - 9*a^4*b^2*c^2*e*j^2*k^2*1 - 9*a^4*b^2*c^2 \\
& *d*j^2*k^2*m - 9*a^3*b^3*c^2*e^2*j*k*1^2 - 9*a^2*b^4*c^2*d^2*j^2*k*m - 36*a \\
& ^3*b^2*c^3*d^2*j*k^2*1 - 27*a^3*b^2*c^3*e^2*h^2*k*m + 9*a^4*b^2*c^2*g*h^2*j \\
& *1^2 + 9*a^4*b^2*c^2*f*h^2*k*1^2 - 9*a^4*b^2*c^2*f*g^2*k*m^2 - 9*a^4*b^2*c^ \\
& 2*e*g^2*1*m^2 - 9*a^4*b^2*c^2*d*j^2*k*1^2 + 9*a^4*b^2*c^2*d*h^2*1^2*m - 9*a \\
& ^3*b^3*c^2*e^2*g*1^2*m + 9*a^2*b^4*c^2*e^2*h^2*k*m + 9*a^2*b^4*c^2*d^2*j*k^ \\
& 2*1 - 45*a^3*b^3*c^2*e^2*h*j*m^2 + 36*a^4*b^2*c^2*e*h^2*j*m^2 + 36*a^3*b^2* \\
& c^3*e^2*h*j^2*m - 36*a^3*b^2*c^3*d^2*h*k^2*m + 36*a^2*b^3*c^3*d^2*g^2*1*m - \\
& 9*a^4*b^2*c^2*f*h*j^2*1^2 - 9*a^4*b^2*c^2*d*h^2*k*m^2 + 9*a^3*b^3*c^2*f^2* \\
& h*j*1^2 + 9*a^3*b^3*c^2*e^2*f*1*m^2 + 9*a^3*b^3*c^2*e*h^2*j^2*m - 9*a^3*b^2 \\
& *c^3*f^2*h^2*j*1 - 9*a^2*b^4*c^2*e^2*h*j^2*m + 9*a^2*b^4*c^2*d^2*h*k^2*m + \\
& 36*a^3*b^2*c^3*d^2*h*k*1^2 - 27*a^4*b^2*c^2*e*g*j^2*m^2 - 27*a^4*b^2*c^2*d* \\
& h*j^2*m^2 - 9*a^4*b^2*c^2*d*h*k^2*1^2 - 9*a^3*b^3*c^2*e*f^2*k*m^2 - 9*a^3*b \\
& ^3*c^2*d*f^2*1*m^2 + 9*a^3*b^2*c^3*f^2*h*j^2*k + 9*a^3*b^2*c^3*f^2*g*j^2*1 \\
& - 9*a^3*b^2*c^3*e^2*g*k^2*1 - 9*a^3*b^2*c^3*e^2*f*k^2*m - 9*a^3*b^2*c^3*d^2 \\
& *f*1^2*m - 9*a^2*b^4*c^2*d^2*h*k*1^2 + 9*a^2*b^3*c^3*d^2*h^2*k*1 - 81*a^3*b \\
& ^2*c^3*d^2*g*j*m^2 + 54*a^2*b^4*c^2*d^2*g*j*m^2 - 45*a^3*b^3*c^2*d*g^2*j*m^ \\
& 2 - 45*a^2*b^3*c^3*d^2*g*j^2*m + 36*a^3*b^2*c^3*d^2*f*k*m^2 + 36*a^3*b^2*c^
\end{aligned}$$

$$\begin{aligned}
& 3*d^2*g^2*j^2*m + 18*a^3*b^2*c^3*e^2*g*j^2*l^2 + 18*a^3*b^2*c^3*e^2*f*k^2*l^2 + 1 \\
& 8*a^3*b^2*c^3*d*e^2*l^2*m - 9*a^4*b^2*c^2*d*f*k^2*m^2 - 9*a^3*b^3*c^2*f^2*g \\
& *h*m^2 - 9*a^3*b^3*c^2*d*h^2*j^2*l^2 - 9*a^3*b^2*c^3*f^2*g*j^2*k^2 - 9*a^3*b^2* \\
& c^3*d^2*e^2*l^2*m^2 - 9*a^3*b^2*c^3*f*g^2*h^2*m - 9*a^3*b^2*c^3*e*g^2*j^2*l - 9 \\
& *a^3*b^2*c^3*e*f^2*k^2*l - 9*a^2*b^4*c^2*d^2*f*k^2*m^2 - 9*a^2*b^4*c^2*d*g^2* \\
& j^2*m - 9*a^2*b^3*c^3*e^2*h^2*j*k - 9*a^2*b^2*c^4*d^2*f^2*k*m - 27*a^2*b^2* \\
& c^4*d^2*g^2*j^2*l - 9*a^3*b^3*c^2*f*g*h^2*l^2 + 9*a^3*b^2*c^3*e*g^2*j^2*k^2 - 9 \\
& *a^3*b^2*c^3*e*f^2*j^2*l^2 - 9*a^3*b^2*c^3*d*h^2*j^2*k - 9*a^3*b^2*c^3*d*f^2* \\
& k^2*l^2 - 9*a^3*b^2*c^3*d*e^2*k^2*m^2 - 9*a^2*b^3*c^3*e^2*g*h^2*m - 9*a^2*b^3*c \\
& ^3*d^2*h*j^2*k^2 - 9*a^2*b^3*c^3*d^2*f*k^2*l - 9*a^2*b^3*c^3*d^2*e*k^2*m + 36 \\
& *a^3*b^3*c^2*d*e*j^2*m^2 + 36*a^3*b^2*c^3*e^2*f*h*m^2 - 27*a^2*b^2*c^4*d^2* \\
& g^2*h*m + 9*a^3*b^3*c^2*e*f*h^2*m^2 + 9*a^3*b^2*c^3*f*g^2*h*k^2 - 9*a^2*b^4 \\
& *c^2*e^2*f*h*m^2 + 9*a^2*b^3*c^3*d^2*e*k^2*l^2 - 9*a^2*b^2*c^4*e^2*f^2*h*m - \\
& 45*a^2*b^3*c^3*d^2*g*h^2*l^2 - 36*a^3*b^2*c^3*e*f^2*g*m^2 + 36*a^3*b^2*c^3*d* \\
& g^2*h^2*l^2 - 36*a^3*b^2*c^3*d*f^2*h*m^2 + 36*a^2*b^2*c^4*d^2*g*h^2*l - 9*a^3 \\
& *b^2*c^3*e*g*h^2*k^2 + 9*a^2*b^4*c^2*e*f^2*g*m^2 - 9*a^2*b^4*c^2*d*g^2*h^2*l^2 \\
& + 9*a^2*b^4*c^2*d*f^2*h*m^2 + 9*a^2*b^3*c^3*e^2*g*h*k^2 + 9*a^2*b^3*c^3*d \\
& *g^2*h^2*l - 9*a^2*b^3*c^3*d*e^2*j^2*l^2 - 9*a^2*b^2*c^4*e^2*g^2*h*k - 9*a^2* \\
& b^2*c^4*e^2*f*g^2*m - 9*a^2*b^2*c^4*d^2*f*j^2*k - 9*a^2*b^2*c^4*d^2*f*h^2*m \\
& - 9*a^2*b^2*c^4*d^2*e*j^2*l - 45*a^2*b^3*c^3*d^2*f*g*m^2 + 36*a^3*b^2*c^3* \\
& d*f*g^2*m^2 - 27*a^3*b^2*c^3*d*f*h^2*l^2 + 18*a^2*b^2*c^4*d^2*e*j^2*k^2 + 9*a \\
& ^2*b^4*c^2*d*f*h^2*l^2 - 9*a^2*b^4*c^2*d*f*g^2*m^2 - 9*a^2*b^3*c^3*e^2*f*g* \\
& l^2 + 9*a^2*b^2*c^4*e^2*g*h^2*j + 9*a^2*b^2*c^4*e^2*f*h^2*k - 9*a^2*b^2*c^4 \\
& *e*f^2*g^2*l - 9*a^2*b^2*c^4*d*f^2*g^2*m - 9*a^2*b^2*c^4*d*e^2*j^2*k + 9*a^ \\
& 2*b^2*c^4*d*e^2*h^2*m + 18*a^4*b^2*c^2*f^2*j^2*m^2 + 18*a^3*b^2*c^3*e^2*h^2 \\
& *l^2 - 9*a^2*b^4*c^2*e^2*h^2*l^2 + 18*a^2*b^2*c^4*d^2*g^2*k^2 + 12*a^6*c^2* \\
& j^3*k^2*l^2 + 3*a^6*b^2*j^2*k^2*l^2 - 12*a^6*c^2*g^2*k^3*l^2 - 12*a^5*c^3*g^3*k^2 \\
& *l^2 - 24*a^6*c^2*e*k^2*l^3 - 24*a^4*c^4*e^3*k^2*l^2 + 12*a^6*c^2*h*j^2*k^2*l^3 + 1 \\
& 2*a^6*c^2*f*j^2*l^3 + 12*a^5*c^3*h^3*j^2*k^2 - 3*a^5*b^3*h*j^2*k^2*m^3 - 3*a^5*b^ \\
& 3*g^2*j^2*l^2 - 3*a^5*b^3*f*k^2*l^2 + 12*a^6*c^2*g^2*h^2*l^3 + 12*a^5*c^3*g^2*h^3 \\
& *l^2 - 12*a^6*c^2*e*j^2*k^2*m^3 - 12*a^6*c^2*d*j^2*l^2 - 12*a^5*c^3*f*j^2*k^2 - \\
& 12*a^5*c^3*e*j^2*k^2*m - 12*a^5*c^3*d*j^2*l^2 - 12*a^4*c^4*f^3*j^2*k^2 + 24*a^ \\
& 6*c^2*f*h^2*k^2*m^3 + 24*a^6*c^2*f*g^2*l^2 + 24*a^4*c^4*f^3*h^2*k^2 + 24*a^4*c^4* \\
& f^3*g^2*l^2 - 12*a^6*c^2*g^2*h^2*j^2*m^3 - 12*a^6*c^2*e*h^2*l^2 - 12*a^5*c^3*g^2*h^2* \\
& j^3 + 3*b^6*c^2*d^3*j^2*k^2 + 3*a^4*b^4*e*j^2*k^2*m^3 + 3*a^4*b^4*d*j^2*l^2 - 24* \\
& a^5*c^3*d*j^2*k^2*l - 24*a^3*c^5*d^3*j^2*k^2 - 6*a^4*b^4*e*h^2*l^2 + 3*b^6*c^2* \\
& d^3*h^2*k^2 + 3*b^6*c^2*d^3*g^2*l^2 + 3*a^6*b^2*c^2*j^2*l^3 + 3*a^4*b^4*g^2*h^2*j^2*m^3 \\
& + 3*a^4*b^4*f^2*h^2*k^2 + 3*a^4*b^4*f*g^2*l^2 - 24*a^5*c^3*d^2*h^2*k^2 - 24*a^ \\
& 3*c^5*d^3*h^2*k^2 + 12*a^5*c^3*g^2*h^2*j^2*k^2 + 12*a^5*c^3*f^2*g^2*k^2 + 12*a^5*c^3* \\
& e*h^2*k^2 + 12*a^5*c^3*e*g^2*k^2 + 12*a^4*c^4*g^3*h^2*j^2*k^2 + 12*a^4*c^4*f^2*g^3* \\
& k^2 + 12*a^4*c^4*f^2*g^3*j^2 + 12*a^4*c^4*e*g^3*k^2 + 12*a^4*c^4*d*g^3*l^2 + \\
& 12*a^3*c^5*d^3*g^2*l^2 + 3*a^6*b^2*c^2*j^2*k^2 - 9*a^6*b^2*c^2*h^2*l^2 - 3*a^5*b^ \\
& c^2*j^4*k^2 + 24*a^5*c^3*e*g^2*j^2 + 24*a^5*c^3*e*f^2*k^2 + 24*a^5*c^3*d*e^ \\
& 2*l^2 + 24*a^3*c^5*e^3*g^2*j^2 + 24*a^3*c^5*e^3*f^2*k^2 + 24*a^3*c^5*d*e^3*l^2 \\
& - 12*a^5*c^3*d^2*h^2*j^2 - 12*a^5*c^3*d^2*g^2*k^2 - 12*a^4*c^4*e^2*h^2*j^2*k^2 - 12*a
\end{aligned}$$

$$\begin{aligned}
&^4c^4d^3h^3j^3k^3 - 12a^3c^5e^3h^3j^3k^3 - 12a^3c^5e^3f^3j^3m^3 + 9a^4b^3c^3g^4l^3m^3 + 6b^5c^3d^3f^3j^3m^3 + 6a^3b^5d^3g^3k^3m^3 - 3b^5c^3d^3h^3j^3k^3 \\
&- 3b^5c^3d^3g^3j^3l^3 - 3b^5c^3d^3f^3k^3l^3 - 3b^5c^3d^3e^3k^3m^3 - 3a^3b^5e^3g^3j^3m^3 - 3a^3b^5e^3f^3k^3m^3 - 3a^3b^5d^3h^3j^3m^3 - 3a^3b^5d^3f^3l^3m^3 \\
&- 12a^5c^3f^3g^3h^3l^3 - 12a^4c^4f^3g^3h^3l^3 - 12a^4c^4e^3g^3h^3m^3 - 12a^3c^5e^3g^3h^3m^3 - 9a^6b^3c^3g^3k^2m^3 - 3b^5c^3d^3g^3h^3m^3 + 3a^6b^3c^3f^3l^3m^2 \\
&- 3a^3b^5f^3g^3h^3m^3 + 12a^5c^3d^3e^3j^3m^3 + 12a^4c^4e^3f^3j^3k^3 + 12a^4c^4d^3g^3j^3k^3 + 12a^4c^4d^3f^3j^3l^3 + 12a^4c^4d^3e^3j^3m^3 \\
&+ 12a^3c^5e^3f^3j^3k^3 + 12a^3c^5d^3f^3j^3l^3 - 9a^6b^3c^3e^3l^2m^3 - 24a^5c^3e^3f^3g^3m^3 - 24a^5c^3d^3f^3h^3m^3 - 24a^3c^5e^3f^3g^3m^3 - 24a^3c^5d^3f^3h^3m^3 \\
&- 15a^2b^3c^5d^4l^3m^3 + 15a^2b^3c^4d^4l^3m^3 + 12a^4c^4f^3g^3h^3j^3 + 12a^3c^5f^3g^3h^3j^3 + 12a^3c^5e^3f^3h^3l^3 + 9a^3b^3c^4f^4k^3l^3 - 9a^3b^3c^4f^4j^3m^3 \\
&+ 3b^4c^4d^3e^3j^3k^3 + 3a^5b^2c^3g^3j^3l^4 + 3a^5b^2c^3f^3k^3l^4 + 3a^5b^2c^3d^3l^4m^3 - 3a^5b^3c^2h^3j^3k^4 - 3a^5b^3c^2f^3k^4l^3 \\
&- 3a^5b^3c^2e^3k^4m^3 - 3a^4b^3c^3h^4j^3k^3 + 3a^2b^6d^3e^3j^3m^3 + 3a^2b^4c^3e^4k^3m^3 + 24a^4c^4d^3e^3j^3k^3 + 24a^2c^6d^3e^3j^3k^3 - 6b^4c^4d^3e^3h^3l^3 \\
&+ 3b^4c^4d^3g^3h^3j^3 + 3b^4c^4d^3f^3h^3k^3 + 3b^4c^4d^3f^3g^3l^3 + 3b^4c^4d^3e^3g^3m^3 - 3a^4b^3c^3g^3h^4m^3 + 3a^2b^6e^3f^3g^3m^3 + 3a^2b^6d^3f^3h^3m^3 \\
&- 3a^2b^6c^3e^3j^3m^2 + 24a^4c^4d^3f^3h^3k^3 + 24a^2c^6d^3f^3h^3k^3 - 12a^4c^4e^3f^3g^3k^3 - 12a^3c^5e^3f^3g^3k^3 - 12a^3c^5d^3g^3h^3j^3 - 12a^3c^5d^3f^3g^3l^3 \\
&- 12a^3c^5d^3e^3g^3m^3 - 12a^2c^6d^3g^3h^3j^3 - 12a^2c^6d^3f^3g^3l^3 - 12a^2c^6d^3e^3h^3l^3 - 12a^2c^6d^3e^3g^3m^3 - 12a^2b^2c^5d^4j^3l^3 + 9a^5b^3c^2d^3j^3l^4 \\
&+ 9a^2b^3c^5e^4j^3k^3 - 3a^4b^3c^3d^3j^3l^4 - 3a^4b^3c^3e^3j^4k^3 - 3a^4b^3c^3d^3j^4l^3 - 3a^2b^3c^4e^4j^3k^3 - 24a^4c^4d^3e^3f^3l^3 - 24a^2c^6d^3e^3f^3l^3 \\
&- 24a^5b^2c^3e^3g^3m^4 - 12a^5b^2c^3d^3h^3m^4 + 12a^3c^5d^3e^3h^3j^3 + 12a^2c^6d^3e^3h^3j^3 + 12a^2c^6d^3e^3g^3k^3 - 12a^2b^2c^5d^4h^3m^3 + 9a^5b^3c^2f^3g^3l^4 \\
&- 9a^5b^3c^2e^3h^3l^4 - 9a^2b^3c^5e^4h^3l^3 + 9a^2b^3c^5e^4g^3m^3 + 6a^4b^3c^3e^3h^3l^4 + 6a^2b^3c^4e^4h^3l^3 - 3b^3c^5d^3e^3g^3j^3 - 3b^3c^5d^3e^3f^3k^3 \\
&- 3a^4b^3c^3f^3g^3l^4 - 3a^4b^3c^3g^3h^3j^4 - 3a^3b^3c^4g^4h^3j^3 - 3a^3b^3c^4f^3g^4l^3 - 3a^3b^3c^4e^3g^4m^3 - 3a^2b^3c^4e^4g^3m^3 + 12a^3c^5e^3f^3g^3h^3 \\
&+ 12a^2c^6e^3f^3g^3h^3 - 3b^3c^5d^3f^3g^3h^3 - 12a^3c^5d^3e^3f^3j^3 - 12a^2c^6d^3e^3f^3j^3 - 3a^2b^6c^3d^2g^3l^3 - 15a^5b^3c^2d^3e^3m^4 + 15a^4b^3c^3d^3e^3m^4 \\
&+ 9a^4b^3c^3e^3f^3k^4 - 9a^4b^3c^3d^3g^3k^4 + 3a^3b^4c^3d^3f^3l^4 - 3a^3b^3c^4d^3h^4j^3 - 3a^2b^3c^5e^3f^4k^3 - 3a^2b^3c^5d^3f^4l^3 + 3a^2b^2c^5e^4g^3j^3 + 3a^2b^2c^5e^4f^3k^3 \\
&+ 3a^2b^2c^5d^3e^4m^3 - 9a^2b^3c^6d^3e^2l^3 + 3b^2c^6d^3e^3f^3g^3 - 3a^3b^3c^4f^3g^3h^4 - 3a^2b^3c^5f^4g^3h^3 + 12a^2c^6d^3e^3f^3g^3 - 9a^2b^3c^6d^3f^2j^3 \\
&+ 3a^2b^3c^6d^2e^3k^3 + 9a^3b^3c^4d^3e^3j^4 - 3a^2b^3c^5e^3f^3g^4 - 9a^2b^3c^6d^3e^3h^2 + 3a^2b^3c^6d^2f^3g^3 + 3a^2b^3c^6d^3e^3g^3h^2 - 3a^4b^2c^2h^3j^2m^3 \\
&+ 12a^4b^2c^2g^3j^3m^2 - 3a^4b^2c^2f^2k^3m^3 + 3a^3b^3c^2g^3j^2m^3 - 9a^3b^4c^3f^2j^2m^2 + 9a^3b^3c^2f^2j^3m^3 - 6a^3b^3c^2f^2j^3m^2 - 6a^3b^2c^3f^3j^2m^3 - 3a^2b^4c^2f^2j^3m^2 \\
&- 27a^4b^2c^2d^2k^3m^3 - 27a^3b^2c^3e^3j^3m^2 + 18a^2b^4c^2e^3j^3m^2 - 15a^2b^3c^3e^3j^2m^3 + 12a^4b^2c^2f^2j^3l^3 + 3a^3b^3c^2e^2k^3l^3 + 42a^2b^3c^3d^3j^3m^2 - 27a^2b^2c^4d^3j^2
\end{aligned}$$

$$\begin{aligned}
& *m - 15a^3b^3c^2d^2k^1^3 - 3a^4b^2c^2f^j^2k^3 - 3a^4b^2c^2f^h \\
& ^3m^2 + 3a^3b^3c^2g^3h^1^2 + 3a^3b^3c^2f^2j^k^3 - 3a^3b^2c^3 \\
& g^3h^2^1 - 3a^3b^2c^3e^2j^3^1 - 27a^4b^2c^2e^2h^m^3 + 12a^3b^2 \\
& *c^3f^3h^1^2 + 3a^3b^3c^2f^g^3m^2 - 3a^2b^4c^2f^3h^1^2 + 3a^2 \\
& b^3c^3f^3h^2^1 + 9a^3b^3c^2e^h^3^1^2 + 9a^2b^3c^3e^2h^3^1 - 6a \\
& ^4b^2c^2e^h^2^1^3 - 6a^3b^3c^2e^2h^1^3 - 6a^2b^3c^3e^3h^1^2 - \\
& 6a^2b^2c^4e^3h^2^1 + 3a^2b^3c^3d^2j^3^k + 42a^3b^3c^2d^2g^m^ \\
& ^3 - 27a^4b^2c^2d^2g^2m^3 - 27a^2b^2c^4d^3h^1^2 - 15a^2b^3c^3e^ \\
& ^3f^m^2 + 12a^3b^2c^3e^2h^k^3 + 3a^3b^3c^2e^h^2k^3 - 3a^3b^2c^ \\
& ^3e^g^3^1^2 - 3a^2b^4c^2e^2h^k^3 + 3a^2b^3c^3f^3g^k^2 - 3a^2b^2 \\
& *c^4f^3g^2k - 27a^3b^2c^3d^2g^1^3 - 27a^2b^2c^4d^3f^m^2 + 18a \\
& ^2b^4c^2d^2g^1^3 - 15a^3b^3c^2d^2g^2^1^3 + 12a^2b^2c^4e^3g^k^2 \\
& - 3a^3b^2c^3e^h^2j^3 + 3a^2b^3c^3e^2h^j^3 + 3a^2b^3c^3e^f^3^1 \\
& ^2 - 3a^2b^2c^4d^2h^3k + 9a^2b^3c^3d^2g^3k^2 - 9a^2b^4c^3d^2g^ \\
& ^2k^2 - 6a^3b^2c^3d^2g^2k^3 - 6a^2b^3c^3d^2g^k^3 - 3a^2b^4c^2d \\
& *g^2k^3 + 12a^2b^2c^4d^2g^j^3 + 3a^2b^3c^3d^2g^2j^3 - 3a^2b^2c \\
& ^4d^2f^3k^2 - 3a^2b^2c^4d^2g^2h^3 + 12a^7c^j^k^1m^3 - 3b^7c^d^3k \\
& *1m - 3a^6b^c^k^4^1m - 3a^6b^c^j^k^1^4 - 3a^6b^c^g^1^4m - 9a^6b^c \\
& *f^j^m^4 + 9a^6b^c^e^k^m^4 + 9a^6b^c^d^1m^4 + 9a^6b^c^g^h^m^4 - 3a \\
& *b^7d^e^f^m^3 + 9a^6b^c^6d^4h^j - 9a^6b^c^6d^4g^k + 9a^6b^c^6d^4f^1 \\
& + 9a^6b^c^6d^4e^m + 12a^7c^3e^f^g - 3a^6b^c^6d^4e^4j - 3a^6b^c^6e^ \\
& ^4f^g - 3a^6b^c^6d^4e^f^4 + 18a^6c^2h^2j^1m^2 - 18a^6c^2h^j^2^1^2m \\
& + 18a^6c^2f^k^2^1^2m + 36a^5c^3e^2k^1^2m + 18a^6c^2g^j^k^2m^2 \\
& + 18a^6c^2e^k^2^1m^2 + 18a^5c^3g^2j^2k^m + 18a^6c^2e^j^1^2m^2 \\
& + 18a^6c^2d^k^1^2m^2 - 18a^5c^3e^2j^1m^2 - 18a^6c^2f^h^1^2m^2 \\
& + 18a^5c^3f^2h^1^2m - 36a^5c^3f^2h^k^m^2 - 36a^5c^3f^2g^1m^2 \\
& + 18a^5c^3g^2h^k^1^2 - 18a^5c^3g^h^2k^2^1 + 18a^5c^3f^h^2k^2m \\
& + 18a^5c^3f^g^2^1^2m + 18a^5c^3e^j^2k^2^1 + 18a^5c^3d^j^2k^2m \\
& - 18a^4c^4d^2j^2k^m + 36a^4c^4d^2j^k^2^1 + 18a^5c^3f^g^2k^m^2 \\
& + 18a^5c^3e^g^2^1m^2 + 18a^5c^3d^j^2k^1^2 - 18a^4c^4f^2g^2k^m \\
& + 36a^4c^4d^2h^k^2m + 18a^5c^3f^h^j^2^1^2 - 18a^5c^3e^h^2j^m^2 \\
& + 18a^5c^3d^h^2k^m^2 + 18a^4c^4f^2h^2j^1 - 18a^4c^4e^2h^j^2m \\
& - 18a^5c^3e^g^k^2^1^2 + 18a^5c^3d^h^k^2^1^2 + 18a^4c^4e^2g^k^2^1 \\
& + 18a^4c^4e^2f^k^2m - 18a^4c^4d^2h^k^1^2 + 18a^4c^4d^2f^1^2m \\
& - 36a^4c^4e^2g^j^1^2 - 36a^4c^4e^2f^k^1^2 - 36a^4c^4d^2e^2^1^2m \\
& + 18a^5c^3d^f^k^2m^2 + 18a^4c^4f^2g^j^k^2 + 18a^4c^4d^2g^j^m^2 \\
& - 18a^4c^4d^2f^k^m^2 + 18a^4c^4d^2e^1m^2 - 18a^4c^4f^g^2j^2k \\
& + 18a^4c^4f^g^2h^2m + 18a^4c^4e^g^2j^2^1 + 18a^4c^4e^f^2k^2^1 \\
& - 18a^4c^4d^2g^2j^2m - 18a^4c^4d^2f^2k^2m + 18a^3c^5d^2f^2k^m \\
& + 3a^4b^2c^2h^4k^m - 3a^3b^3c^2g^4^1m + 18a^4c^4e^f^2j^1^2 + \\
& 18a^4c^4d^2h^2j^2k + 18a^4c^4d^2f^2k^1^2 + 18a^4c^4d^2e^2k^m^2 - \\
& 18a^3c^5e^2f^2j^1 + 12a^5b^2c^2g^2k^m^3 - 9a^5b^c^2h^3j^m^2 - \\
& 9a^5b^c^2f^2^1^3m + 3a^5b^c^2h^2k^3^1 + 3a^4b^3c^h^3j^m^2 + 3a \\
& ^4b^3c^f^2^1^3m - 18a^4c^4e^2f^h^m^2 + 18a^3c^5e^2f^2h^m + 15a \\
& ^5b^c^2e^2^1m^3 - 15a^4b^3c^e^2^1m^3 - 9a^5b^c^2g^2k^1^3 - 9a^4
\end{aligned}$$

$$\begin{aligned}
& *b^3c^3g^3j^2m - 3a^5b^2c^3g^3k^2l^3 + 3a^5b^2c^2h^3j^3l^2 + 3a^4b^3c^3g^2k^3l^3 - 3a^3b^4c^3g^3j^2m^2 + 36a^4c^4e^2f^2g^2m^2 + 36a^4c^4d^2f^2h^2m^2 + 18a^4c^4e^2g^2h^2k^2 - 18a^4c^4d^2g^2h^2l^2 - 18a^4c^4d^2f^2j^2k^2 + 18a^3c^5e^2g^2h^2k + 18a^3c^5e^2f^2g^2m - 18a^3c^5d^2g^2h^2l + 18a^3c^5d^2f^2j^2k + 18a^3c^5d^2f^2h^2m + 18a^3c^5d^2e^2j^2l - 12a^2b^2c^4e^4k^2m + 9a^4b^3c^3f^2j^3m^2 - 9a^4b^2c^2f^2j^4m - 6a^5b^2c^3f^2j^2m^3 + 6a^5b^2c^2f^2j^3m^3 - 6a^5b^2c^2f^2j^3m^2 - 6a^4b^3c^3f^2j^3m^3 + 6a^4b^3c^3f^3j^2m^2 - 6a^4b^2c^3f^2j^3m^2 + 6a^2b^3c^3f^4j^2m + 3a^3b^2c^3g^4j^2l + 3a^2b^5c^3f^3j^2m^2 - 3a^2b^3c^3f^4k^2l - 36a^3c^5d^2e^2j^2k^2 - 18a^4c^4d^2f^2g^2m^2 + 18a^3c^5e^2f^2g^2l + 18a^3c^5d^2f^2g^2m + 18a^3c^5d^2e^2j^2k + 18a^3b^4c^3d^2k^2m^3 + 15a^3b^4c^4e^3j^2m + 12a^5b^2c^3d^2k^2m^3 - 9a^5b^2c^2f^2j^2l^3 - 9a^4b^2c^3e^2k^3l + 3a^5b^2c^2e^2k^3l^2 + 3a^4b^3c^3f^2j^2l^3 + 3a^4b^2c^3g^4h^2m + 3a^3b^4c^3f^2j^2l^3 + 3a^3b^2c^3g^4h^2m + 3a^3b^5c^2e^3j^2m - 36a^3c^5d^2f^2h^2k^2 - 21a^3b^2c^4d^3j^2m^2 - 21a^3b^5c^2d^3j^2m^2 + 18a^3c^5e^2f^2h^2j^2 - 18a^3c^5e^2f^2h^2j + 18a^3c^5d^2f^2h^2k + 18a^3b^4c^3d^3j^2m + 15a^4b^2c^3d^2k^2l^3 - 9a^5b^2c^2d^2k^2l^3 - 9a^4b^2c^3g^3h^2l^2 - 9a^4b^2c^3f^2j^2k^3 + 3a^4b^3c^3d^2k^2l^3 + 3a^2b^5c^3d^2k^2l^3 - 18a^3c^5d^2e^2g^2l^2 + 18a^3c^5d^2e^2h^2k^2 + 18a^3b^4c^3e^2h^2m^3 - 18a^2c^6d^2e^2h^2k + 18a^2c^6d^2e^2g^2l + 18a^2c^6d^2e^2f^2m + 15a^5b^2c^2e^2h^2m^3 - 15a^4b^3c^3e^2h^2m^3 - 9a^4b^2c^3f^2g^3m^2 - 9a^3b^2c^4f^3h^2l + 3a^4b^2c^2e^2j^2k^4 + 3a^4b^2c^3g^3h^3k^2 + 3a^3b^2c^4f^2g^3m + 36a^3c^5d^2e^2f^2l^2 + 18a^3c^5d^2f^2g^2j^2 + 18a^2c^6d^2f^2g^2j + 18a^2c^6d^2e^2f^2l - 9a^3b^2c^3e^2h^4l - 9a^3b^2c^4d^2j^3k + 6a^4b^2c^3e^2h^3l^3 - 6a^4b^2c^3e^2h^3l^2 + 6a^3b^2c^4e^3h^3l^2 - 6a^3b^2c^4e^2h^3l + 3a^4b^2c^2f^2h^2k^4 + 3a^4b^2c^3d^2j^3k^2 - 3a^3b^4c^3e^2h^2l^3 + 3a^2b^5c^3e^2h^2l^3 + 3a^2b^2c^4f^4h^2k + 3a^2b^2c^4f^4g^2l + 3a^3b^5c^2e^3h^2l^2 - 3a^3b^4c^3e^3h^2l - 21a^4b^2c^3d^2g^2m^3 - 21a^2b^5c^3d^2g^2m^3 + 18a^3b^4c^3d^2g^2m^3 + 18a^2c^6d^2e^2f^2k + 18a^3b^4c^3d^3h^2l^2 + 15a^3b^2c^4e^3f^2m^2 + 15a^2b^2c^5d^3h^2l - 15a^3b^3c^4d^3h^2l - 9a^4b^2c^3e^2h^2k^3 - 9a^3b^2c^4f^3g^2k^2 - 9a^2b^2c^5e^3f^2m + 3a^3b^2c^4f^2h^3j + 3a^3b^5c^2e^3f^2m^2 + 3a^3b^3c^4e^3f^2m + 18a^3b^4c^3d^3f^2m^2 + 15a^4b^2c^3d^2g^2l^3 + 12a^3b^2c^5d^3f^2m - 9a^3b^2c^4e^2h^2j^3 - 9a^3b^2c^4e^2f^3l^2 - 9a^2b^2c^5e^3g^2k + 3a^3b^2c^4f^2g^3j^2 + 3a^2b^5c^3d^2g^2l^3 + 3a^2b^2c^5e^2f^3l - 3a^3b^4c^3e^3g^2k^2 + 3a^3b^3c^4e^3g^2k + 18a^2c^6d^2e^2g^2h^2 - 18a^2c^6d^2e^2g^2h - 12a^4b^2c^2d^2f^2l^4 - 9a^2b^2c^4d^2g^4k + 9a^3b^3c^4d^2g^3k + 6a^3b^3c^2d^2g^2k^4 + 6a^3b^2c^4d^2g^2k^3 - 6a^3b^2c^4d^2g^3k^2 + 6a^2b^2c^5d^3g^2k^2 - 6a^2b^2c^5d^2g^3k - 6a^3b^3c^4d^3g^2k^2 - 6a^3b^2c^5d^3g^2k - 3a^3b^3c^2e^2f^2k^4 + 3a^3b^2c^3e^2g^2j^4 + 3a^3b^2c^3d^2h^2j^4 + 3a^3b^5c^2d^2g^2k^3 + 15a^2b^2c^5d^3e^2l^2 - 15a^3b^3c^4d^3e^2l^2 - 9a^3b^2c^4d^2g^2j^3 - 9a^2b^2c^5e^3f^2j^2 - 3a^3b^4c^3d^2g^2j^3 + 3a^3b^3c^4e^3f^2j^2 - 3a^3b^2c^5e^3f^2j + 12a^3b^2c^5d^3f^2j^2 - 9a^2b^2c^5
\end{aligned}$$

$$\begin{aligned}
& *d^3e^3k^2 + 3a^2b^3c^5e^2g^3h + 3a^2b^3c^4de^3k^2 - 9a^2b^3c^5d^2 \\
& *g^3h^3 - 3a^2b^3c^3de^3j^4 + 3a^2b^3c^5e^3f^3h^2 + 3a^2b^3c^4d^2g^3 \\
& *h^3 + 3a^2b^2c^4d^3f^3h^4 - 9a^7c^3k^2l^2m^2 - 6a^6c^2j^2k^3m - \\
& 3a^6b^2h^1l^2m^3 + 3a^5b^3h^2l^1m^3 - 6a^6c^2g^2k^3m^3 - 6a^6c^2 \\
& *hk^3l^2 + 6a^5c^3h^3j^2m + 6a^6c^2g^2k^2l^3 - 6a^6c^2f^3k^3m^2 \\
& - 6a^5c^3h^2j^3l - 6a^5c^3g^3j^3m^2 + 6a^5c^3f^2k^3m + 3a^5 \\
& *b^3g^2k^2m^3 - 3a^4b^4g^2k^3m^3 + 12a^6c^2f^2j^2m^3 + 12a^4c^4f^3 \\
& *j^2m + 3a^5b^3e^1l^2m^3 + 3a^3b^5e^2l^1m^3 - 6a^6c^2dk^2m^3 - \\
& 6a^5c^3f^2j^3l^3 + 6a^5c^3d^2k^3m^3 - 6a^5c^3g^2j^3k^2 + 6a^4c^4 \\
& *e^3j^3m^2 - 3b^6c^2d^3j^2m - 3a^4b^4f^2j^2m^3 + 3a^3b^5f^2j^3m \\
& ^3 + 6a^5c^3f^2j^2k^3 + 6a^5c^3f^3h^3m^2 - 6a^5c^3e^2j^3l^2 + 6a^4 \\
& *c^4g^3h^2l - 6a^4c^4f^2h^3m + 6a^4c^4e^2j^3l + 6a^3c^5d^3 \\
& *j^2m - 3a^4b^4dk^2m^3 - 3a^2b^6d^2k^3m^3 + 6a^5c^3e^2h^3m^3 - \\
& 6a^4c^4g^2h^3k - 6a^4c^4f^3h^1l^2 + 12a^5c^3e^2h^2l^3 + 12a^3c^5 \\
& *e^3h^2l - 3b^6c^2d^3h^1l^2 + 3b^5c^3d^3h^2l - 3a^5b^2c^3j^4m \\
& ^2 + 3a^3b^5e^2h^2m^3 - 3a^2b^6e^2h^3m^3 + 6a^5c^3dg^2m^3 - 6a^4 \\
& *c^4e^2hk^3 - 6a^4c^4f^3h^3j^2 + 6a^4c^4e^2g^3l^2 + 6a^3c^5f^3 \\
& *g^2k - 6a^3c^5e^2g^3l + 6a^3c^5d^3h^1l^2 - 3b^6c^2d^3f^3m^2 - \\
& 3b^4c^4d^3f^2m + 6a^4c^4d^2g^3l^3 + 6a^4c^4e^2h^2j^3 - 6a^4c^4 \\
& *dh^3k^2 - 6a^3c^5f^2g^3j - 6a^3c^5e^3g^2k^2 + 6a^3c^5d^3f^3m \\
& ^2 + 6a^3c^5d^2h^3k - 6a^2c^6d^3f^2m + 4a^5b^2c^3h^3m^3 + 3b^5 \\
& *c^3d^3g^2k^2 - 3b^4c^4d^3g^2k - 3a^2b^6dg^2m^3 + a^5b^2c^2j^3 \\
& *k^3 + 12a^4c^4dg^2k^3 + 12a^2c^6d^3g^2k + 6a^5b^2c^2h^3l^3 + \\
& 5a^5b^2c^2g^3m^3 - 5a^4b^3c^3g^3m^3 + 3b^5c^3d^3e^1l^2 + 3b^3c^5 \\
& *d^3e^2l - 3a^5b^2c^3h^2l^4 + a^4b^3c^3h^3l^3 + 12a^5b^2c^3f^2m^4 \\
& - 6a^3c^5d^2g^3j^3 + 6a^3c^5df^3k^2 + 6a^3b^4c^3f^3m^3 + 6a^2c^6 \\
& *e^3f^2j - 6a^2c^6d^2f^3k - 3b^4c^4d^3f^2j^2 + 3b^3c^5d^3f^2 \\
& *j - 3a^2b^2c^4f^5m - 7a^4b^3c^3e^3m^3 - 7a^2b^5c^3e^3m^3 + 6a^4 \\
& *b^3c^3g^3k^3 - 6a^3c^5e^2g^3h^2 - 6a^2c^6d^3f^2j^2 + 5a^4b^3c^3 \\
& *f^3l^3 + a^4b^3c^3h^3j^3 + a^2b^5c^3f^3l^3 + 6a^3c^5d^2g^2h^3 - 6a^2 \\
& *c^6e^2f^3h - 3a^3b^4c^3e^2l^4 - 3a^2b^4c^3e^4l^2 - 7a^3b^3c^4 \\
& *d^3l^3 - 7a^2b^5c^2d^3l^3 + 6a^3b^3c^4f^3j^3 + 5a^3b^3c^4e^3k^3 \\
& + 3b^3c^5d^3e^2h - 3b^2c^6d^3e^2h + a^5b^3c^2e^3k^3 + 12a^2b^2c^5 \\
& *d^4k^2 - 6a^2c^6d^3f^3g^2 + 6a^2b^4c^3d^3k^3 - 3a^4b^2c^2dk^3 \\
& ^5 + a^3b^3c^4g^3h^3 + 5a^2b^3c^5d^3j^3 - 5a^2b^3c^4d^3j^3 - 9a^2c^7 \\
& *d^2e^2f^2 + 6a^2b^3c^5e^3h^3 - 3a^2b^2c^5e^4h^2 + a^2b^3c^5f^3g^3 \\
& + a^2b^3c^4e^3h^3 + 4a^2b^2c^5d^3h^3 - 3a^2b^2c^5d^2g^4 - 6a^7c^3 \\
& *j^1l^3m^2 + 6a^7c^3h^1l^2m^3 + 6a^6c^2j^2k^4l + 6a^6c^2hk^4m - 6 \\
& *a^5c^3h^4k^3m + 3a^6b^2h^3k^4m + 3a^6b^2g^3l^4m - 3b^5c^3d^4l^1 \\
& *m - 6a^6c^2g^2j^1l^4 - 6a^6c^2f^3k^1l^4 - 6a^6c^2d^1l^4m + 6a^5c^3h \\
& *j^4k + 6a^5c^3g^2j^4l + 6a^5c^3f^2j^4m - 6a^4c^4g^4j^1l + 6a^3c^5 \\
& *e^4k^3m + 6a^5b^3f^2j^3m^4 - 6a^4c^4g^4h^3m + 3b^7c^3d^3j^3m^2 - 3 \\
& *a^5b^3e^2k^3m^4 - 3a^5b^3d^1l^4m + 3b^4c^4d^4j^1l - 3a^5b^3g^3h^3m^4 \\
& - 6a^5c^3e^2j^3k^4 + 6a^2c^6d^4j^1l + 3b^4c^4d^4h^3m + 6a^6c^2e \\
& *g^3m^4 + 6a^6c^2d^3h^3m^4 + 6a^6b^3c^3j^3m^3 - 6a^5c^3f^3h^3k^4 + 6a^4c^4
\end{aligned}$$

$$\begin{aligned}
& c^4 g^h^4 j + 6 a^4 c^4 f^h^4 k + 6 a^4 c^4 e^h^4 l + 6 a^4 c^4 d^h^4 m - 6 \\
& a^3 c^5 f^4 h^k - 6 a^3 c^5 f^4 g^l + 6 a^2 c^6 d^4 h^m + 3 a^5 b^c^2 j^5 m + a^6 b^c^k^3 l^3 + 3 a^4 b^4 e^g^m^4 + 3 a^4 b^4 d^h^m^4 + 6 b^3 c^5 d^4 \\
& g^k - 3 b^3 c^5 d^4 h^j - 3 b^3 c^5 d^4 f^l - 3 b^3 c^5 d^4 e^m + 3 a^b^7 d^2 g^m^3 + 6 a^5 c^3 d^f^l^4 - 6 a^4 c^4 e^g^j^4 - 6 a^4 c^4 d^h^j^4 + 6 a \\
& ^3 c^5 e^g^4 j + 6 a^3 c^5 d^g^4 k - 6 a^2 c^6 e^4 g^j - 6 a^2 c^6 e^4 f^k - 6 a^2 c^6 d^e^4 m + 3 a^4 b^c^3 h^5 l + 6 a^3 c^5 f^g^4 h - 3 a^3 b^5 d^e \\
& ^m^4 + 3 b^2 c^6 d^4 e^j + 3 a^5 b^c^2 g^k^5 + 3 a^3 b^c^4 g^5 k + 8 a^b^6 c^d^3 m^3 + 3 b^2 c^6 d^4 f^h - 3 a^5 b^2 c^e^l^5 - 3 a^b^2 c^5 e^5 l - 6 a \\
& ^3 c^5 d^f^h^4 + 6 a^2 c^6 e^f^4 g + 6 a^2 c^6 d^f^4 h + 3 a^4 b^c^3 f^j^5 + 3 a^2 b^c^5 f^5 j + 6 a^c^7 d^3 e^2 h - 6 a^c^7 d^2 e^3 g + 3 a^3 b^c^4 e \\
& ^h^5 + 6 a^b^c^6 d^3 g^3 + 3 a^2 b^c^5 d^g^5 + a^b^c^6 e^3 f^3 - 9 a^6 c^2 j^2 k^2 l^2 - 9 a^6 c^2 g^2 l^2 m^2 - 18 a^5 c^3 f^2 j^2 m^2 - 9 a^5 c^3 h^2 j^2 k^2 - 9 a^5 c^3 g^2 j^2 l^2 - 9 a^5 c^3 f^2 k \\
& ^2 l^2 - 9 a^5 c^3 e^2 k^2 m^2 - 9 a^5 c^3 d^2 l^2 m^2 - 9 a^5 c^3 g^2 h^2 m^2 - 9 a^4 c^4 e^2 j^2 k^2 - 9 a^4 c^4 d^2 j^2 l^2 - 18 a^4 c^4 e^2 h^2 l^2 - 9 a^4 c^4 g^2 h^2 j^2 - 9 a^4 c^4 f^2 h^2 k^2 - 9 a^4 c^4 f^2 g^2 l^2 - \\
& 9 a^4 c^4 e^2 g^2 m^2 - 9 a^4 c^4 d^2 h^2 m^2 - 18 a^3 c^5 d^2 g^2 k^2 - 9 \\
& a^3 c^5 e^2 g^2 j^2 - 9 a^3 c^5 e^2 f^2 k^2 - 9 a^3 c^5 d^2 h^2 j^2 - 9 a^3 c^5 d^2 f^2 l^2 - 9 a^3 c^5 d^2 e^2 m^2 - 3 a^4 b^2 c^2 h^4 l^2 - 18 a^4 b^2 c^2 f^3 m^3 + 12 a^3 b^2 c^3 f^4 m^2 - 9 a^3 c^5 f^2 g^2 h^2 + 4 a^4 b^2 c^2 g^3 l^3 - 3 a^2 b^4 c^2 f^4 m^2 + 14 a^3 b^3 c^2 e^3 m^3 - 5 a^3 b^3 c^2 f^3 l^3 - 3 a^4 b^2 c^2 g^2 k^4 - 3 a^3 b^2 c^3 g^4 k^2 + a^3 b^3 c^2 g^3 k^3 - 20 a^2 b^4 c^2 d^3 m^3 - 18 a^3 b^2 c^3 e^3 l^3 + 16 a^3 b^2 c^3 d^3 m^3 + 12 a^4 b^2 c^2 e^2 l^4 + 12 a^2 b^2 c^4 e^4 l^2 - 9 a^2 c^6 d^2 e^2 j^2 + 6 a^2 b^4 c^2 e^3 l^3 + 4 a^3 b^2 c^3 f^3 k^3 + 14 a^2 b^3 c^3 d^3 l^3 - 9 a^2 c^6 e^2 f^2 g^2 - 9 a^2 c^6 d^2 f^2 h^2 - 5 a^2 b^3 c^3 e^3 k^3 - 3 a^3 b^2 c^3 f^2 j^4 - 3 a^2 b^2 c^4 f^4 j^2 + a^2 b^3 c^3 f^3 j^3 - 18 a^2 b^2 c^4 d^3 k^3 + 12 a^3 b^2 c^3 d^2 k^4 + 4 a^2 b^2 c^4 e^3 j^3 - 3 a^2 b^4 c^2 d^2 k^4 - 3 a^2 b^2 c^4 e^2 h^4 + 6 a^7 c^k^l^4 m - 3 a^7 b^k^l^4 m^4 - 6 a^7 c^h^k^m^4 - 6 a^7 c^g^l^m^4 + 3 a^6 b^c^h^l^5 - 6 a^c^7 d^4 e^j - 6 a^c^7 d^4 f^h - 3 b^c^7 d^4 e^f + 6 a^c^7 d^e^4 f + 3 a^b^c^6 e^5 h - a^5 b^2 c^j^3 l^3 - a^3 b^4 c^g^3 l^3 - a^b^4 c^3 e^3 j^3 - a^b^2 c^5 e^3 g^3 + 3 a^7 b^j^m^5 + 6 a^7 c^f^m^5 + 6 a^c^7 d^5 k + 3 b^c^7 d^5 g - 3 a^6 c^2 j^4 m^2 - 3 a^6 b^2 j^2 m^4 + 2 a^6 c^2 j^3 l^3 + a^5 b^3 j^3 m^3 - 2 a^6 c^2 h^3 m^3 - 3 a^6 c^2 h^2 l^4 - 3 a^5 c^3 h^4 l^2 - a^b^6 c^e^3 l^3 + 20 a^5 c^3 f^3 m^3 - 15 a^6 c^2 f^2 m^4 - 15 a^4 c^4 f^4 m^2 + 2 a^5 c^3 h^3 k^3 - 2 a^5 c^3 g^3 l^3 + a^3 b^5 g^3 m^3 - 3 a^5 c^3 g^2 k^4 - 3 a^4 c^4 g^4 k^2 - 3 a^4 b^4 f^2 m^4 + 20 a^4 c^4 e^3 l^3 - 15 a^5 c^3 e^2 l^4 - 15 a^3 c^5 e^4 l^2 + 2 a^4 c^4 g^3 j^3 - 2 a^4 c^4 f^3 k^3 - 2 a^4 c^4 d^3 m^3 - 3 b^4 c^4 d^4 k^2 - 3 a^4 c^4 f^2 j^4 - 3 a^3 c^5 f^4 j^2 + 20 a^3 c^5 d^3 k^3 - 15 a^4 c^4 d^2 k^4 - 15 a^2 c^6 d^4 k^2 - 2 a^3 c^5 e^3 j^3 + b^5 c^3 d^3 j^3 + 2 a^3 c^5 f^3 h^3 - 3 a^3 c^5 e^2 h^4 - 3 a^2 c^6 e^4 h^2 - 3 b^2 c^6 d^4 g^2 + 2 a^2 c^6 e^3 g^3 - 2 a^2 c^6 d^3 h^3 + b^3 c^5 d^3 g^3 - 3 a^2 c^6 d^2 g^4 - a^4 b^2 c^2 h^3 k^3 - a^3 b^2 c^3 g^3 j^3 - a^2 b^4 c^
\end{aligned}$$

$c^2f^3k^3 - a^2b^2c^4f^3h^3 + 2a^7c^3k^3m^3 + a^7b^1l^3m^3 - 3a^7$   
 $*c^j^2m^4 + 6a^3c^5f^5m - 3a^6b^2f^5m^5 + 6a^6c^2e^1l^5 + 6a^2c^6$   
 $e^5l + b^7c^d^3l^3 + a^b^7e^3m^3 - 3b^2c^6d^5k + 6a^5c^3d^3k^5$   
 $- 3a^c^7d^4g^2 + 2a^c^7d^3f^3 + b^c^7d^3e^3 - a^6b^2k^3m^3 - a^4$   
 $b^4h^3m^3 - a^2b^6f^3m^3 - b^6c^2d^3k^3 - b^4c^4d^3h^3 - b^2c^6$   
 $d^3f^3 - b^8d^3m^3 - a^6c^2k^6 - a^5c^3j^6 - a^4c^4h^6 - a^3c^5$   
 $g^6 - a^2c^6f^6 - a^7c^1l^6 - a^c^7e^6 - a^8m^6 - c^8d^6, z, k1)*(ro$   
 $ot(34992a^4b^2c^8z^6 - 8748a^3b^4c^7z^6 + 729a^2b^6c^6z^6 - 466$   
 $56a^5c^9z^6 + 34992a^4b^3c^6mz^5 - 8748a^3b^5c^5mz^5 + 729a^2$   
 $b^7c^4mz^5 - 34992a^4b^2c^7jz^5 + 8748a^3b^4c^6jz^5 - 729a^2$   
 $b^6c^5jz^5 - 46656a^5b^c^7mz^5 + 46656a^5c^8jz^5 + 34992a^5b^c^6$   
 $j^mz^4 - 11664a^5b^c^6k^1z^4 + 3888a^4b^c^7f^jz^4 + 3888a^4b^c^7$   
 $e^kz^4 + 3888a^4b^c^7d^1z^4 + 3888a^4b^c^7g^hz^4 + 3888a^3b^c^8$   
 $d^ez^4 + 243a^b^5c^6d^ez^4 - 25272a^4b^3c^5j^mz^4 + 9720a^4$   
 $b^3c^5k^1z^4 + 6075a^3b^5c^4j^mz^4 - 2673a^3b^5c^4k^1z^4 - 48$   
 $6a^2b^7c^3j^mz^4 + 243a^2b^7c^3k^1z^4 - 7776a^4b^2c^6h^kz^4$   
 $- 7776a^4b^2c^6g^1z^4 - 7776a^4b^2c^6f^mz^4 + 2430a^3b^4c^5h^k$   
 $kz^4 + 2430a^3b^4c^5g^1z^4 + 2430a^3b^4c^5f^mz^4 - 243a^2b^6c^4$   
 $h^kz^4 - 243a^2b^6c^4g^1z^4 - 243a^2b^6c^4f^mz^4 - 1944a^3b^3$   
 $c^6f^jz^4 - 1944a^3b^3c^6e^kz^4 - 1944a^3b^3c^6d^1z^4 + 243$   
 $a^2b^5c^5f^jz^4 + 243a^2b^5c^5e^kz^4 + 243a^2b^5c^5d^1z^4 - 1$   
 $944a^3b^3c^6g^hz^4 + 243a^2b^5c^5g^hz^4 + 3888a^3b^2c^7e^gz^4$   
 $+ 3888a^3b^2c^7d^hz^4 - 486a^2b^4c^6e^gz^4 - 486a^2b^4c^6d^h$   
 $z^4 - 1944a^2b^3c^7d^ez^4 + 7776a^5c^7h^kz^4 + 7776a^5c^7g^1$   
 $z^4 + 7776a^5c^7f^mz^4 - 7776a^4c^8e^gz^4 - 7776a^4c^8d^hz^4 -$   
 $13608a^5b^2c^5m^2z^4 + 11421a^4b^4c^4m^2z^4 - 2916a^3b^6c^3m^2$   
 $z^4 + 243a^2b^8c^2m^2z^4 + 13608a^4b^2c^6j^2z^4 - 3159a^3b^4c^5$   
 $j^2z^4 + 243a^2b^6c^4j^2z^4 + 1944a^3b^2c^7f^2z^4 - 243a^2b^4$   
 $c^6f^2z^4 - 3888a^6c^6m^2z^4 - 19440a^5c^7j^2z^4 - 3888a^4c^8$   
 $f^2z^4 + 3078a^4b^4c^3k^1mz^3 - 2592a^5b^2c^4k^1mz^3 - 891$   
 $a^3b^6c^2k^1mz^3 - 4536a^4b^3c^4j^k^1z^3 + 1053a^3b^5c^3j^k^1$   
 $z^3 - 81a^2b^7c^2j^k^1z^3 - 2592a^4b^3c^4h^k^1mz^3 - 2592a^4b^3$   
 $c^4g^1mz^3 + 810a^3b^5c^3h^k^1mz^3 + 810a^3b^5c^3g^1mz^3 - 81$   
 $a^2b^7c^2h^k^1mz^3 - 81a^2b^7c^2g^1mz^3 + 7776a^4b^2c^5f^j^m$   
 $z^3 + 3888a^4b^2c^5h^j^k^1z^3 + 3888a^4b^2c^5g^j^1z^3 - 3888a^4b^2$   
 $c^5f^k^1z^3 - 2916a^3b^4c^4f^j^mz^3 + 1458a^3b^4c^4f^k^1z^3 -$   
 $972a^3b^4c^4h^j^k^1z^3 - 972a^3b^4c^4g^j^1z^3 - 486a^3b^4c^4e^k$   
 $mz^3 - 486a^3b^4c^4d^1mz^3 + 324a^2b^6c^3f^j^mz^3 - 162a^2b^6$   
 $c^3f^k^1z^3 + 81a^2b^6c^3h^j^k^1z^3 + 81a^2b^6c^3g^j^1z^3 + 81$   
 $a^2b^6c^3e^k^1mz^3 + 81a^2b^6c^3d^1mz^3 - 486a^3b^4c^4g^h^mz^3$   
 $+ 81a^2b^6c^3g^h^mz^3 + 648a^3b^3c^5e^j^k^1z^3 + 648a^3b^3c^5$   
 $d^j^1z^3 - 81a^2b^5c^4e^j^k^1z^3 - 81a^2b^5c^4d^j^1z^3 + 2592a^3$   
 $b^3c^5e^g^1mz^3 + 2592a^3b^3c^5d^h^mz^3 - 1296a^3b^3c^5f^h^k^1z^3$   
 $- 1296a^3b^3c^5f^g^1z^3 - 1296a^3b^3c^5e^h^1z^3 + 648a^3b^3c^5$   
 $g^h^1z^3 - 324a^2b^5c^4e^g^1mz^3 - 324a^2b^5c^4d^h^mz^3 + 162$



$$\begin{aligned}
& a^2 b^5 c^4 f h k z^3 + 162 a^2 b^5 c^4 f g l z^3 + 162 a^2 b^5 c^4 e h l z^3 \\
& - 81 a^2 b^5 c^4 g h j z^3 + 5184 a^3 b^2 c^6 d e m z^3 - 2592 a^3 b^2 c^6 e g j z^3 - 2592 a^3 b^2 c^6 d h j z^3 - 2106 a^2 b^4 c^5 d e m z^3 + 12 \\
& 96 a^3 b^2 c^6 e f k z^3 + 1296 a^3 b^2 c^6 d g k z^3 + 1296 a^3 b^2 c^6 d f l z^3 + 324 a^2 b^4 c^5 e g j z^3 + 324 a^2 b^4 c^5 d h j z^3 - 162 a^2 b^4 c^5 e f k z^3 - 162 a^2 b^4 c^5 d g k z^3 - 162 a^2 b^4 c^5 d f l z^3 + \\
& 1296 a^3 b^2 c^6 f g h z^3 - 162 a^2 b^4 c^5 f g h z^3 + 1944 a^2 b^3 c^6 d e j z^3 - 1296 a^2 b^2 c^7 d e f z^3 + 81 a^2 b^8 c^3 k l m z^3 + 6480 a^5 b^3 c^5 j k l z^3 + 2592 a^5 b^3 c^5 h k m z^3 + 2592 a^5 b^3 c^5 g l m z^3 - 1296 \\
& a^4 b^3 c^6 e j k z^3 - 1296 a^4 b^3 c^6 d j l z^3 - 5184 a^4 b^3 c^6 e g m z^3 - 5184 a^4 b^3 c^6 d h m z^3 + 2592 a^4 b^3 c^6 f h k z^3 + 2592 a^4 b^3 c^6 f g l z^3 + 2592 a^4 b^3 c^6 e h l z^3 - 1296 a^4 b^3 c^6 g h j z^3 + 243 a^4 b^3 c^6 d e m z^3 - 3888 a^3 b^3 c^7 d e j z^3 - 243 a^4 b^5 c^5 d e j z^3 + 162 a^4 b^4 c^6 d e f z^3 - 2592 a^6 c^5 k l m z^3 - 5184 a^5 c^6 h j k z^3 - 5184 a^5 c^6 g j l z^3 - 5184 a^5 c^6 f j m z^3 + 2592 a^5 c^6 f k l z^3 + 2592 a^5 c^6 e k m z^3 + 2592 a^5 c^6 d l m z^3 + 2592 a^5 c^6 g h m z^3 + 5184 a^4 c^7 e g j z^3 + 5184 a^4 c^7 d h j z^3 - 2592 a^4 c^7 e f k z^3 - 2592 a^4 c^7 d g k z^3 - 2592 a^4 c^7 d f l z^3 - 2592 a^4 c^7 d e m z^3 - 2592 a^4 c^7 f g h z^3 + 2592 a^3 c^8 d e f z^3 + 6480 a^5 b^2 c^4 j m^2 z^3 + 6480 a^4 b^3 c^4 j^2 m z^3 - 5022 a^4 b^4 c^3 j m^2 z^3 - 1296 a^3 b^5 c^3 j^2 m z^3 + 1134 a^3 b^6 c^2 j m^2 z^3 + 81 a^2 b^7 c^2 j^2 m z^3 + 2592 a^4 b^3 c^4 h l^2 z^3 - 1944 a^4 b^2 c^5 h^2 l z^3 - 810 a^3 b^5 c^3 h l^2 z^3 + 729 a^3 b^4 c^4 h^2 l z^3 + 81 a^2 b^7 c^2 h l^2 z^3 - 81 a^2 b^6 c^3 h^2 l z^3 - 5184 a^4 b^3 c^4 f m^2 z^3 + 1620 a^3 b^5 c^3 f m^2 z^3 + 1296 a^3 b^3 c^5 f^2 m z^3 - 162 a^2 b^7 c^2 f m^2 z^3 - 162 a^2 b^5 c^4 f^2 m z^3 - 1944 a^4 b^2 c^5 g k^2 z^3 + 729 a^3 b^4 c^4 g k^2 z^3 - 648 a^3 b^3 c^5 g^2 k z^3 - 81 a^2 b^6 c^3 g k^2 z^3 + 81 a^2 b^5 c^4 g^2 k z^3 - 1944 a^4 b^2 c^5 e l^2 z^3 + 729 a^3 b^4 c^4 e l^2 z^3 + 648 a^3 b^2 c^6 e^2 l z^3 - 81 a^2 b^6 c^3 e l^2 z^3 - 81 a^2 b^4 c^5 e^2 l z^3 + 1296 a^3 b^3 c^5 f j^2 z^3 - 1296 a^3 b^2 c^6 f^2 j z^3 - 162 a^2 b^5 c^4 f j^2 z^3 + 162 a^2 b^4 c^5 f^2 j z^3 - 648 a^3 b^3 c^5 d k^2 z^3 + 81 a^2 b^5 c^4 d k^2 z^3 + 648 a^3 b^2 c^6 e h^2 z^3 - 81 a^2 b^4 c^5 e h^2 z^3 - 648 a^2 b^2 c^7 d^2 g z^3 - 10368 a^5 b^3 c^5 j^2 m z^3 - 81 a^2 b^8 c^3 j m^2 z^3 - 2592 a^5 b^3 c^5 h l^2 z^3 + 5184 a^5 b^3 c^5 f m^2 z^3 - 2592 a^4 b^3 c^6 f^2 m z^3 + 1296 a^4 b^3 c^6 g^2 k z^3 - 2592 a^4 b^3 c^6 f j^2 z^3 + 1296 a^4 b^3 c^6 d k^2 z^3 + 81 a^4 b^4 c^6 d^2 g z^3 + 2592 a^6 c^5 j m^2 z^3 + 1296 a^5 c^6 h^2 l z^3 + 1296 a^5 c^6 g k^2 z^3 + 1296 a^5 c^6 e l^2 z^3 - 1296 a^4 c^7 e^2 l z^3 + 2592 a^4 c^7 f^2 j z^3 - 2592 a^6 b^3 c^4 m^3 z^3 - 324 a^3 b^7 c^3 m^3 z^3 - 27 a^2 b^8 c^1^3 z^3 - 1296 a^4 c^7 e h^2 z^3 - 864 a^5 b^3 c^5 k^3 z^3 + 1296 a^3 c^8 d^2 g z^3 + 432 a^4 b^3 c^6 h^3 z^3 + 27 a^4 b^4 c^6 e^3 z^3 - 432 a^2 b^3 c^8 d^3 z^3 + 216 a^4 b^3 c^7 d^3 z^3 + 1134 a^4 b^5 c^2 m^3 z^3 - 432 a^5 b^3 c^3 m^3 z^3 + 1512 a^5 b^2 c^4 l^3 z^3 - 1107 a^4 b^4 c^3 l^3 z^3 + 297 a^3 b^6 c^2 l^3 z^3 + 864 a^4 b^3 c^4 k^3 z^3 - 270 a^3 b^5 c^3 k^3 z^3 + 27 a^2 b^7 c^2 k^3 z^3 - 2592 a^4 b^2 c^5 j^3 z^3 + 486 a^3 b^4 c^4 j^3 z^3 - 27 a^2 b^6 c^3 j^3 z^3 - 216 a^3 b^3 c^5 h^3 z^3 + 27 a^2 b^5 c^4 h^3 z^3 +
\end{aligned}$$

$$\begin{aligned}
& 216a^3b^2c^6g^3z^3 - 27a^2b^4c^5g^3z^3 - 216a^2b^2c^7e^3z^3 \\
& - 432a^6c^5l^3z^3 + 27a^2b^9m^3z^3 + 4320a^5c^6j^3z^3 - 432a^4 \\
& *c^7g^3z^3 + 432a^3c^8e^3z^3 - 27b^5c^6d^3z^3 + 81a^3b^6c^j*k* \\
& l*m*z^2 - 1296a^5b*c^4*h*j*k*m*z^2 - 1296a^5b*c^4*g*j*l*m*z^2 + 1296a^ \\
& 5*b*c^4*f*k*l*m*z^2 - 81a^2b^7c*f*k*l*m*z^2 + 2592a^4b*c^5*e*g*j*m*z^2 \\
& + 2592a^4b*c^5*d*h*j*m*z^2 - 1296a^4b*c^5*f*h*j*k*z^2 - 1296a^4b*c^5 \\
& *f*g*j*l*z^2 - 1296a^4b*c^5*e*f*k*m*z^2 - 1296a^4b*c^5*d*f*l*m*z^2 - 64 \\
& 8a^4b*c^5*e*h*j*l*z^2 - 648a^4b*c^5*e*g*k*l*z^2 - 648a^4b*c^5*d*h*k*l \\
& *z^2 - 648a^4b*c^5*d*g*k*m*z^2 - 1296a^4b*c^5*f*g*h*m*z^2 - 162a*b^6*c \\
& ^3*d*e*j*m*z^2 + 81a*b^6*c^3*d*e*k*l*z^2 + 1296a^3b*c^6*d*e*f*m*z^2 - 64 \\
& 8a^3b*c^6*d*f*g*k*z^2 - 648a^3b*c^6*d*e*h*k*z^2 - 648a^3b*c^6*d*e*g*l \\
& *z^2 - 81a*b^5*c^4*d*e*h*k*z^2 - 81a*b^5*c^4*d*e*g*l*z^2 + 81a*b^5*c^4*d \\
& *e*f*m*z^2 - 81a*b^4*c^5*d*e*f*j*z^2 + 81a*b^4*c^5*d*e*g*h*z^2 + 648a^5* \\
& b^2*c^3*j*k*l*m*z^2 - 567a^4b^4*c^2*j*k*l*m*z^2 - 1944a^4b^3*c^3*f*k*l* \\
& m*z^2 + 729a^3b^5*c^2*f*k*l*m*z^2 + 648a^4b^3*c^3*h*j*k*m*z^2 + 648a^4 \\
& *b^3*c^3*g*j*l*m*z^2 - 81a^3b^5*c^2*h*j*k*m*z^2 - 81a^3b^5*c^2*g*j*l*m* \\
& z^2 + 1944a^4b^2*c^4*f*j*k*l*z^2 - 729a^3b^4*c^3*f*j*k*l*z^2 + 648a^4* \\
& b^2*c^4*e*j*k*m*z^2 + 648a^4b^2*c^4*d*j*l*m*z^2 - 81a^3b^4*c^3*e*j*k*m* \\
& z^2 - 81a^3b^4*c^3*d*j*l*m*z^2 + 81a^2b^6*c^2*f*j*k*l*z^2 + 1296a^4b^ \\
& 2*c^4*f*h*k*m*z^2 + 1296a^4b^2*c^4*f*g*l*m*z^2 + 648a^4b^2*c^4*g*h*j*m* \\
& z^2 - 648a^3b^4*c^3*f*h*k*m*z^2 - 648a^3b^4*c^3*f*g*l*m*z^2 - 324a^4b \\
& ^2*c^4*g*h*k*l*z^2 - 324a^4b^2*c^4*e*h*l*m*z^2 + 81a^3b^4*c^3*g*h*k*l*z \\
& ^2 - 81a^3b^4*c^3*g*h*j*m*z^2 + 81a^2b^6*c^2*f*h*k*m*z^2 + 81a^2b^6*c \\
& ^2*f*g*l*m*z^2 - 1296a^3b^3*c^4*e*g*j*m*z^2 - 1296a^3b^3*c^4*d*h*j*m*z^ \\
& 2 + 648a^3b^3*c^4*f*h*j*k*z^2 + 648a^3b^3*c^4*f*g*j*l*z^2 + 648a^3b^3 \\
& *c^4*e*f*k*m*z^2 + 648a^3b^3*c^4*d*f*l*m*z^2 + 486a^3b^3*c^4*e*g*k*l*z^ \\
& 2 + 486a^3b^3*c^4*d*h*k*l*z^2 + 162a^3b^3*c^4*e*h*j*l*z^2 + 162a^3b^3 \\
& *c^4*d*g*k*m*z^2 + 162a^2b^5*c^3*e*g*j*m*z^2 + 162a^2b^5*c^3*d*h*j*m*z^ \\
& 2 - 81a^2b^5*c^3*f*h*j*k*z^2 - 81a^2b^5*c^3*f*g*j*l*z^2 - 81a^2b^5*c^ \\
& 3*e*g*k*l*z^2 - 81a^2b^5*c^3*e*f*k*m*z^2 - 81a^2b^5*c^3*d*h*k*l*z^2 - 8 \\
& 1a^2b^5*c^3*d*f*l*m*z^2 + 648a^3b^3*c^4*f*g*h*m*z^2 - 81a^2b^5*c^3*f* \\
& g*h*m*z^2 - 3240a^3b^2*c^5*d*e*j*m*z^2 + 1620a^3b^2*c^5*d*e*k*l*z^2 + 1 \\
& 377a^2b^4*c^4*d*e*j*m*z^2 - 648a^3b^2*c^5*e*f*j*k*z^2 - 648a^3b^2*c^5 \\
& *d*f*j*l*z^2 - 648a^2b^4*c^4*d*e*k*l*z^2 - 324a^3b^2*c^5*d*g*j*k*z^2 + \\
& 81a^2b^4*c^4*e*f*j*k*z^2 + 81a^2b^4*c^4*d*f*j*l*z^2 + 972a^3b^2*c^5*e \\
& *f*h*l*z^2 - 648a^3b^2*c^5*f*g*h*j*z^2 - 324a^3b^2*c^5*e*g*h*k*z^2 - 32 \\
& 4a^3b^2*c^5*d*g*h*l*z^2 - 162a^2b^4*c^4*e*f*h*l*z^2 + 81a^2b^4*c^4*f* \\
& g*h*j*z^2 + 81a^2b^4*c^4*e*g*h*k*z^2 + 81a^2b^4*c^4*d*g*h*l*z^2 - 648a \\
& ^2b^3*c^5*d*e*f*m*z^2 + 486a^2b^3*c^5*d*e*h*k*z^2 + 486a^2b^3*c^5*d*e* \\
& g*l*z^2 + 162a^2b^3*c^5*d*f*g*k*z^2 + 648a^2b^2*c^6*d*e*f*j*z^2 - 324a \\
& ^2b^2*c^6*d*e*g*h*z^2 - 1296a^6b*c^3*k*l*m^2*z^2 - 81a^4b^5*c*k*l*m^2* \\
& z^2 - 1296a^5b*c^4*j^2*k*l*z^2 - 324a^5b*c^4*h^2*l*m*z^2 + 324a^5b*c^ \\
& 4*h*k^2*l*z^2 - 324a^5b*c^4*g*k^2*m*z^2 + 972a^5b*c^4*h*j*l^2*z^2 + 324 \\
& *a^5b*c^4*g*k*l^2*z^2 - 324a^5b*c^4*e*l^2*m*z^2 - 324a^4b*c^5*e^2*l*m* \\
& z^2 - 1944a^5b*c^4*f*j*m^2*z^2 + 1296a^5b*c^4*e*k*m^2*z^2 + 1296a^5b*
\end{aligned}$$

$$\begin{aligned}
& c^4 d^1 m^2 z^2 + 648 a^4 b^3 c^5 f^2 j^2 m^2 z^2 + 81 a^2 b^7 c^5 f^2 j^2 m^2 z^2 + 12 \\
& 96 a^5 b^3 c^4 g^2 h^2 m^2 z^2 - 324 a^4 b^3 c^5 g^2 j^2 k^2 z^2 + 324 a^4 b^3 c^5 g^2 h^2 m^2 z^2 + 972 a^4 b^3 c^5 f^2 h^2 l^2 z^2 + 324 a^4 b^3 c^5 g^2 h^2 k^2 z^2 - 324 a^4 b^3 c^5 e^2 h^2 m^2 z^2 - 324 a^4 b^3 c^5 d^2 j^2 k^2 z^2 - 324 a^3 b^3 c^6 d^2 j^2 k^2 z^2 + 97 \\
& 2 a^4 b^3 c^5 f^2 g^2 k^2 z^2 + 972 a^3 b^3 c^6 d^2 g^2 m^2 z^2 + 324 a^4 b^3 c^5 e^2 h^2 k^2 z^2 + 324 a^3 b^3 c^6 d^2 h^2 l^2 z^2 + 81 a^2 b^5 c^4 d^2 g^2 m^2 z^2 + 972 a^4 b^3 c^5 e^2 f^2 l^2 z^2 + 324 a^4 b^3 c^5 d^2 g^2 l^2 z^2 - 324 a^3 b^3 c^6 e^2 h^2 j^2 z^2 + 324 a^3 b^3 c^6 e^2 g^2 k^2 z^2 - 324 a^3 b^3 c^6 e^2 f^2 l^2 z^2 - 1296 a^4 b^3 c^5 d^2 e^2 m^2 z^2 + 81 a^2 b^7 c^2 d^2 e^2 m^2 z^2 - 324 a^3 b^3 c^6 d^2 g^2 j^2 z^2 - 81 a^2 b^4 c^5 d^2 g^2 j^2 z^2 + 81 a^2 b^4 c^5 d^2 e^2 l^2 z^2 + 324 a^3 b^3 c^6 e^2 g^2 h^2 z^2 + 81 a^2 b^4 c^5 d^2 e^2 k^2 z^2 + 1296 a^3 b^3 c^6 d^2 e^2 j^2 z^2 - 324 a^3 b^3 c^6 e^2 f^2 h^2 z^2 + 324 a^3 b^3 c^6 d^2 g^2 h^2 z^2 + 81 a^2 b^5 c^4 d^2 e^2 j^2 z^2 - 324 a^2 b^3 c^7 d^2 f^2 g^2 z^2 + 324 a^2 b^3 c^7 d^2 e^2 h^2 z^2 + 81 a^2 b^3 c^6 d^2 f^2 g^2 z^2 - 81 a^2 b^3 c^6 d^2 e^2 h^2 z^2 + 324 a^2 b^3 c^7 d^2 e^2 g^2 z^2 - 81 a^2 b^3 c^6 d^2 e^2 g^2 z^2 + 129 \\
& 6 a^6 c^4 j^2 k^2 l^2 m^2 z^2 - 1296 a^5 c^5 f^2 j^2 k^2 l^2 z^2 - 1296 a^5 c^5 e^2 j^2 k^2 m^2 z^2 - 1296 a^5 c^5 d^2 j^2 l^2 m^2 z^2 - 1296 a^5 c^5 g^2 h^2 j^2 m^2 z^2 + 1296 a^5 c^5 e^2 h^2 l^2 m^2 z^2 + 1296 a^4 c^6 e^2 f^2 j^2 k^2 z^2 + 1296 a^4 c^6 d^2 g^2 j^2 k^2 z^2 + 1296 a^4 c^6 d^2 f^2 j^2 l^2 z^2 - 1296 a^4 c^6 d^2 e^2 k^2 l^2 z^2 + 1296 a^4 c^6 d^2 e^2 j^2 m^2 z^2 + 1296 a^4 c^6 f^2 g^2 h^2 j^2 z^2 - 1296 a^4 c^6 e^2 f^2 h^2 l^2 z^2 - 1296 a^3 c^7 d^2 e^2 f^2 j^2 z^2 + 648 a^5 b^3 c^2 k^2 l^2 m^2 z^2 + 648 a^4 b^3 c^3 j^2 k^2 l^2 z^2 + 486 a^5 b^2 c^3 h^2 l^2 m^2 z^2 - 81 a^4 b^4 c^2 h^2 l^2 m^2 z^2 + 81 a^4 b^3 c^3 h^2 l^2 m^2 z^2 - 81 a^3 b^5 c^2 j^2 k^2 l^2 z^2 - 162 a^4 b^2 c^4 g^2 k^2 m^2 z^2 - 81 a^4 b^3 c^3 h^2 k^2 l^2 z^2 + 81 a^4 b^3 c^3 g^2 k^2 m^2 z^2 - 567 a^4 b^3 c^3 h^2 j^2 l^2 z^2 + 486 a^4 b^2 c^4 h^2 j^2 l^2 z^2 - 81 a^4 b^3 c^3 g^2 k^2 l^2 z^2 + 81 a^4 b^3 c^3 e^2 l^2 m^2 z^2 + 81 a^3 b^5 c^2 h^2 j^2 l^2 z^2 - 81 a^3 b^4 c^3 h^2 j^2 l^2 z^2 + 81 a^3 b^3 c^4 e^2 l^2 m^2 z^2 + 2430 a^4 b^3 c^3 f^2 j^2 m^2 z^2 - 2268 a^4 b^2 c^4 f^2 j^2 m^2 z^2 - 810 a^3 b^5 c^2 f^2 j^2 m^2 z^2 + 810 a^3 b^4 c^3 f^2 j^2 m^2 z^2 - 648 a^4 b^3 c^3 e^2 k^2 m^2 z^2 - 648 a^4 b^3 c^3 d^2 l^2 m^2 z^2 - 648 a^4 b^2 c^4 h^2 j^2 k^2 z^2 - 648 a^4 b^2 c^4 g^2 j^2 l^2 z^2 - 162 a^3 b^3 c^4 f^2 j^2 m^2 z^2 + 81 a^3 b^5 c^2 e^2 k^2 m^2 z^2 + 81 a^3 b^5 c^2 d^2 l^2 m^2 z^2 + 81 a^3 b^4 c^3 h^2 j^2 k^2 z^2 + 81 a^3 b^4 c^3 g^2 j^2 l^2 z^2 - 81 a^2 b^6 c^2 f^2 j^2 m^2 z^2 - 648 a^4 b^3 c^3 g^2 h^2 m^2 z^2 + 486 a^4 b^2 c^4 g^2 j^2 k^2 z^2 - 486 a^4 b^2 c^4 e^2 k^2 l^2 z^2 + 486 a^3 b^2 c^5 d^2 k^2 m^2 z^2 - 162 a^4 b^2 c^4 d^2 k^2 m^2 z^2 + 81 a^3 b^5 c^2 g^2 h^2 m^2 z^2 - 81 a^3 b^4 c^3 g^2 j^2 k^2 z^2 + 81 a^3 b^4 c^3 e^2 k^2 l^2 z^2 + 81 a^3 b^3 c^4 g^2 j^2 k^2 z^2 - 81 a^2 b^4 c^4 d^2 k^2 m^2 z^2 + 486 a^4 b^2 c^4 e^2 j^2 l^2 z^2 - 486 a^4 b^2 c^4 d^2 k^2 l^2 z^2 - 162 a^3 b^2 c^5 e^2 j^2 l^2 z^2 - 81 a^3 b^4 c^3 e^2 j^2 l^2 z^2 + 81 a^3 b^4 c^3 d^2 k^2 l^2 z^2 - 81 a^3 b^3 c^4 g^2 h^2 l^2 z^2 - 1458 a^4 b^2 c^4 f^2 h^2 l^2 z^2 + 648 a^3 b^4 c^3 f^2 h^2 l^2 z^2 - 567 a^3 b^3 c^4 f^2 h^2 l^2 z^2 + 486 a^3 b^2 c^5 e^2 h^2 m^2 z^2 - 81 a^3 b^3 c^4 g^2 h^2 k^2 z^2 + 81 a^3 b^3 c^4 e^2 h^2 m^2 z^2 - 81 a^2 b^6 c^2 f^2 h^2 l^2 z^2 + 81 a^2 b^5 c^3 f^2 h^2 l^2 z^2 - 81 a^2 b^4 c^4 e^2 h^2 m^2 z^2 - 1296 a^4 b^2 c^4 e^2 g^2 m^2 z^2 - 1296 a^4 b^2 c^4 d^2 h^2 m^2 z^2 + 648 a^3 b^4 c^3 e^2 g^2 m^2 z^2 + 648 a^3 b^4 c^3 d^2 h^2 m^2 z^2 + 81 a^3 b^3 c^4 d^2 j^2 k^2 z^2 - 81 a^2 b^6 c^2 e^2 g^2 m^2 z^2 - 81 a^2 b^6 c^2 d^2 h^2 m^2 z^2 + 81 a^2 b^3 c^5 d^2 j^2 k^2 z^2 - 567 a^3 b^3 c^4 f^2 g^2 k^2 z^2 - 567 a^2 b^3 c^5 d^2 g^2 m^2 z^2 + 486 a^3 b^2 c^5 f^2 g^2 k^2 z^2
\end{aligned}$$

$$\begin{aligned}
& - 486a^3b^2c^5e*g^2*1*z^2 + 486a^3b^2c^5*d*g^2*m*z^2 - 81a^3b^3c^4*e*h*k^2*z^2 + 81a^2b^5c^3*f*g*k^2*z^2 - 81a^2b^4c^4*f*g^2*k*z^2 + \\
& 81a^2b^4c^4*e*g^2*1*z^2 - 81a^2b^4c^4*d*g^2*m*z^2 - 81a^2b^3c^5*d^2*h*1*z^2 - 567a^3b^3c^4*e*f*1^2*z^2 - 486a^3b^2c^5*d*h^2*k*z^2 - 162 \\
& *a^3b^2c^5*e*h^2*j*z^2 - 81a^3b^3c^4*d*g*1^2*z^2 + 81a^2b^5c^3*e*f*1^2*z^2 + 81a^2b^4c^4*d*h^2*k*z^2 + 81a^2b^3c^5*e^2*h*j*z^2 - 81a^2* \\
& b^3c^5*e^2*g*k*z^2 + 81a^2b^3c^5*e^2*f*1*z^2 + 1944a^3b^3c^4*d*e*m^2 \\
& *z^2 - 729a^2b^5c^3*d*e*m^2*z^2 + 648a^3b^2c^5*e*g*j^2*z^2 + 648a^3* \\
& b^2c^5*d*h*j^2*z^2 - 81a^2b^4c^4*e*g*j^2*z^2 - 81a^2b^4c^4*d*h*j^2*z \\
& ^2 + 486a^3b^2c^5*d*f*k^2*z^2 + 486a^2b^2c^6*d^2*g*j*z^2 - 486a^2b^ \\
& 2c^6*d^2*e*1*z^2 - 162a^2b^2c^6*d^2*f*k*z^2 - 81a^2b^4c^4*d*f*k^2*z^ \\
& 2 + 81a^2b^3c^5*d*g^2*j*z^2 - 486a^2b^2c^6*d*e^2*k*z^2 - 81a^2b^3c^ \\
& 5*e*g^2*h*z^2 - 648a^2b^3c^5*d*e*j^2*z^2 - 162a^2b^2c^6*e^2*f*h*z^2 \\
& + 81a^2b^3c^5*e*f*h^2*z^2 - 81a^2b^3c^5*d*g*h^2*z^2 - 162a^2b^2c^6 \\
& *d*f*g^2*z^2 - 189a^5b^3c^2*1^3*m*z^2 + 162a^5b^2c^3*k^3*m*z^2 - 27a \\
& ^4b^4c^2*k^3*m*z^2 - 702a^4b^3c^3*j^3*m*z^2 - 81a^3b^6c*j^2*m^2*z^2 \\
& + 81a^3b^5c^2*j^3*m*z^2 - 54a^5b^3c^2*j*m^3*z^2 - 486a^5b^2c^3*j* \\
& 1^3*z^2 + 216a^4b^4c^2*j*1^3*z^2 - 189a^4b^3c^3*j*k^3*z^2 - 54a^4b^ \\
& 2c^4*h^3*m*z^2 + 27a^3b^5c^2*j*k^3*z^2 + 27a^3b^3c^4*g^3*m*z^2 - 810 \\
& *a^4b^4c^2*f*m^3*z^2 + 540a^5b^2c^3*f*m^3*z^2 - 324a^3b^2c^5*f^3*m* \\
& z^2 + 54a^2b^4c^4*f^3*m*z^2 + 675a^4b^3c^3*f*1^3*z^2 - 243a^3b^5c^ \\
& 2*f*1^3*z^2 - 189a^2b^3c^5*e^3*m*z^2 + 27a^3b^3c^4*h^3*j*z^2 - 486a^ \\
& 4b^2c^4*f*k^3*z^2 - 486a^2b^2c^6*d^3*m*z^2 + 216a^3b^4c^3*f*k^3*z^2 \\
& - 54a^3b^2c^5*g^3*j*z^2 - 27a^2b^6c^2*f*k^3*z^2 - 270a^3b^3c^4*f* \\
& j^3*z^2 - 54a^2b^3c^5*f^3*j*z^2 + 27a^2b^5c^3*f*j^3*z^2 + 162a^2b^2 \\
& c^6*e^3*j*z^2 + 162a^3b^2c^5*f*h^3*z^2 - 27a^2b^4c^4*f*h^3*z^2 + 27* \\
& a^2b^3c^5*f*g^3*z^2 + 81a*b^2c^7*d^2*e^2*z^2 - 648a^6c^4*h*1^2*m*z^2 \\
& + 648a^5c^5*g^2*k*m*z^2 - 648a^5c^5*h^2*j*1*z^2 + 1296a^5c^5*h*j^2*k* \\
& z^2 + 1296a^5c^5*g*j^2*1*z^2 + 1296a^5c^5*f*j^2*m*z^2 - 648a^5c^5*g*j \\
& *k^2*z^2 + 648a^5c^5*e*k^2*1*z^2 + 648a^5c^5*d*k^2*m*z^2 - 648a^4c^6* \\
& d^2*k*m*z^2 - 648a^5c^5*e*j*1^2*z^2 + 648a^5c^5*d*k*1^2*z^2 + 648a^4c^ \\
& ^6*e^2*j*1*z^2 + 324a^6*b*c^3*1^3*m*z^2 + 27a^4b^5c*1^3*m*z^2 + 648a^5 \\
& c^5*f*h*1^2*z^2 - 648a^4c^6*e^2*h*m*z^2 + 1512a^5b*c^4*j^3*m*z^2 + 108 \\
& 0a^6b*c^3*j*m^3*z^2 - 162a^4b^5c*j*m^3*z^2 - 648a^4c^6*f*g^2*k*z^2 + \\
& 648a^4c^6*e*g^2*1*z^2 - 648a^4c^6*d*g^2*m*z^2 - 27a^3b^6c*j*1^3*z^2 \\
& + 648a^4c^6*e*h^2*j*z^2 + 648a^4c^6*d*h^2*k*z^2 + 324a^5b*c^4*j*k^3* \\
& z^2 - 1296a^4c^6*e*g*j^2*z^2 - 1296a^4c^6*d*h*j^2*z^2 - 108a^4b*c^5*g \\
& ^3*m*z^2 - 648a^4c^6*d*f*k^2*z^2 - 648a^3c^7*d^2*g*j*z^2 + 648a^3c^7* \\
& d^2*f*k*z^2 + 648a^3c^7*d^2*e*1*z^2 + 270a^3b^6c*f*m^3*z^2 + 648a^3c^ \\
& ^7*d*e^2*k*z^2 - 540a^5b*c^4*f*1^3*z^2 + 324a^3b*c^6*e^3*m*z^2 - 108a^ \\
& 4b*c^5*h^3*j*z^2 + 27a^2b^7*c*f*1^3*z^2 + 27a*b^5c^4*e^3*m*z^2 + 648a^ \\
& ^3c^7*e^2*f*h*z^2 + 216a*b^4c^5*d^3*m*z^2 + 648a^4b*c^5*f*j^3*z^2 + 21 \\
& 6a^3b*c^6*f^3*j*z^2 + 648a^3c^7*d*f*g^2*z^2 - 27a*b^4c^5*e^3*j*z^2 + \\
& 324a^2b*c^7*d^3*j*z^2 - 189a*b^3c^6*d^3*j*z^2 - 108a^3b*c^6*f*g^3*z^2 \\
& - 108a^2b*c^7*e^3*f*z^2 + 27a*b^3c^6*e^3*f*z^2 + 162a*b^2c^7*d^3*f*z
\end{aligned}$$

$$\begin{aligned}
&^2 - 1134*a^5*b^2*c^3*j^2*m^2*z^2 + 648*a^4*b^4*c^2*j^2*m^2*z^2 + 81*a^5*b^2*c^3*k^2*l^2*z^2 + 162*a^4*b^2*c^4*f^2*m^2*z^2 + 81*a^4*b^2*c^4*h^2*k^2*z^2 \\
&+ 81*a^4*b^2*c^4*g^2*l^2*z^2 + 162*a^3*b^2*c^5*f^2*j^2*z^2 + 81*a^3*b^2*c^5*e^2*k^2*z^2 + 81*a^3*b^2*c^5*d^2*l^2*z^2 + 81*a^3*b^2*c^5*g^2*h^2*z^2 + \\
&81*a^2*b^2*c^6*e^2*g^2*z^2 + 81*a^2*b^2*c^6*d^2*h^2*z^2 - 216*a^6*c^4*k^3*m*z^2 + 216*a^6*c^4*j^3*z^2 + 27*a^3*b^7*j*m^3*z^2 + 216*a^5*c^5*h^3*m*z^2 \\
&+ 432*a^6*c^4*f*m^3*z^2 + 432*a^4*c^6*f^3*m*z^2 - 27*b^6*c^4*d^3*m*z^2 - 27*a^2*b^8*f*m^3*z^2 + 216*a^5*c^5*f*k^3*z^2 + 216*a^4*c^6*g^3*j*z^2 + 216*a^3*c^7*d^3*m*z^2 \\
&+ 216*a^5*b^4*c*m^4*z^2 - 216*a^3*c^7*e^3*j*z^2 + 27*b^5*c^5*d^3*j*z^2 - 216*a^4*c^6*f*h^3*z^2 - 27*b^4*c^6*d^3*f*z^2 - 216*a^2*c^8*d^3*f*z^2 - 648*a^6*c^4*j^2*m^2*z^2 \\
&- 324*a^6*c^4*k^2*l^2*z^2 - 648*a^5*c^5*f^2*m^2*z^2 - 324*a^5*c^5*h^2*k^2*z^2 - 324*a^5*c^5*g^2*l^2*z^2 - 648*a^4*c^6*f^2*j^2*z^2 - 324*a^4*c^6*e^2*k^2*z^2 \\
&- 324*a^4*c^6*d^2*l^2*z^2 - 405*a^6*b^2*c^2*m^4*z^2 - 324*a^4*c^6*g^2*h^2*z^2 - 324*a^3*c^7*e^2*g^2*z^2 - 324*a^3*c^7*d^2*h^2*z^2 + 243*a^4*b^2*c^4*j^4*z^2 - 27*a^3*b^4*c^3*j^4*z^2 - 324*a^2*c^8*d^2*e^2*z^2 \\
&+ 27*a^2*b^2*c^6*f^4*z^2 - 108*a^7*c^3*m^4*z^2 - 27*a^4*b^6*m^4*z^2 - 540*a^5*c^5*j^4*z^2 - 108*a^3*c^7*f^4*z^2 - 216*a^5*b*c^3*f*j*k*l*m*z - 54*a^3*b^5*c*f*j*k*l*m*z \\
&+ 27*a^3*b^5*c*g*h*k*l*m*z - 27*a^2*b^6*c*e*g*k*l*m*z - 27*a^2*b^6*c*d*h*k*l*m*z + 432*a^4*b*c^4*d*g*j*k*m*z - 432*a^4*b*c^4*d*e*k*l*m*z + 216*a^4*b*c^4*e*g*j*k*l*z \\
&+ 216*a^4*b*c^4*e*f*j*k*m*z + 216*a^4*b*c^4*d*h*j*k*l*z + 216*a^4*b*c^4*d*f*j*l*m*z + 216*a^4*b*c^4*f*g*h*j*m*z - 27*a*b^6*c^2*d*e*j*k*l*z - 27*a*b^6*c^2*d*e*h*k*m*z - 27*a*b^6*c^2*d*e*g*l*m*z \\
&+ 216*a^3*b*c^5*d*e*h*j*k*z + 216*a^3*b*c^5*d*e*g*j*l*z - 216*a^3*b*c^5*d*e*f*j*m*z + 27*a*b^5*c^3*d*e*h*j*k*z + 27*a*b^5*c^3*d*e*g*j*l*z + 27*a*b^5*c^3*d*e*g*h*m*z - 27*a*b^4*c^4*d*e*g*h*j*z \\
&+ 27*a*b^7*c*d*e*k*l*m*z + 270*a^4*b^3*c^2*f*j*k*l*m*z - 108*a^4*b^3*c^2*g*h*k*l*m*z - 216*a^4*b^2*c^3*f*h*j*k*m*z - 216*a^4*b^2*c^3*f*g*j*l*m*z - 216*a^4*b^2*c^3*e*g*k*l*m*z \\
&- 216*a^4*b^2*c^3*d*h*k*l*m*z + 162*a^3*b^4*c^2*e*g*k*l*m*z + 162*a^3*b^4*c^2*d*h*k*l*m*z + 108*a^4*b^2*c^3*g*h*j*k*l*z + 108*a^4*b^2*c^3*e*h*j*l*m*z + 54*a^3*b^4*c^2*f*h*j*k*m*z \\
&+ 54*a^3*b^4*c^2*f*g*j*l*m*z - 27*a^3*b^4*c^2*g*h*j*k*l*z + 540*a^3*b^3*c^3*d*e*k*l*m*z - 216*a^2*b^5*c^2*d*e*k*l*m*z - 162*a^3*b^3*c^3*e*g*j*k*l*z - 162*a^3*b^3*c^3*d*h*j*k*l*z - 108*a^3*b^3*c^3*d*g*j*k*m*z \\
&- 54*a^3*b^3*c^3*e*f*j*k*m*z - 54*a^3*b^3*c^3*d*f*j*l*m*z + 27*a^2*b^5*c^2*e*g*j*k*l*z + 27*a^2*b^5*c^2*d*h*j*k*l*z - 108*a^3*b^3*c^3*e*g*h*k*m*z - 108*a^3*b^3*c^3*d*g*h*l*m*z - 54*a^3*b^3*c^3*f*g*h*j*m*z \\
&+ 27*a^2*b^5*c^2*e*g*h*k*m*z + 27*a^2*b^5*c^2*d*g*h*l*m*z - 540*a^3*b^2*c^4*d*e*j*k*l*z + 216*a^2*b^4*c^3*d*e*j*k*l*z - 216*a^3*b^2*c^4*d*e*h*k*m*z - 216*a^3*b^2*c^4*d*e*g*l*m*z + 162*a^2*b^4*c^3*d*e*h*k*m*z + 162*a^2*b^4*c^3*d*e*g*l*m*z \\
&+ 108*a^3*b^2*c^4*e*g*h*j*k*z - 108*a^3*b^2*c^4*e*f*h*j*l*z + 108*a^3*b^2*c^4*d*g*h*j*l*z + 108*a^3*b^2*c^4*d*f*g*k*m*z - 27*a^2*b^4*c^3*e*g*h*j*k*z - 27*a^2*b^4*c^3*d*g*h*j*l*z - 162*a^2*b^3*c^4*d*e*h*j*k*z \\
&- 162*a^2*b^3*c^4*d*e*g*j*l*z + 54*a^2*b^3*c^4*d*e*f*j*m*z - 108*a^2*b^3*c^4*d*e*g*h*m*z + 108*a^2*b^2*c^5*d*e*g*h*j*z + 324*a^6*b*c^2*j*k*l*m^2*z - 81*a^5*b^3*c*j*k*l*m^2*z + 27*a^4*b^4*c*j^2*k*l*m*z - 27*a^4*b^4*c*h*k^2*l*m*z - 27*a^4*b^4*c*g*k*l^2*m*z + 216*a^5*b*c^3*h*j^2*k*m*z + 216*a^5*b*c^
\end{aligned}$$

$$\begin{aligned}
& 3*g*j^2*l*m*z + 54*a^4*b^4*c*f*k*l*m^2*z + 27*a^4*b^4*c*h*j*k*m^2*z + 27*a^4*b^4*c*g*j*l*m^2*z + 27*a^2*b^6*c*f^2*k*l*m*z + 216*a^5*b*c^3*e*k^2*l*m*z \\
& - 108*a^5*b*c^3*h*j*k^2*l*z + 27*a^3*b^5*c*e*k^2*l*m*z + 216*a^5*b*c^3*d*k*l^2*m*z + 216*a^4*b*c^4*e^2*j*l*m*z - 108*a^5*b*c^3*g*j*k*l^2*z + 27*a^3*b^5*c*d*k*l^2*m*z - 324*a^5*b*c^3*e*j*k*m^2*z - 324*a^5*b*c^3*d*j*l*m^2*z - 2 \\
& 16*a^5*b*c^3*f*h*l^2*m*z - 108*a^4*b*c^4*f^2*j*k*l*z - 27*a^3*b^5*c*e*j*k*m^2*z - 27*a^3*b^5*c*d*j*l*m^2*z - 324*a^5*b*c^3*g*h*j*m^2*z + 216*a^5*b*c^3*f*h*k*m^2*z + 216*a^5*b*c^3*f*g*l*m^2*z + 216*a^5*b*c^3*e*h*l*m^2*z - 216* \\
& a^4*b*c^4*f^2*h*k*m*z - 216*a^4*b*c^4*f^2*g*l*m*z - 27*a^3*b^5*c*g*h*j*m^2*z + 216*a^4*b*c^4*e*g^2*l*m*z - 108*a^4*b*c^4*g^2*h*j*l*z - 216*a^4*b*c^4*f*h^2*j*l*z + 216*a^4*b*c^4*e*h^2*j*m*z + 216*a^4*b*c^4*d*h^2*k*m*z - 108*a^4*b*c^4*g*h^2*j*k*z - 432*a^4*b*c^4*e*g*j^2*m*z - 432*a^4*b*c^4*d*h*j^2*m*z \\
& + 216*a^4*b*c^4*f*h*j^2*k*z + 216*a^4*b*c^4*f*g*j^2*l*z + 27*a^2*b^6*c*e*g*j*m^2*z + 27*a^2*b^6*c*d*h*j*m^2*z - 432*a^3*b*c^5*d^2*g*j*m*z - 216*a^4*b*c^4*f*g*j*k^2*z + 216*a^3*b*c^5*d^2*f*k*m*z + 216*a^3*b*c^5*d^2*e*l*m*z - \\
& 108*a^4*b*c^4*e*h*j*k^2*z - 108*a^4*b*c^4*d*g*k^2*l*z - 108*a^3*b*c^5*d^2*h*j*l*z + 108*a^3*b*c^5*d^2*g*k*l*z - 54*a*b^5*c^3*d^2*g*j*m*z + 27*a*b^5*c^3*d^2*g*k*l*z + 27*a*b^5*c^3*d^2*e*l*m*z - 216*a^4*b*c^4*e*f*j*l^2*z + 216* \\
& a^3*b*c^5*d*e^2*k*m*z - 108*a^4*b*c^4*d*g*j*l^2*z - 108*a^3*b*c^5*e^2*g*j*k*z + 27*a*b^5*c^3*d*e^2*k*m*z + 324*a^4*b*c^4*d*e*j*m^2*z + 216*a^3*b*c^5*e^2*f*h*m*z - 108*a^4*b*c^4*e*g*h*l^2*z + 108*a^3*b*c^5*e^2*g*h*l*z + 108*a^3*b*c^5*e*f^2*j*k*z + 108*a^3*b*c^5*d*f^2*j*l*z + 27*a*b^6*c^2*d*e*j^2*m*z \\
& - 216*a^3*b*c^5*e*f^2*h*l*z + 108*a^3*b*c^5*f^2*g*h*j*z - 27*a*b^4*c^4*d^2*e*j*l*z + 216*a^3*b*c^5*d*f*g^2*m*z - 108*a^3*b*c^5*e*g^2*h*j*z + 54*a*b^4*c^4*d^2*f*g*m*z - 27*a*b^4*c^4*d^2*g*h*k*z - 27*a*b^4*c^4*d^2*e*h*m*z - 27* \\
& a*b^4*c^4*d*e^2*j*k*z - 108*a^3*b*c^5*d*g*h^2*j*z + 54*a*b^4*c^4*d*e^2*h*l*z + 27*a*b^6*c^2*d*e*h*l^2*z - 27*a*b^5*c^3*d*e*h^2*l*z - 27*a*b^4*c^4*d*e^2*g*m*z - 27*a*b^4*c^4*d*e*f^2*m*z + 216*a^2*b*c^6*d^2*f*g*j*z - 108*a^3*b*c^5*d*e*g*k^2*z - 108*a^2*b*c^6*d^2*e*h*j*z + 108*a^2*b*c^6*d^2*e*g*k*z - 5 \\
& 4*a*b^3*c^5*d^2*f*g*j*z - 27*a*b^5*c^3*d*e*g*k^2*z + 27*a*b^4*c^4*d*e*g^2*k*z + 27*a*b^3*c^5*d^2*e*h*j*z - 27*a*b^3*c^5*d^2*e*g*k*z - 108*a^2*b*c^6*d*e^2*g*j*z + 27*a*b^3*c^5*d*e^2*g*j*z - 108*a^2*b*c^6*d*e*f^2*j*z + 27*a*b^3*c^5*d*e*f^2*j*z - 432*a^5*c^4*e*h*j*l*m*z + 432*a^4*c^5*d*e*j*k*l*z + 432* \\
& a^4*c^5*e*f*h*j*l*z - 432*a^4*c^5*d*f*g*k*m*z - 27*a*b^7*c*d*e*j*m^2*z - 54*a^5*b^2*c^2*j^2*k*l*m*z + 108*a^5*b^2*c^2*h*k^2*l*m*z + 108*a^5*b^2*c^2*g*k*l^2*m*z - 54*a^5*b^2*c^2*h*j*l^2*m*z + 378*a^4*b^2*c^3*f^2*k*l*m*z - 270* \\
& a^5*b^2*c^2*f*k*l*m^2*z - 189*a^3*b^4*c^2*f^2*k*l*m*z - 108*a^5*b^2*c^2*h*j*k*m^2*z - 108*a^5*b^2*c^2*g*j*l*m^2*z - 54*a^4*b^3*c^2*h*j^2*k*m*z - 54*a^4*b^3*c^2*g*j^2*l*m*z - 162*a^4*b^3*c^2*e*k^2*l*m*z + 54*a^4*b^2*c^3*g^2*j*k*m*z + 27*a^4*b^3*c^2*h*j*k^2*l*z - 162*a^4*b^3*c^2*d*k*l^2*m*z + 108*a^4*b^2*c^3*g^2*h*l*m*z - 54*a^3*b^3*c^3*e^2*j*l*m*z + 27*a^4*b^3*c^2*g*j*k*l^2*z - 27*a^3*b^4*c^2*g^2*h*l*m*z - 270*a^4*b^2*c^3*f*j^2*k*l*z + 189*a^4*b^3*c^2*e*j*k*m^2*z + 189*a^4*b^3*c^2*d*j*l*m^2*z - 162*a^4*b^2*c^3*e*j^2*k*m*z - 162*a^4*b^2*c^3*d*j^2*l*m*z + 135*a^3*b^3*c^3*f^2*j*k*l*z + 108*a^4*b^2*c^3*g*h^2*k*m*z + 54*a^4*b^3*c^2*f*h*l^2*m*z - 54*a^4*b^2*c^3*f*h^2*l*m*z
\end{aligned}$$

$$\begin{aligned}
& + 54a^3b^4c^2f^2jk^2k^1z - 27a^3b^4c^2g^2h^2k^2m^2z + 27a^3b^4c^2e^2j^2k^2m^2z + 27a^3b^4c^2d^2j^2k^2m^2z - 27a^2b^5c^2f^2jk^2k^1z - 270 \\
& *a^3b^2c^4d^2jk^2m^2z + 189a^4b^3c^2g^2h^2j^2m^2z - 162a^4b^2c^3g^2h^2j^2m^2z + 162a^4b^2c^3e^2j^2k^2m^2z + 162 \\
& *a^3b^3c^3f^2g^2l^2m^2z - 54a^4b^3c^2f^2h^2k^2m^2z - 54a^4b^3c^2f^2g^2l^2m^2z - 54a^4b^3c^2e^2h^2l^2m^2z + 54a^4b^2c^3d^2jk^2m^2z + 54a^2b^4c^3d^2j^2k^2m^2z + 27a^3b^4c^2g^2h^2j^2m^2z - 27a^3b^4c^2e^2jk^2k^1 \\
& *z - 27a^2b^5c^2f^2h^2k^2m^2z - 27a^2b^5c^2f^2g^2l^2m^2z + 162a^4b^2c^3d^2jk^2k^1z - 162a^3b^3c^3e^2g^2l^2m^2z + 108a^4b^2c^3e^2h^2k^2m^2z \\
& + 108a^3b^2c^4d^2h^2l^2m^2z - 54a^4b^2c^3f^2g^2k^2m^2z - 27a^3b^4c^2e^2h^2k^2m^2z - 27a^3b^4c^2d^2jk^2k^1z + 27a^3b^3c^3g^2h^2j^2k^1z + 2 \\
& 7a^2b^5c^2e^2g^2l^2m^2z - 27a^2b^4c^3d^2h^2l^2m^2z + 270a^4b^2c^3f^2h^2j^2k^1z - 270a^3b^2c^4e^2h^2j^2m^2z - 162a^4b^2c^3e^2h^2k^2k^1z - 162 \\
& *a^3b^3c^3d^2h^2k^2m^2z + 162a^3b^2c^4e^2h^2k^2k^1z + 108a^4b^2c^3d^2g^2l^2m^2z + 108a^3b^2c^4e^2g^2k^2m^2z - 54a^4b^2c^3e^2f^2l^2m^2z - 54a^3b^4c^2f^2h^2j^2k^1z + 54a^3b^3c^3f^2h^2j^2k^1z - 54a^3b^3c^3e^2h^2j^2m^2z + 54a^3b^2c^4e^2f^2l^2m^2z + 54a^2b^4c^3e^2h^2j^2m^2z + 27a^3b^4c^2e^2h^2k^2k^1z - 27a^3b^4c^2d^2g^2l^2m^2z + 27a^3b^3c^3g^2h^2j^2k^2z + 27a^2b^5c^2d^2h^2k^2m^2z - 27a^2b^4c^3e^2h^2k^2k^1z - 27a^2b^4c^3e^2g^2k^2m^2z + 432a^4b^2c^3e^2g^2j^2m^2z + 432a^4b^2c^3d^2h^2j^2m^2z - 270a^4b^2c^3d^2g^2k^2m^2z - 216a^3b^4c^2e^2g^2j^2m^2z - 216a^3b^4c^2d^2h^2j^2m^2z + 216a^3b^3c^3e^2g^2j^2m^2z + 216a^3b^3c^3d^2h^2j^2m^2z - 162a^3b^2c^4e^2f^2k^2m^2z - 162a^3b^2c^4d^2f^2l^2m^2z - 108a^3b^2c^4f^2h^2j^2k^2z - 108a^3b^2c^4f^2g^2j^2k^1z + 54a^4b^2c^3e^2f^2k^2m^2z + 54a^4b^2c^3d^2f^2l^2m^2z + 54a^3b^4c^2d^2g^2k^2m^2z - 54a^3b^3c^3f^2h^2j^2k^2z - 54a^3b^3c^3f^2g^2j^2k^1z - 27a^2b^5c^2e^2g^2j^2m^2z - 27a^2b^5c^2d^2h^2j^2m^2z + 27a^2b^4c^3f^2h^2j^2k^2z + 27a^2b^4c^3f^2g^2j^2k^1z + 27a^2b^4c^3e^2f^2k^2m^2z + 27a^2b^4c^3d^2f^2l^2m^2z + 324a^2b^3c^4d^2g^2j^2m^2z - 270a^3b^2c^4d^2g^2j^2m^2z - 162a^3b^2c^4f^2g^2h^2m^2z + 162a^3b^2c^4e^2g^2j^2k^1z - 162a^2b^3c^4d^2e^2l^2m^2z - 135a^2b^3c^4d^2g^2k^2k^1z + 108a^3b^2c^4d^2g^2k^2k^1z + 54a^4b^2c^3f^2g^2h^2m^2z + 54a^3b^3c^3f^2g^2j^2k^2z - 54a^3b^2c^4f^2g^2j^2k^2z + 54a^2b^4c^3d^2g^2j^2m^2z - 54a^2b^3c^4d^2f^2k^2m^2z + 27a^3b^3c^3e^2h^2j^2k^2z + 27a^3b^3c^3d^2g^2k^2l^2z + 27a^2b^4c^3f^2g^2h^2m^2z - 27a^2b^4c^3e^2g^2j^2k^1z - 27a^2b^4c^3d^2g^2k^2l^2z + 27a^2b^3c^4d^2h^2j^2k^1z + 162a^3b^2c^4d^2h^2j^2k^2z - 162a^2b^3c^4d^2e^2k^2m^2z + 108a^3b^2c^4e^2g^2h^2m^2z + 54a^3b^3c^3e^2f^2j^2k^1z + 27a^3b^3c^3d^2g^2j^2k^1z - 27a^2b^4c^3e^2g^2h^2m^2z - 27a^2b^4c^3d^2h^2j^2k^2z + 27a^2b^3c^4e^2g^2j^2k^2z - 621a^3b^3c^3d^2e^2j^2m^2z + 594a^3b^2c^4d^2e^2j^2m^2z + 243a^2b^5c^2d^2e^2j^2m^2z - 243a^2b^4c^3d^2e^2j^2m^2z + 135a^3b^3c^3e^2g^2h^2l^2z - 108a^3b^2c^4e^2g^2h^2l^2z + 108a^3b^2c^4d^2g^2h^2m^2z + 54a^3b^2c^4e^2f^2j^2k^2z + 54a^3b^2c^4e^2f^2h^2m^2z + 54a^3b^2c^4d^2g^2j^2k^2z + 54a^3b^2c^4d^2f^2j^2k^1z - 54a^2b^3c^4e^2f^2h^2m^2z - 27a^2b^5c^2e^2g^2h^2l^2z + 27a^2b^4c^3e^2g^2h^2l^2z - 27a^2b^4c^3d^2g^2h^2m^2z - 27a^2b^3c^4e^2g^2h^2l^2z - 27a^2b^3c^4e^2f^2j^2k^2z - 27a^2b^3c^4d^2f^2j^2k^2z
\end{aligned}$$

$$\begin{aligned}
& *1*z + 162*a^2*b^2*c^5*d^2*e*j*1*z + 54*a^3*b^2*c^4*f*g*h*j^2*z - 54*a^3*b^2*c^4*d*f*j*k^2*z + 54*a^2*b^3*c^4*e*f^2*h*1*z + 54*a^2*b^2*c^5*d^2*f*j*k*z \\
& - 27*a^2*b^3*c^4*f^2*g*h*j*z - 270*a^2*b^2*c^5*d^2*f*g*m*z - 162*a^3*b^2*c^4*d*g*h*k^2*z + 162*a^2*b^2*c^5*d^2*g*h*k*z + 162*a^2*b^2*c^5*d*e^2*j*k*z \\
& + 108*a^2*b^2*c^5*d^2*e*h*m*z - 54*a^2*b^3*c^4*d*f*g^2*m*z + 27*a^2*b^4*c^3*d*g*h*k^2*z + 27*a^2*b^3*c^4*e*g^2*h*j*z + 270*a^3*b^2*c^4*d*e*h*1^2*z - 2 \\
& 70*a^2*b^2*c^5*d*e^2*h*1*z - 162*a^2*b^4*c^3*d*e*h*1^2*z + 108*a^2*b^3*c^4*d*e*h^2*1*z + 108*a^2*b^2*c^5*d*e^2*g*m*z + 54*a^2*b^2*c^5*e^2*f*h*j*z + 27 \\
& *a^2*b^3*c^4*d*g*h^2*j*z + 162*a^2*b^2*c^5*d*e*f^2*m*z - 54*a^3*b^2*c^4*d*e*f*m^2*z - 54*a^2*b^2*c^5*d*f^2*g*k*z + 135*a^2*b^3*c^4*d*e*g*k^2*z - 108*a^2*b^2*c^5*d*e*g^2*k*z \\
& + 54*a^2*b^2*c^5*d*f*g^2*j*z - 54*a^2*b^2*c^5*d*e*f*j^2*z - 9*a*b^7*c*d*e*1^3*z - 36*a*b*c^7*d^3*e*g*z - 108*a^6*b*c^2*k^2*1^2*m*z + 27*a^5*b^3*c*k^2*1^2*m*z - 18*a^5*b^2*c^2*j*k^3*m*z - 27*a^4*b^3*c^2*j^3*k*1*z - 108*a^5*b*c^3*h^2*k^2*m*z - 108*a^5*b*c^3*g^2*1^2*m*z + 108*a^5*b*c^3*h^2*k*1^2*z + 108*a^5*b*c^3*g^2*k*m^2*z + 90*a^5*b^2*c^2*f*1^3*m*z - 18*a^5*b^2*c^2*h*k*1^3*z + 18*a^4*b^2*c^3*h^3*k*1*z + 18*a^4*b^2*c^3*h^3*j*m*z - 108*a^5*b*c^3*h*j^2*1^2*z + 18*a^4*b^3*c^2*f*k^3*m*z - 18*a^3*b^3*c^3*g^3*j*m*z - 9*a^4*b^3*c^2*g*k^3*1*z + 9*a^3*b^3*c^3*g^3*k*1*z + 252*a^4*b^2*c^3*f*j^3*m*z + 216*a^5*b*c^3*f*j^2*m^2*z + 180*a^3*b^2*c^4*f^3*j*m*z - 108*a^4*b*c^4*e^2*k^2*m*z - 108*a^4*b*c^4*d^2*1^2*m*z + 90*a^5*b^2*c^2*e*k*m^3*z + 90*a^5*b^2*c^2*d*1*m^3*z - 90*a^3*b^2*c^4*f^3*k*1*z + 54*a^3*b^5*c*f*j^2*m^2*z - 54*a^3*b^4*c^2*f*j^3*m*z + 36*a^5*b^2*c^2*f*j*m^3*z + 36*a^4*b^2*c^3*h*j^3*k*z + 36*a^4*b^2*c^3*g*j^3*1*z - 36*a^2*b^4*c^3*f^3*j*m*z - 27*a^2*b^6*c*f^2*j*m^2*z + 18*a^2*b^4*c^3*f^3*k*1*z - 216*a^4*b*c^4*d^2*k*m^2*z + 108*a^5*b*c^3*d*k^2*m^2*z - 108*a^4*b^3*c^2*f*j*1^3*z - 108*a^4*b*c^4*g^2*h^2*m*z + 108*a^2*b^3*c^4*e^3*j*m*z + 90*a^5*b^2*c^2*g*h*m^3*z + 54*a^4*b^3*c^2*e*k*1^3*z - 54*a^2*b^3*c^4*e^3*k*1*z + 234*a^2*b^2*c^5*d^3*j*m*z - 144*a^2*b^2*c^5*d^3*k*1*z + 90*a^4*b^2*c^3*f*j*k^3*z - 72*a^4*b^2*c^3*d*k^3*1*z + 27*a^4*b^3*c^2*g*h*1^3*z - 27*a^3*b^3*c^3*g*h^3*1*z - 18*a^3*b^4*c^2*f*j*k^3*z + 9*a^3*b^4*c^2*d*k^3*1*z + 216*a^4*b*c^4*f^2*h*1^2*z - 216*a^4*b*c^4*e^2*h*m^2*z + 108*a^4*b*c^4*g^2*h*k^2*z - 18*a^4*b^2*c^3*g*h*k^3*z + 18*a^3*b^2*c^4*g^3*h*k*z + 18*a^3*b^2*c^4*f*g^3*m*z + 9*a^3*b^4*c^2*g*h*k^3*z - 9*a^3*b^3*c^3*e*j^3*k*z - 9*a^3*b^3*c^3*d*j^3*1*z - 144*a^4*b^3*c^2*e*g*m^3*z - 144*a^4*b^3*c^2*d*h*m^3*z - 108*a^3*b*c^5*e^2*g^2*m*z + 108*a^3*b*c^5*d^2*j^2*k*z - 108*a^3*b*c^5*d^2*h^2*m*z - 18*a^2*b^3*c^4*f^3*h*k*z - 18*a^2*b^3*c^4*f^3*g*1*z - 9*a^3*b^3*c^3*g*h*j^3*z - 216*a^4*b*c^4*d*g^2*m^2*z + 144*a^4*b^2*c^3*e*g*1^3*z - 126*a^3*b^2*c^4*d*h^3*1*z - 108*a^4*b*c^4*d*h^2*1^2*z - 108*a^3*b*c^5*f^2*g^2*k*z - 108*a^3*b*c^5*e^2*h^2*k*z - 90*a^2*b^2*c^5*e^3*f*m*z + 72*a^2*b^2*c^5*e^3*g*1*z - 63*a^3*b^4*c^2*e*g*1^3*z - 36*a^3*b^4*c^2*d*h*1^3*z + 27*a^2*b^4*c^3*d*h^3*1*z + 27*a*b^6*c^2*d^2*g*m^2*z - 18*a^4*b^2*c^3*d*h*1^3*z - 18*a^3*b^2*c^4*f*h^3*j*z - 18*a^3*b^2*c^4*e*h^3*k*z + 18*a^2*b^2*c^5*e^3*h*k*z + 108*a^3*b*c^5*e^2*h*j^2*z + 54*a^3*b^3*c^3*d*h*k^3*z + 27*a^3*b^3*c^3*e*g*k^3*z - 27*a^2*b^3*c^4*e*g^3*k*z + 27*a^2*b^3*c^4*d*g^3*1*z - 27*a*b^4*c^4*d^2*g^2*1*z - 9*a^2*b^5*c^2*e*g*k^3*z - 9*a^2*b^5*c^2*d*h*k^3*z + 207*a^3*b^4*c^2*d*e*m^3*z - 108*a^2*b*c^6*d
\end{aligned}$$



$$\begin{aligned}
&^2e^2m^z - 90a^4b^2c^3d^2e^3m^3z - 72a^3b^2c^4e^2g^2j^3z - 72a^3b^2c^4d^2h^2j^3z + 27a^2b^3c^5d^2e^2m^z + 18a^2b^2c^5e^2f^3k^z + 18a^2b^2c^5d^2f^3l^z + 9a^2b^4c^3e^2g^2j^3z + 9a^2b^4c^3d^2h^2j^3z \\
&- 216a^3b^2c^5d^2e^2l^2z - 198a^3b^3c^3d^2e^2l^3z + 108a^3b^2c^5d^2g^2j^2z - 108a^3b^2c^5d^2f^2k^2z + 72a^2b^5c^2d^2e^2l^3z - 27a^2b^5c^3d^2e^2l^2z + 27a^2b^4c^4d^2g^2j^2z + 18a^2b^2c^5f^3g^2h^z + 144a^3b^2c^4d^2e^2k^3z - 63a^2b^4c^3d^2e^2k^3z + 27a^2b^4c^4d^2e^2k^2z - 9a^2b^3c^4e^2g^2h^3z - 108a^2b^2c^6d^2g^2h^z + 81a^2b^3c^4d^2e^2j^3z + 27a^2b^3c^5d^2g^2h^z - 27a^2b^2c^6d^2e^2j^z - 18a^2b^2c^5d^2g^3h^z + 108a^2b^2c^6d^2e^2h^2z - 27a^2b^3c^5d^2e^2h^2z + 27a^2b^2c^6d^2f^2g^z - 18a^2b^2c^5d^2e^2h^3z - 216a^6c^3j^2k^2l^m^z + 216a^6c^3h^2j^2l^2m^z + 216a^6c^3f^2k^2l^m^2z - 216a^5c^4f^2k^2l^m^z - 216a^5c^4g^2j^2k^2m^z + 216a^5c^4f^2j^2k^2l^m^z + 216a^5c^4f^2h^2l^m^z + 216a^5c^4e^2j^2k^2m^z + 216a^5c^4d^2j^2l^m^z + 216a^5c^4g^2h^2j^2m^z - 216a^5c^4e^2j^2k^2l^m^z - 216a^5c^4d^2j^2k^2m^z + 216a^4c^5d^2j^2k^2m^z - 18a^6b^2c^2k^2l^m^3z + 216a^5c^4f^2g^2k^2m^z - 216a^5c^4d^2j^2k^2l^m^z - 72a^6b^2c^2j^2l^3m^z + 18a^5b^3c^2j^2l^3m^z - 216a^5c^4f^2h^2j^2l^m^z + 216a^5c^4e^2h^2k^2l^m^z + 216a^5c^4e^2f^2l^m^z - 216a^4c^5e^2h^2k^2l^m^z + 216a^4c^5e^2h^2j^2m^z - 216a^4c^5e^2f^2l^m^z - 216a^5c^4e^2f^2k^2m^z + 216a^5c^4d^2g^2k^2m^z - 216a^5c^4d^2f^2l^m^z + 216a^4c^5e^2f^2k^2m^z + 216a^4c^5d^2f^2l^m^z + 108a^5b^2c^3j^2k^2l^m^z - 216a^5c^4f^2g^2h^2m^z + 216a^4c^5f^2g^2h^2m^z + 216a^4c^5f^2g^2j^2k^2z - 216a^4c^5e^2g^2j^2l^m^z + 216a^4c^5d^2g^2j^2m^z - 72a^6b^2c^2h^2k^2m^3z - 72a^6b^2c^2g^2l^m^3z + 54a^5b^3c^2h^2k^2m^3z + 54a^5b^3c^2g^2l^m^3z - 216a^4c^5d^2h^2j^2k^2z - 18a^4b^4c^2f^2l^3m^z + 9a^4b^4c^2h^2k^2l^3z - 216a^4c^5e^2f^2j^2k^2z - 216a^4c^5e^2f^2h^2m^z - 216a^4c^5d^2g^2j^2k^2z - 216a^4c^5d^2f^2j^2l^m^z - 216a^4c^5d^2e^2j^2m^z - 72a^5b^2c^3f^2k^3m^z + 72a^4b^2c^4g^2j^2m^z + 36a^5b^2c^3g^2k^3l^z - 36a^4b^2c^4g^2k^3l^z - 216a^4c^5f^2g^2h^2j^2z + 216a^4c^5d^2f^2j^2k^2z - 216a^3c^6d^2f^2j^2k^2z - 216a^3c^6d^2e^2j^2l^m^z + 72a^4b^4c^2f^2j^2m^3z - 63a^4b^4c^2e^2k^2m^3z - 63a^4b^4c^2d^2l^m^3z + 216a^4c^5d^2g^2h^2k^2z - 216a^3c^6d^2g^2h^2k^2z + 216a^3c^6d^2f^2g^2m^z - 216a^3c^6d^2e^2j^2k^2z + 144a^5b^2c^3f^2j^2l^3z - 144a^3b^2c^5e^2j^2m^z - 72a^5b^2c^3e^2k^2l^3z + 72a^3b^2c^5e^2k^2l^z - 63a^4b^4c^2g^2h^2m^3z + 18a^3b^5c^2f^2j^2l^3z - 18a^2b^5c^3e^2j^2m^z - 9a^3b^5c^2e^2k^2l^3z + 9a^2b^5c^3e^2k^2l^z - 216a^4c^5d^2e^2h^2l^2z - 216a^3c^6e^2f^2h^2j^z + 216a^3c^6d^2e^2h^2l^z - 126a^2b^4c^4d^3j^2m^z + 108a^4b^2c^4g^2h^3l^z + 63a^2b^4c^4d^3k^2l^z + 36a^5b^2c^3g^2h^2l^3z - 9a^3b^5c^2g^2h^2l^3z + 216a^4c^5d^2e^2f^2m^z + 216a^3c^6d^2f^2g^2k^z - 216a^3c^6d^2e^2f^2m^z + 36a^4b^2c^4e^2j^2k^z + 36a^4b^2c^4d^2j^2l^z - 216a^3c^6d^2f^2g^2j^z + 72a^3b^5c^2e^2g^2m^3z + 72a^3b^5c^2d^2h^2m^3z + 72a^3b^2c^5f^2h^2k^z + 72a^3b^2c^5f^2g^2l^z + 36a^4b^2c^4g^2h^2j^3z + 18a^2b^4c^4e^2f^2m^z + 9a^2b^6c^2e^2g^2l^3z + 9a^2b^6c^2d^2h^2l^3z - 9a^2b^4c^4e^2h^2k^z - 9a^2b^4c^4e^2g^2l^z + 216a^3c^6d^2e^2f^2j^2z - 144a^2b^2c^6d^3f^2m^z + 108a^3b^2c^5e^2g^2k^z - 108a^3b^2c^5d^2g^2l^z + 108a^2b^3c^5d^3f^2m^z - 72a^4b^2c^4d^2h^2k^3
\end{aligned}$$

$$\begin{aligned}
& z + 72a^2b^3c^6d^3hk^2z - 54a^2b^3c^5d^3hk^2z + 36a^4b^3c^4e^3g^2k^3z \\
& z - 36a^2b^3c^6d^3g^2k^3z - 27a^2b^3c^5d^3g^2k^3z - 81a^2b^6c^3d^3e^3m^3z \\
& z + 216a^4b^3c^4d^3e^3l^3z + 72a^2b^3c^6e^3f^2j^3z + 72a^2b^3c^6d^3e^3l^3z \\
& z - 18a^2b^3c^5e^3f^2j^3z - 18a^2b^3c^5d^3e^3l^3z - 90a^2b^2c^6d^3f^2j^3z \\
& z + 72a^2b^2c^6d^3e^3k^3z + 36a^3b^3c^5e^3g^2h^3z - 36a^2b^3c^6e^3g^2h^3z \\
& z + 9a^2b^6c^2d^3e^3k^3z + 9a^2b^3c^5e^3g^2h^3z - 180a^3b^3c^5d^3e^3j^3z \\
& z + 18a^2b^2c^6d^3g^2h^3z - 9a^2b^5c^3d^3e^3j^3z + 18a^2b^2c^6d^3e^3h^3z \\
& + 9a^2b^4c^4d^3e^3h^3z + 36a^2b^3c^6d^3e^3g^2k^3z - 9a^2b^3c^5d^3e^3g^2k^3z - \\
& 18a^2b^2c^6d^3e^3f^2k^3z + 27a^5b^2c^2h^2l^3m^2z - 27a^5b^2c^2j^2k^2 \\
& l^2z + 27a^4b^3c^2h^2k^2m^2z + 27a^4b^3c^2g^2l^2m^2z + 27a^5b^2 \\
& c^2g^2k^2m^2z - 27a^4b^3c^2h^2k^2l^2z - 27a^4b^3c^2g^2k^2m^2z \\
& z - 135a^4b^2c^3e^2l^3m^2z + 27a^5b^2c^2e^2l^2m^2z + 27a^4b^3c^2 \\
& h^2j^2l^2z - 27a^4b^2c^3h^2j^2l^2z + 27a^3b^4c^2e^2l^3m^2z - \\
& 270a^4b^3c^2f^2j^2m^2z - 270a^4b^2c^3f^2j^2m^2z + 162a^3b^4c^2 \\
& f^2j^2m^2z - 108a^3b^3c^3f^2j^2m^2z - 27a^4b^2c^3h^2j^2k^2z - 2 \\
& 7a^4b^2c^3g^2j^2l^2z + 27a^3b^3c^3e^2k^2m^2z + 27a^3b^3c^3d^2 \\
& l^2m^2z + 27a^2b^5c^2f^2j^2m^2z + 162a^3b^3c^3d^2k^2m^2z - 27a^4 \\
& b^3c^2d^2k^2m^2z - 27a^4b^2c^3g^2j^2k^2z + 27a^3b^3c^3g^2h^2 \\
& m^2z - 27a^2b^5c^2d^2k^2m^2z + 162a^3b^2c^4d^2k^2l^2z - 108a^4b^2 \\
& c^3g^2h^2l^2z - 27a^4b^2c^3e^2j^2l^2z + 27a^3b^4c^2g^2h^2l^2z \\
& z + 27a^3b^2c^4e^2j^2l^2z - 27a^2b^4c^3d^2k^2l^2z - 162a^3b^3c^3 \\
& f^2h^2l^2z + 162a^3b^3c^3e^2h^2m^2z - 135a^4b^2c^3e^2h^2m^2z \\
& + 135a^3b^2c^4f^2h^2l^2z + 27a^3b^4c^2e^2h^2m^2z - 27a^3b^3c^3 \\
& g^2h^2k^2z - 27a^3b^2c^4e^2j^2k^2z - 27a^3b^2c^4d^2j^2l^2z + 27 \\
& a^2b^5c^2f^2h^2l^2z - 27a^2b^5c^2e^2h^2m^2z - 27a^2b^4c^3f^2h^2 \\
& l^2z - 27a^3b^2c^4g^2h^2j^2z + 27a^2b^3c^4e^2g^2m^2z - 27a^2b^3 \\
& c^4d^2j^2k^2z + 27a^2b^3c^4d^2h^2m^2z + 351a^3b^2c^4d^2g^2m^2z - \\
& 189a^2b^4c^3d^2g^2m^2z + 162a^3b^3c^3d^2g^2m^2z - 162a^3b^2 \\
& c^4e^2g^2l^2z + 135a^3b^3c^3d^2h^2l^2z + 135a^3b^2c^4f^2g^2k^2z - \\
& 27a^2b^5c^2d^2h^2l^2z - 27a^2b^5c^2d^2g^2m^2z - 27a^2b^4c^3 \\
& f^2g^2k^2z + 27a^2b^4c^3e^2g^2l^2z + 27a^2b^3c^4f^2g^2k^2z + \\
& 27a^2b^3c^4e^2h^2k^2z + 135a^3b^2c^4e^2f^2l^2z - 108a^3b^2c^4 \\
& e^2g^2k^2z + 108a^2b^2c^5d^2g^2l^2z + 27a^3b^2c^4e^2h^2j^2z + 2 \\
& 7a^2b^4c^3e^2g^2k^2z - 27a^2b^4c^3e^2f^2l^2z - 27a^2b^3c^4e^2 \\
& h^2j^2z - 27a^2b^2c^5e^2f^2l^2z - 27a^2b^2c^5e^2g^2j^2z - 27a^2 \\
& b^2c^5d^2h^2j^2z + 162a^2b^3c^4d^3e^2l^2z - 135a^2b^2c^5d^2g^2 \\
& j^2z - 27a^2b^3c^4d^3g^2j^2z + 27a^2b^3c^4d^3f^2k^2z - 162a^2b^2 \\
& c^5d^2e^2k^2z - 27a^2b^2c^5e^2f^2h^2z - 72a^7c^2k^2l^3m^3z + 9 \\
& a^5b^4k^2l^3m^3z + 72a^6c^3j^2k^3m^3z - 72a^6c^3h^2k^2l^3z - 72a^6c^3 \\
& f^2l^3m^3z - 72a^5c^4h^3k^2l^3z - 72a^5c^4h^3j^2m^3z - 9a^4b^5h^2k^2m^3 \\
& z - 9a^4b^5g^2l^3m^3z - 144a^6c^3f^2j^2m^3z - 144a^5c^4h^2j^3k^2z \\
& - 144a^5c^4g^2j^3l^2z - 144a^5c^4f^2j^3m^3z - 144a^4c^5f^3j^2m^3z + 7 \\
& 2a^6c^3e^2k^2m^3z + 72a^6c^3d^2l^3m^3z + 72a^4c^5f^3k^2l^3z + 72a^6c^3 \\
& g^2h^2m^3z + 18a^6c^3d^3j^2m^3z - 18a^3b^6f^2j^2m^3z - 9a^6c^3d^3 \\
& k^2l^3z + 9a^3b^6e^2k^2m^3z + 9a^3b^6d^2l^3m^3z + 144a^5c^4d^2k^3l^3z
\end{aligned}$$

$$\begin{aligned}
& + 144a^3c^6d^3k^1z - 72a^5c^4f^*jk^3z - 72a^3c^6d^3j^*m^*z + 9a^3b^6g^*h^*m^3z - 72a^5c^4g^*h^*k^3z - 72a^4c^5g^3h^*k^*z - 72a^4c^5f^*g^3m^*z - 108a^5b^*c^3j^4m^*z + 63a^6b^2c^*j^*m^4z + 36a^6b^*c^2k^1^4z - 9a^5b^3c^*k^1^4z - 144a^5c^4e^*g^1^3z - 144a^3c^6e^3g^*1z + 72a^5c^4d^*h^1^3z + 72a^4c^5f^*h^3j^*z + 72a^4c^5e^*h^3k^*z + 72a^4c^5d^*h^31z + 72a^3c^6e^3h^*k^*z + 72a^3c^6e^3f^*m^*z - 18b^5c^4d^3f^*m^*z + 9b^5c^4d^3h^*k^*z + 9b^5c^4d^3g^*1z - 9a^2b^7e^*g^*m^3z - 9a^2b^7d^*h^*m^3z + 144a^4c^5e^*g^*j^3z + 144a^4c^5d^*h^*j^3z - 72a^5c^4d^*e^*m^3z - 72a^3c^6e^*f^3k^*z - 72a^3c^6d^*f^31z + 144a^6b^*c^2f^*m^4z - 108a^5b^3c^*f^*m^4z - 72a^3c^6f^3g^*h^*z + 36a^5b^*c^3h^*k^4z - 36a^3b^*c^5f^4m^*z + 18b^4c^5d^3f^*j^*z - 9b^4c^5d^3e^*k^*z + 9a^4b^4c^*g^1^4z - 144a^4c^5d^*e^*k^3z - 144a^2c^7d^3e^*k^*z + 72a^2c^7d^3f^*j^*z - 9b^4c^5d^3g^*h^*z + 72a^3c^6d^*g^3h^*z + 72a^2c^7d^3g^*h^*z - 72a^5b^*c^3d^1^4z - 72a^4b^*c^4f^*j^4z + 45a^*b^2c^6d^41z - 36a^2b^*c^6e^4k^*z - 9a^3b^5c^*d^1^4z + 9a^*b^3c^5e^4k^*z - 72a^3c^6d^*e^*h^3z - 72a^2c^7d^*e^3h^*z + 9b^3c^6d^3e^*g^*z + 72a^2c^7d^*e^*f^3z + 36a^3b^*c^5d^*h^4z - 9a^*b^2c^6e^4g^*z + 36a^*b^*c^7d^3f^2z + 90a^5b^2c^2j^3m^2z + 45a^5b^2c^2j^21^3z + 9a^4b^3c^2j^2k^3z - 9a^4b^3c^2h^3m^2z - 45a^4b^2c^3g^3m^2z + 9a^3b^4c^2g^3m^2z + 198a^4b^3c^2f^2m^3z - 108a^3b^3c^3f^3m^2z + 18a^2b^5c^2f^3m^2z - 117a^4b^2c^3f^21^3z + 117a^3b^2c^4e^3m^2z + 63a^3b^4c^2f^21^3z - 63a^2b^4c^3e^3m^2z - 171a^2b^3c^4d^3m^2z - 54a^3b^3c^3f^2k^3z + 9a^3b^2c^4g^3j^2z + 9a^2b^5c^2f^2k^3z + 18a^3b^2c^4f^2j^3z + 18a^2b^3c^4f^3j^2z - 9a^2b^4c^3f^2j^3z - 45a^2b^2c^5e^3j^2z + 9a^2b^3c^4f^2h^3z - 9a^2b^2c^5f^2g^3z + 9a^*b^8d^*e^*m^3z - 36a^*b^*c^7d^4h^*z - 108a^6c^3h^21m^2z + 108a^6c^3j^*k^21^2z - 108a^6c^3g^*k^2m^2z - 108a^6c^3e^1^2m^2z + 108a^5c^4h^2j^21z + 108a^5c^4e^21m^2z + 216a^5c^4f^2j^*m^2z + 108a^5c^4h^2j^*k^2z + 108a^5c^4g^2j^*1^2z + 108a^5c^4g^*j^2k^2z - 216a^4c^5d^2k^21z + 108a^5c^4e^*j^21^2z - 108a^4c^5e^2j^21z - 9a^6b^2c^1^3m^2z + 108a^5c^4e^*h^2m^2z - 108a^4c^5f^2h^21z + 108a^4c^5e^2j^*k^2z + 108a^4c^5d^2j^*1^2z - 144a^6b^*c^2j^2m^3z + 108a^4c^5g^2h^2j^*z - 27a^4b^4c^*j^3m^2z + 27a^4b^3c^2j^4m^*z + 9a^5b^2c^2k^41z + 216a^4c^5e^2g^*1^2z - 108a^4c^5f^2g^*k^2z - 108a^4c^5d^2g^*m^2z - 9a^4b^4c^*j^21^3z - 108a^4c^5e^*h^2j^2z - 108a^4c^5e^*f^21^2z + 108a^3c^6e^2f^21z - 36a^5b^*c^3j^2k^3z + 36a^5b^*c^3h^3m^2z + 108a^3c^6e^2g^2j^*z + 108a^3c^6d^2h^2j^*z - 216a^5b^*c^3f^2m^3z + 144a^4b^*c^4f^3m^2z + 108a^3c^6d^2g^*j^2z - 72a^3b^5c^*f^2m^3z - 45a^5b^2c^2g^*1^4z - 9a^4b^3c^2h^*k^4z - 9a^3b^2c^4g^41z + 9a^2b^3c^4f^4m^*z + 216a^3c^6d^2e^*k^2z - 9a^2b^6c^*f^21^3z + 9a^*b^6c^2e^3m^2z + 108a^3c^6e^*f^2h^2z + 108a^3b^*c^5d^3m^2z + 108a^2c^7d^2e^2j^*z + 72a^4b^*c^4f^2k^3z + 72a^*b^5c^3d^3m^2z - 72a^3b^*c^5f^3j^2z + 54a^4b^3c^2d^1^4z - 45a^4b^2c^3e^*k^4z + 18a^3b^3c^3f^*j^4z + 9a^3b^4c^2e^*k^4z - 9a^2b^2c^5f^4j^*z - 108a
\end{aligned}$$

$$\begin{aligned}
& ^2c^7d^2f^2g^*z + 9a^3b^2c^4g^*h^4z + 9a^*b^4c^4e^3j^2z - 72a^2 \\
& *b^*c^6d^3j^2z + 54a^*b^3c^5d^3j^2z - 36a^3b^*c^5f^2h^3z - 9a^2* \\
& b^3c^4d^*h^4z + 9a^2b^2c^5e^*g^4z + 9a^*b^2c^6e^3f^2z + 36a^7c^ \\
& 2*1^3m^2z + 72a^6c^3j^3m^2z - 36a^6c^3j^2*1^3z + 9a^4b^5j^2m \\
& ^3z + 36a^5c^4g^3m^2z + 36a^5c^4f^2*1^3z - 36a^4c^5e^3m^2z - \\
& 9b^7c^2d^3m^2z + 9a^2b^7f^2m^3z - 36a^4c^5g^3j^2z + 72a^4* \\
& c^5f^2j^3z + 36a^3c^6e^3j^2z - 9b^5c^4d^3j^2z + 36a^3c^6f^2 \\
& *g^3z - 9a^4b^2c^3j^5z - 36a^2c^7e^3f^2z - 9b^3c^6d^3f^2z + \\
& 36a^7c^2j^*m^4z - 36a^6c^3k^4*1z - 18a^5b^4j^*m^4z + 36a^6c^3* \\
& g^1*4z + 36a^4c^5g^4*1z + 18a^4b^5f^*m^4z - 9b^4c^5d^4*1z + 36* \\
& a^5c^4e^*k^4z + 36a^3c^6f^4j^*z - 36a^2c^7d^4*1z - 36a^4c^5g^*h^ \\
& 4z + 9b^3c^6d^4h^*z - 36a^3c^6e^*g^4z + 36a^2c^7e^4g^*z - 9b^2c \\
& ^7d^4e^*z - 36a^7b^*c^*m^5z + 36a^*c^8d^4e^*z + 9a^6b^3m^5z + 36a^5 \\
& *c^4j^5z + 9a^4b^3c^*g^*h^*j^*k^*1m - 9a^3b^4c^*e^*g^*j^*k^*1m - 9a^3b^4* \\
& c^*d^*h^*j^*k^*1m - 9a^3b^4c^*f^*g^*h^*k^*1m + 36a^4b^*c^3d^*e^*j^*k^*1m + 9a^2* \\
& b^5c^*d^*e^*j^*k^*1m + 36a^4b^*c^3e^*f^*h^*j^*1m + 36a^4b^*c^3e^*f^*g^*k^*1m + 3 \\
& 6a^4b^*c^3d^*f^*h^*k^*1m + 9a^2b^5c^*e^*f^*g^*k^*1m + 9a^2b^5c^*d^*f^*h^*k^*1m \\
& + 36a^3b^*c^4d^*e^*f^*j^*k^*1 + 9a^*b^5c^2d^*e^*f^*j^*k^*1 + 36a^3b^*c^4d^*e^*g^* \\
& h^*k^*1 + 36a^3b^*c^4d^*e^*f^*h^*k^*m + 36a^3b^*c^4d^*e^*f^*g^*1m + 9a^*b^5c^2d \\
& *e^*f^*h^*k^*m + 9a^*b^5c^2d^*e^*f^*g^*1m - 9a^*b^4c^3d^*e^*f^*h^*j^*k - 9a^*b^4c^ \\
& 3d^*e^*f^*g^*j^*1 - 9a^*b^4c^3d^*e^*f^*g^*h^*m + 9a^*b^3c^4d^*e^*f^*g^*h^*j - 9a^*b^6 \\
& *c^*d^*e^*f^*k^*1m + 18a^4b^2c^2e^*g^*j^*k^*1m + 18a^4b^2c^2d^*h^*j^*k^*1m + \\
& 18a^4b^2c^2f^*g^*h^*k^*1m - 36a^3b^3c^2d^*e^*j^*k^*1m - 36a^3b^3c^2e^* \\
& f^*g^*k^*1m - 36a^3b^3c^2d^*f^*h^*k^*1m + 9a^3b^3c^2f^*g^*h^*j^*k^*1 + 9a^3* \\
& b^3c^2e^*g^*h^*j^*k^*m + 9a^3b^3c^2d^*g^*h^*j^*1m - 108a^3b^2c^3d^*e^*f^*k^*1 \\
& *m + 54a^2b^4c^2d^*e^*f^*k^*1m - 36a^3b^2c^3d^*f^*g^*j^*k^*m + 18a^3b^2c \\
& ^3e^*f^*g^*j^*k^*1 + 18a^3b^2c^3d^*f^*h^*j^*k^*1 + 18a^3b^2c^3d^*e^*h^*j^*k^*m + \\
& 18a^3b^2c^3d^*e^*g^*j^*1m - 9a^2b^4c^2e^*f^*g^*j^*k^*1 - 9a^2b^4c^2d^*f^* \\
& h^*j^*k^*1 - 9a^2b^4c^2d^*e^*h^*j^*k^*m - 9a^2b^4c^2d^*e^*g^*j^*1m + 18a^3b^ \\
& 2c^3e^*f^*g^*h^*k^*m + 18a^3b^2c^3d^*f^*g^*h^*1m - 9a^2b^4c^2e^*f^*g^*h^*k^*m \\
& - 9a^2b^4c^2d^*f^*g^*h^*1m - 36a^2b^3c^3d^*e^*f^*j^*k^*1 - 36a^2b^3c^3d \\
& *e^*f^*h^*k^*m - 36a^2b^3c^3d^*e^*f^*g^*1m + 9a^2b^3c^3e^*f^*g^*h^*j^*k + 9a^2 \\
& *b^3c^3d^*f^*g^*h^*j^*1 + 9a^2b^3c^3d^*e^*g^*h^*j^*m + 18a^2b^2c^4d^*e^*f^*h^*j \\
& *k + 18a^2b^2c^4d^*e^*f^*g^*j^*1 + 18a^2b^2c^4d^*e^*f^*g^*h^*m - 9a^5b^2c^* \\
& h^*j^*k^2*1m - 9a^5b^2c^*g^*j^*k^*1^2m + 27a^5b^2c^*f^*j^*k^*1m^2 - 9a^4b^ \\
& 3c^*f^*j^2k^*1m + 9a^3b^4c^*f^2j^*k^*1m - 18a^5b^*c^2e^*j^*k^2*1m - 9a^ \\
& 5b^2c^*g^*h^*k^*1m^2 + 9a^4b^3c^*e^*j^*k^2*1m - 18a^5b^*c^2f^*h^*k^2*1m - \\
& 18a^5b^*c^2d^*j^*k^*1^2m + 9a^4b^3c^*f^*h^*k^2*1m + 9a^4b^3c^*d^*j^*k^*1^2* \\
& m + 36a^5b^*c^2e^*h^*k^*1^2m - 36a^4b^*c^3e^2h^*k^*1m + 18a^5b^*c^2f^*h^* \\
& j^*1^2m - 18a^5b^*c^2f^*g^*k^*1^2m - 18a^4b^3c^*e^*h^*k^*1^2m + 9a^4b^3c^* \\
& f^*g^*k^*1^2m + 9a^3b^4c^*e^*h^2k^*1m - 9a^2b^5c^*e^2h^*k^*1m - 54a^5b^* \\
& c^2e^*h^*j^*1m^2 - 18a^5b^*c^2e^*g^*k^*1m^2 - 18a^5b^*c^2d^*h^*k^*1m^2 + 18 \\
& *a^4b^3c^*e^*h^*j^*1m^2 - 9a^4b^3c^*f^*h^*j^*k^*m^2 - 9a^4b^3c^*f^*g^*j^*1m^2 \\
& + 9a^4b^3c^*e^*g^*k^*1m^2 + 9a^4b^3c^*d^*h^*k^*1m^2 + 18a^4b^*c^3f^*g^2j^* \\
& k^*m - 18a^4b^*c^3e^*g^2j^*1m + 18a^3b^4c^*d^*g^*k^2*1m - 9a^3b^4c^*e^*f
\end{aligned}$$

$$\begin{aligned}
& *k^2 * l * m - 9 * a^2 * b^5 * c * d * g^2 * k * l * m - 18 * a^4 * b * c^3 * f * g^2 * h * l * m - 18 * a^4 * b * c^3 * d * h^2 * j * k * m - 9 * a^3 * b^4 * c * d * f * k * l^2 * m - 54 * a^4 * b * c^3 * d * g * j^2 * k * m - 18 * a^4 * b * c^3 * f * g * h^2 * k * m - 18 * a^4 * b * c^3 * e * g * j^2 * k * l - 18 * a^4 * b * c^3 * d * h * j^2 * k * l - 18 * a^3 * b^4 * c * d * g * j * k * m^2 + 9 * a^3 * b^4 * c * e * f * j * k * m^2 + 9 * a^3 * b^4 * c * d * f * j * l * m^2 - 9 * a^3 * b^4 * c * d * e * k * l * m^2 - 54 * a^3 * b * c^4 * d^2 * f * j * k * m + 36 * a^4 * b * c^3 * d * g * j * k^2 * l - 36 * a^3 * b * c^4 * d^2 * g * j * k * l - 18 * a^4 * b * c^3 * e * f * j * k^2 * l + 18 * a^4 * b * c^3 * d * f * j * k^2 * m - 18 * a^3 * b * c^4 * d^2 * e * j * l * m + 9 * a^3 * b^4 * c * f * g * h * j * m^2 - 9 * a * b^5 * c^2 * d^2 * g * j * k * l + 36 * a^4 * b * c^3 * d * g * h * k^2 * m - 36 * a^3 * b * c^4 * d^2 * g * h * k * m + 18 * a^4 * b * c^3 * e * g * h * k^2 * l - 18 * a^4 * b * c^3 * e * f * h * k^2 * m - 18 * a^4 * b * c^3 * d * f * j * k * l^2 - 18 * a^3 * b * c^4 * d^2 * f * h * l * m - 18 * a^3 * b * c^4 * d * e^2 * j * k * m - 9 * a * b^5 * c^2 * d^2 * g * h * k * m - 54 * a^4 * b * c^3 * d * g * h * k * l^2 - 54 * a^3 * b * c^4 * e^2 * f * h * j * m - 18 * a^4 * b * c^3 * d * f * g * l^2 * m - 18 * a^3 * b * c^4 * e^2 * f * g * k * m - 54 * a^4 * b * c^3 * d * f * g * k * m^2 - 36 * a^4 * b * c^3 * e * f * g * j * m^2 - 36 * a^4 * b * c^3 * d * f * h * j * m^2 + 36 * a^3 * b * c^4 * e * f^2 * g * j * m + 36 * a^3 * b * c^4 * d * f^2 * h * j * m - 18 * a^4 * b * c^3 * d * e * h * k * m^2 - 18 * a^4 * b * c^3 * d * e * g * l * m^2 + 18 * a^3 * b * c^4 * e * f^2 * h * j * l - 18 * a^3 * b * c^4 * e * f^2 * g * k * l - 18 * a^3 * b * c^4 * d * f^2 * h * k * l + 18 * a^3 * b * c^4 * d * f^2 * g * k * m - 9 * a^2 * b^5 * c * e * f * g * j * m^2 - 9 * a^2 * b^5 * c * d * f * h * j * m^2 - 54 * a^3 * b * c^4 * d * f * g^2 * j * m - 18 * a^3 * b * c^4 * e * f * g^2 * j * l - 18 * a * b^4 * c^3 * d^2 * f * g * j * m + 9 * a * b^4 * c^3 * d^2 * g * h * j * k + 9 * a * b^4 * c^3 * d^2 * f * g * k * l + 9 * a * b^4 * c^3 * d^2 * e * g * k * m - 9 * a * b^4 * c^3 * d^2 * e * f * l * m - 18 * a^3 * b * c^4 * e * f * g^2 * h * m - 18 * a^3 * b * c^4 * d * f * h^2 * j * k - 9 * a * b^4 * c^3 * d * e^2 * f * k * m + 18 * a^3 * b * c^4 * d * f * g * j^2 * k - 18 * a^3 * b * c^4 * d * f * g * h^2 * m - 18 * a^3 * b * c^4 * d * e * h * j^2 * k - 18 * a^3 * b * c^4 * d * e * g * j^2 * l + 18 * a * b^4 * c^3 * d * e * f^2 * j * m - 9 * a * b^5 * c^2 * d * e * f * j^2 * m - 9 * a * b^4 * c^3 * d * e * f^2 * k * l - 18 * a^2 * b * c^5 * d^2 * e * f * j * l - 9 * a * b^3 * c^4 * d^2 * e * g * j * k + 9 * a * b^3 * c^4 * d^2 * e * f * j * l - 54 * a^2 * b * c^5 * d^2 * e * g * h * l - 18 * a^2 * b * c^5 * d^2 * e * f * h * m - 18 * a^2 * b * c^5 * d * e^2 * f * j * k + 18 * a * b^3 * c^4 * d^2 * e * g * h * l - 9 * a * b^3 * c^4 * d^2 * f * g * h * k + 9 * a * b^3 * c^4 * d^2 * e * f * h * m + 9 * a * b^3 * c^4 * d * e^2 * f * j * k - 36 * a^3 * b * c^4 * d * e * f * h * l^2 + 36 * a^2 * b * c^5 * d * e^2 * f * h * l + 18 * a^2 * b * c^5 * d * e^2 * g * h * k - 18 * a^2 * b * c^5 * d * e^2 * f * g * m - 18 * a * b^3 * c^4 * d * e^2 * f * h * l - 9 * a * b^5 * c^2 * d * e * f * h * l^2 + 9 * a * b^4 * c^3 * d * e * f * h^2 * l + 9 * a * b^3 * c^4 * d * e^2 * f * g * m - 18 * a^2 * b * c^5 * d * e * f^2 * h * k - 18 * a^2 * b * c^5 * d * e * f^2 * g * l + 9 * a * b^3 * c^4 * d * e * f^2 * h * k + 9 * a * b^3 * c^4 * d * e * f^2 * g * l + 27 * a * b^2 * c^5 * d^2 * e * f * g * k + 9 * a * b^4 * c^3 * d * e * f * g * k^2 - 9 * a * b^3 * c^4 * d * e * f * g^2 * k - 9 * a * b^2 * c^5 * d^2 * e * f * h * j - 9 * a * b^2 * c^5 * d * e^2 * f * g * j - 9 * a * b^2 * c^5 * d * e * f^2 * g * h + 72 * a^4 * c^4 * d * f * g * j * k * m + 72 * a^4 * c^4 * d * e * f * k * l * m + 9 * a * b^6 * c * d^2 * g * k * l * m + 9 * a * b^6 * c * d * e * f * j * m^2 - 27 * a^4 * b^2 * c^2 * f^2 * j * k * l * m - 9 * a^4 * b^2 * c^2 * g^2 * h * j * l * m + 36 * a^3 * b^3 * c^2 * e^2 * h * k * l * m - 18 * a^4 * b^2 * c^2 * e * h^2 * k * l * m - 9 * a^4 * b^2 * c^2 * g * h^2 * j * k * m + 18 * a^4 * b^2 * c^2 * f * h * j^2 * k * m + 18 * a^4 * b^2 * c^2 * f * g * j^2 * l * m - 18 * a^4 * b^2 * c^2 * e * h * j^2 * l * m - 9 * a^4 * b^2 * c^2 * g * h * j^2 * k * l - 9 * a^3 * b^3 * c^2 * f^2 * h * j * k * m - 9 * a^3 * b^3 * c^2 * f^2 * g * j * l * m - 63 * a^4 * b^2 * c^2 * d * g * k^2 * l * m + 63 * a^3 * b^2 * c^3 * d^2 * g * k * l * m - 45 * a^2 * b^4 * c^2 * d^2 * g * k * l * m + 36 * a^4 * b^2 * c^2 * e * f * k^2 * l * m + 27 * a^3 * b^3 * c^2 * d * g^2 * k * l * m - 9 * a^4 * b^2 * c^2 * f * h * j * k^2 * l - 9 * a^4 * b^2 * c^2 * e * h * j * k^2 * m + 9 * a^3 * b^3 * c^2 * e * g^2 * j * l * m - 9 * a^3 * b^2 * c^3 * d^2 * h * j * l * m + 36 * a^4 * b^2 * c^2 * d * f * k * l^2 * m + 27 * a^4 * b^2 * c^2 * e * h * j * k * l^2 - 27 * a^3 * b^2 * c^3 * e^2 * h * j * k * l - 18 * a^3 * b^2 * c^3 * e^2 * f * j * l * m - 9 * a^4 * b^2 * c^2 * f * g * j * k * l^2 - 9 * a^4 * b^2 * c^2 * d * g * j * l^2 * m + 9 * a^3 * b^3 * c^2 * f * g^2 * h * l * m - 9 * a^3 * b^3 * c^2 * e * h^2 * j * k * l + 9 * a^3 * b^3 * c^2 * d * h^2 * j * k * m - 9 * a^3 * b^2 * c^3 * e^2 * g * j * k * m + 9 * a^2 * b^4 * c^2
\end{aligned}$$

$$\begin{aligned}
& *e^2*h*j*k*1 + 72*a^4*b^2*c^2*d*g*j*k*m^2 + 36*a^4*b^2*c^2*d*e*k*1*m^2 + 27 \\
& *a^4*b^2*c^2*e*g*h*1^2*m - 27*a^4*b^2*c^2*e*f*j*k*m^2 - 27*a^4*b^2*c^2*d*f* \\
& j*1*m^2 - 27*a^3*b^2*c^3*e^2*g*h*1*m + 27*a^3*b^2*c^3*e*f^2*j*k*m + 27*a^3* \\
& b^2*c^3*d*f^2*j*1*m + 18*a^3*b^3*c^2*d*g*j^2*k*m + 9*a^3*b^3*c^2*f*g*h^2*k* \\
& m + 9*a^3*b^3*c^2*e*g*j^2*k*1 - 9*a^3*b^3*c^2*e*g*h^2*1*m - 9*a^3*b^3*c^2*e \\
& *f*j^2*k*m + 9*a^3*b^3*c^2*d*h*j^2*k*1 - 9*a^3*b^3*c^2*d*f*j^2*1*m + 9*a^2* \\
& b^4*c^2*e^2*g*h*1*m + 36*a^2*b^3*c^3*d^2*g*j*k*1 - 27*a^4*b^2*c^2*f*g*h*j*m \\
& ^2 + 27*a^3*b^2*c^3*f^2*g*h*j*m - 18*a^4*b^2*c^2*e*f*h*1*m^2 - 18*a^3*b^3*c \\
& ^2*d*g*j*k^2*1 - 18*a^3*b^2*c^3*d*g^2*j*k*1 + 18*a^2*b^3*c^3*d^2*f*j*k*m - \\
& 9*a^4*b^2*c^2*e*g*h*k*m^2 - 9*a^4*b^2*c^2*d*g*h*1*m^2 - 9*a^3*b^3*c^2*f*g*h \\
& *j^2*m + 9*a^3*b^3*c^2*e*f*j*k^2*1 - 9*a^3*b^2*c^3*f^2*g*h*k*1 + 9*a^2*b^4* \\
& c^2*d*g^2*j*k*1 + 9*a^2*b^3*c^3*d^2*e*j*1*m + 36*a^3*b^2*c^3*e*f*g^2*1*m + \\
& 36*a^2*b^3*c^3*d^2*g*h*k*m - 18*a^3*b^3*c^2*d*g*h*k^2*m - 18*a^3*b^2*c^3*d* \\
& g^2*h*k*m + 9*a^3*b^3*c^2*e*f*h*k^2*m + 9*a^3*b^3*c^2*d*f*j*k*1^2 - 9*a^3*b \\
& ^2*c^3*f*g^2*h*j*1 - 9*a^3*b^2*c^3*e*g^2*h*j*m - 9*a^2*b^4*c^2*e*f*g^2*1*m \\
& + 9*a^2*b^4*c^2*d*g^2*h*k*m + 9*a^2*b^3*c^3*d^2*f*h*1*m + 9*a^2*b^3*c^3*d*e \\
& ^2*j*k*m + 36*a^3*b^2*c^3*d*f*h^2*k*m + 36*a^3*b^2*c^3*d*e*j^2*k*1 + 18*a^3 \\
& *b^3*c^2*d*g*h*k*1^2 + 18*a^3*b^2*c^3*e*g*h^2*j*1 + 18*a^3*b^2*c^3*e*f*h^2* \\
& k*1 - 18*a^3*b^2*c^3*e*f*h^2*j*m - 18*a^3*b^2*c^3*d*g*h^2*k*1 + 18*a^3*b^2* \\
& c^3*d*e*h^2*1*m + 18*a^2*b^3*c^3*e^2*f*h*j*m - 9*a^3*b^3*c^2*e*g*h*j*1^2 - \\
& 9*a^3*b^3*c^2*e*f*h*k*1^2 + 9*a^3*b^3*c^2*d*f*g*1^2*m - 9*a^3*b^3*c^2*d*e*h \\
& *1^2*m - 9*a^3*b^2*c^3*f*g*h^2*j*k - 9*a^3*b^2*c^3*d*g*h^2*j*m - 9*a^2*b^4* \\
& c^2*d*f*h^2*k*m - 9*a^2*b^4*c^2*d*e*j^2*k*1 - 9*a^2*b^3*c^3*e^2*g*h*j*1 - 9 \\
& *a^2*b^3*c^3*e^2*f*h*k*1 + 9*a^2*b^3*c^3*e^2*f*g*k*m - 9*a^2*b^3*c^3*d*e^2* \\
& h*1*m + 36*a^3*b^3*c^2*e*f*g*j*m^2 + 36*a^3*b^3*c^2*d*f*h*j*m^2 + 18*a^3*b^ \\
& 3*c^2*d*f*g*k*m^2 - 18*a^3*b^2*c^3*e*f*g*j^2*m - 18*a^3*b^2*c^3*d*f*h*j^2*m \\
& - 18*a^2*b^3*c^3*e*f^2*g*j*m - 18*a^2*b^3*c^3*d*f^2*h*j*m + 9*a^3*b^3*c^2* \\
& d*e*h*k*m^2 + 9*a^3*b^3*c^2*d*e*g*1*m^2 - 9*a^3*b^2*c^3*e*g*h*j^2*k - 9*a^3 \\
& *b^2*c^3*d*g*h*j^2*1 + 9*a^2*b^4*c^2*e*f*g*j^2*m + 9*a^2*b^4*c^2*d*f*h*j^2* \\
& m + 9*a^2*b^3*c^3*e*f^2*g*k*1 + 9*a^2*b^3*c^3*d*f^2*h*k*1 + 72*a^2*b^2*c^4* \\
& d^2*f*g*j*m + 36*a^2*b^2*c^4*d^2*e*f*1*m + 27*a^3*b^2*c^3*d*g*h*j*k^2 + 27* \\
& a^3*b^2*c^3*d*f*g*k^2*1 + 27*a^3*b^2*c^3*d*e*g*k^2*m - 27*a^2*b^2*c^4*d^2*g \\
& *h*j*k - 27*a^2*b^2*c^4*d^2*f*g*k*1 - 27*a^2*b^2*c^4*d^2*e*g*k*m + 18*a^2*b \\
& ^3*c^3*d*f*g^2*j*m - 18*a^2*b^2*c^4*d^2*e*h*k*1 - 9*a^3*b^2*c^3*e*f*h*j*k^2 \\
& + 9*a^2*b^3*c^3*e*f*g^2*j*1 - 9*a^2*b^3*c^3*d*g^2*h*j*k - 9*a^2*b^3*c^3*d* \\
& f*g^2*k*1 - 9*a^2*b^3*c^3*d*e*g^2*k*m - 9*a^2*b^2*c^4*d^2*f*h*j*1 - 9*a^2*b \\
& ^2*c^4*d^2*e*h*j*m + 36*a^2*b^2*c^4*d*e^2*f*k*m - 27*a^3*b^2*c^3*d*e*h*j*1^ \\
& 2 + 27*a^2*b^2*c^4*d*e^2*h*j*1 - 18*a^3*b^2*c^3*d*e*g*k*1^2 - 9*a^3*b^2*c^3 \\
& *d*f*g*j*1^2 + 9*a^2*b^4*c^2*d*e*h*j*1^2 + 9*a^2*b^3*c^3*e*f*g^2*h*m + 9*a^ \\
& 2*b^3*c^3*d*f*h^2*j*k - 9*a^2*b^3*c^3*d*e*h^2*j*1 - 9*a^2*b^2*c^4*e^2*f*g*j \\
& *k - 9*a^2*b^2*c^4*d*e^2*g*j*m + 63*a^3*b^2*c^3*d*e*f*j*m^2 - 63*a^2*b^2*c^ \\
& 4*d*e*f^2*j*m - 45*a^2*b^4*c^2*d*e*f*j*m^2 + 36*a^2*b^2*c^4*d*e*f^2*k*1 - 2 \\
& 7*a^3*b^2*c^3*e*f*g*h*1^2 + 27*a^2*b^3*c^3*d*e*f*j^2*m + 27*a^2*b^2*c^4*e^2 \\
& *f*g*h*1 + 9*a^2*b^4*c^2*e*f*g*h*1^2 - 9*a^2*b^3*c^3*e*f*g*h^2*1 + 9*a^2*b^ \\
& 3*c^3*d*f*g*h^2*m + 9*a^2*b^3*c^3*d*e*h*j^2*k + 9*a^2*b^3*c^3*d*e*g*j^2*1 +
\end{aligned}$$

$$\begin{aligned}
& 18a^2b^2c^4d^2eg^2jk - 9a^3b^2c^3d^2eg^2h^2m^2 - 9a^2b^3c^3d^2eg^2jk^2 - 9a^2b^2c^4e^2f^2g^2h^2k - 9a^2b^2c^4d^2f^2g^2h^2k + 18a^2b^2c^4d^2f^2g^2h^2k - 18a^2b^2c^4d^2eg^2h^2k - 9a^2b^3c^3d^2f^2g^2h^2k^2 - 9a^2b^2c^4e^2f^2g^2h^2j + 36a^2b^3c^3d^2e^2f^2h^2k - 18a^2b^2c^4d^2e^2f^2h^2k - 9a^2b^2c^4d^2f^2g^2h^2j - 9a^2b^2c^4d^2eg^2h^2j^2 - 27a^2b^2c^4d^2e^2f^2g^2k^2 + 18a^2b^2c^4d^2f^2h^2k^2 - 9a^2b^3c^3e^2f^2g^2k^2 - 9a^2b^2c^4e^2f^2h^2j^2 - 9a^2b^2c^4d^2f^2h^2k + 45a^2b^3c^3d^2e^2f^2m^2 + 36a^2b^2c^4d^2e^2g^2l^2 + 9a^2b^3c^3d^2eg^2l^2 + 9a^2b^2c^4e^2f^2g^2j^2 + 9a^2b^2c^4d^2f^2h^2j^2 - 9a^2b^2c^4d^2e^2h^2k^2 - 36a^2b^2c^4d^2e^2f^2l^2 - 9a^2b^2c^4d^2f^2g^2j^2 - 12a^6b^2c^2h^2k^2 + 3a^2b^6c^2e^2k^2l^2 + 3a^2b^6c^2d^2e^2f^2l^3 - 12a^2b^2c^6d^2e^2f^2h^2 + 9a^5b^2c^2h^2k^2l^2m + 18a^5b^2c^2g^2k^2l^2m - 9a^5b^2c^2h^2j^2l^2m + 9a^5b^2c^2h^2j^2l^2m - 9a^4b^3c^2g^2k^2l^2m - 3a^4b^2c^2g^2k^2l^2m + 18a^5b^2c^2f^2k^2l^2m + 15a^3b^3c^2f^2k^2l^2m + 9a^5b^2c^2h^2j^2k^2l^2m + 9a^5b^2c^2g^2j^2l^2m - 9a^5b^2c^2f^2k^2l^2m + 9a^5b^2c^2h^2j^2k^2l^2m + 9a^5b^2c^2g^2j^2l^2m - 9a^4b^3c^2f^2k^2l^2m + 36a^3b^2c^3e^2k^2l^2m - 27a^5b^2c^2g^2j^2k^2l^2m - 18a^5b^2c^2h^2j^2k^2l^2m - 18a^2b^4c^2e^2k^2l^2m - 9a^5b^2c^2g^2j^2k^2l^2m - 9a^5b^2c^2e^2k^2l^2m + 9a^5b^2c^2h^2j^2k^2l^2m + 9a^5b^2c^2g^2j^2k^2l^2m + 9a^4b^3c^2f^2k^2l^2m + 36a^3b^2c^3e^2k^2l^2m - 27a^5b^2c^2g^2j^2k^2l^2m - 18a^5b^2c^2h^2j^2k^2l^2m - 18a^2b^4c^2e^2k^2l^2m - 9a^5b^2c^2g^2j^2k^2l^2m - 9a^5b^2c^2e^2k^2l^2m + 9a^5b^2c^2h^2j^2k^2l^2m + 9a^5b^2c^2g^2j^2k^2l^2m + 9a^4b^3c^2f^2k^2l^2m + 36a^3b^2c^3e^2k^2l^2m - 27a^5b^2c^2g^2j^2k^2l^2m - 18a^5b^2c^2h^2j^2k^2l^2m - 18a^2b^4c^2e^2k^2l^2m - 51a^2b^3c^3d^2k^2l^2m - 27a^4b^2c^3e^2j^2l^2m - 18a^5b^2c^2g^2h^2l^2m - 9a^5b^2c^2e^2j^2l^2m - 9a^5b^2c^2d^2k^2l^2m + 9a^5b^2c^2g^2h^2l^2m + 9a^5b^2c^2g^2j^2k^2l^2m + 9a^5b^2c^2e^2j^2l^2m - 9a^3b^4c^2e^2j^2l^2m - 9a^2b^5c^2d^2k^2l^2m + 3a^4b^2c^2g^2h^3l^2m - 3a^3b^3c^2g^3j^2k^2l^2m + 18a^5b^2c^2e^2j^2k^2l^2m + 18a^5b^2c^2d^2j^2l^2m + 18a^4b^2c^3f^2j^2k^2l^2m + 9a^5b^2c^2g^2h^2k^2l^2m + 9a^5b^2c^2f^2h^2l^2m + 9a^5b^2c^2f^2j^2k^2l^2m - 9a^4b^3c^2e^2j^2k^2l^2m - 9a^4b^3c^2d^2j^2l^2m + 9a^4b^2c^2f^2j^3k^2l^2m + 9a^4b^2c^2e^2j^3k^2l^2m + 9a^4b^2c^2d^2j^3l^2m + 9a^4b^2c^3f^2h^2l^2m + 9a^4b^2c^3e^2j^2k^2l^2m + 9a^4b^2c^3d^2j^2l^2m - 3a^3b^3c^2g^3h^2k^2l^2m - 3a^3b^2c^3f^3j^2k^2l^2m + 3a^2b^4c^2f^3j^2k^2l^2m + 45a^4b^2c^3d^2j^2k^2l^2m - 27a^5b^2c^2d^2j^2k^2l^2m + 18a^5b^2c^2g^2h^2j^2m^2 + 18a^4b^2c^3e^2j^2k^2l^2m + 15a^2b^3c^3e^2j^2k^2l^2m - 12a^3b^2c^3f^3h^2k^2l^2m - 12a^3b^2c^3f^3g^2l^2m + 9a^5b^2c^2g^2h^2k^2l^2 - 9a^4b^3c^2g^2h^2j^2m^2 + 9a^4b^3c^2d^2j^2k^2m^2 + 9a^4b^2c^2g^2h^2j^3m + 9a^2b^5c^2d^2j^2k^2m + 3a^2b^4c^2f^3h^2k^2m + 3a^2b^4c^2f^3g^2l^2m + 36a^2b^2c^4d^3j^2k^2l^2m + 18a^4b^2c^3e^2g^2l^2m + 15a^2b^3c^3e^2g^2l^2m + 12a^4b^2c^2d^2j^2k^2l^2m + 9a^5b^2c^2f^2g^2k^2l^2m + 9a^5b^2c^2e^2h^2k^2l^2m + 9a^4b^2c^3g^2h^2j^2l^2m + 9a^4b^2c^3f^2h^2k^2l^2m + 9a^4b^2c^3f^2g^2k^2l^2m + 9a^4b^2c^3d^2h^2l^2m - 9a^3b^3c^2e^2h^3k^2l^2m + 6a^2b^3c^3e^2h^2k^2l^2m + 45a^4b^2c^3e^2h^2j^2m^2 + 36a^2b^2c^4d^3h^2k^2l^2m - 33a^3b^2c^3d^2g^3l^2m - 27a^4b^2c^3f^2h^2j^2l^2m - 27a^4b^2c^3e^2f^2l^2m - 27a^4b^2c^3e^2h^2j^2m - 18a^4b^2c^3g^2h^2j^2k^2l^2m - 18a^4b^2c^3f^2g^2k^2l^2m - 18a^4b^2c^3e^2g^2k^2l^2m - 18a^3b^2c^4d^2g^2l^2m + 12a^4b^2c^2d^2h^2k^2l^2m + 9a^5b^2c^2e^2f^2l^2m^2 + 9a^5b^2c^2d^2g^2l^2m^2 + 9a^4b^2c^3f^2
\end{aligned}$$

$$\begin{aligned}
& 2g^*k^*l^2 + 9a^4b^*c^3e^2g^*k^*m^2 + 9a^4b^*c^3g^*h^2j^2k + 9a^4b^*c^3 \\
& *f^*h^2j^2l + 9a^4b^*c^3e^*f^2l^2m - 9a^3b^4c^*e^*h^2j^*m^2 + 9a^3b^* \\
& c^4e^2f^2l^*m + 9a^2b^5c^*e^2h^*j^*m^2 + 9a^2b^4c^2d^*g^3l^*m - 9a^2 \\
& *b^2c^4d^3g^*l^*m - 9a*b^5c^2d^2g^2l^*m - 6a^4b^2c^2e^*h^*k^3l - 6 \\
& a^3b^2c^3f^*g^3j^*m + 3a^4b^2c^2g^*h^*j^*k^3 + 3a^4b^2c^2f^*g^*k^3l + \\
& 3a^4b^2c^2e^*g^*k^3m + 3a^3b^2c^3g^3h^*j^*k + 3a^3b^2c^3f^*g^3k^* \\
& l + 3a^3b^2c^3e^*g^3k^*m - 27a^3b^*c^4d^2h^2k^*l + 18a^4b^*c^3e^*f^2 \\
& *k^*m^2 + 18a^4b^*c^3d^*f^2l^*m^2 + 9a^4b^*c^3f^*h^2j^*k^2 + 9a^4b^*c^3f \\
& *g^2j^*l^2 + 9a^4b^*c^3e^*g^2k^*l^2 + 9a^4b^*c^3d^*h^2k^2l + 9a^3b^4c^* \\
& c^*e^*g^j^2m^2 + 9a^3b^4c^*d^*h^*j^2m^2 - 9a^3b^3c^2e^*g^*j^3m - 9a^3b \\
& ^3c^2d^*h^*j^3m + 9a^3b^*c^4e^2g^2k^*l + 9a^3b^*c^4e^2g^2j^*m + 9a^ \\
& 3b^*c^4d^2h^2j^*m - 3a^2b^3c^3f^3h^*j^*k - 3a^2b^3c^3f^3g^*j^*l - 3 \\
& a^2b^3c^3e^*f^3k^*m - 3a^2b^3c^3d^*f^3l^*m + 45a^4b^*c^3d^*g^2j^*m^2 \\
& + 45a^3b^*c^4d^2g^*j^2m + 24a^4b^2c^2d^*g^*k^*l^3 + 24a^2b^2c^4e^3 \\
& *f^*j^*m + 18a^4b^*c^3f^2g^*h^*m^2 + 18a^4b^*c^3d^*h^2j^*l^2 + 18a^3b^*c^4 \\
& e^2h^2j^*k - 12a^4b^2c^2e^*g^*j^*l^3 - 12a^4b^2c^2e^*f^*k^*l^3 - 12a^4 \\
& *b^2c^2d^*e^*l^3m - 12a^2b^2c^4e^3g^*j^*l - 12a^2b^2c^4e^3f^*k^*l - \\
& 12a^2b^2c^4d^*e^3l^*m + 9a^4b^*c^3f^*g^*j^2k^2 + 9a^4b^*c^3e^*h^*j^2k^ \\
& 2 + 9a^3b^2c^3e^*h^3j^*k + 9a^3b^2c^3d^*h^3j^*l + 9a^3b^*c^4f^2g^2 \\
& *j^*k + 9a^3b^*c^4d^2h^*j^2l + 9a^2b^5c^*d^*g^2j^*m^2 + 9a*b^5c^2d^2* \\
& g^*j^2m - 3a^4b^2c^2d^*h^*j^*l^3 - 3a^2b^3c^3f^3g^*h^*m - 3a^2b^2c^4 \\
& e^3h^*j^*k + 18a^4b^*c^3f^*g^*h^2l^2 + 18a^3b^*c^4e^2g^*h^2m + 18a^3b \\
& *c^4d^2h^*j^*k^2 + 18a^3b^*c^4d^2f^*k^2l + 18a^3b^*c^4d^2e^*k^2m + 9 \\
& a^4b^*c^3e^*g^2h^*m^2 + 9a^4b^*c^3e^*f^*j^2l^2 + 9a^4b^*c^3d^*g^*j^2l^2 + \\
& 9a^3b^2c^3f^*g^*h^3l + 9a^3b^2c^3e^*g^*h^3m + 9a^3b^*c^4f^2g^2h^* \\
& l + 9a^3b^*c^4e^2g^*j^2k + 9a^3b^*c^4e^2f^*j^2l - 9a^2b^3c^3d^*g^3 \\
& *j^*l + 9a*b^4c^3d^2g^2j^*l - 3a^4b^2c^2f^*g^*h^*l^3 - 3a^3b^3c^2e^* \\
& g^*j^*k^3 - 3a^3b^3c^2d^*h^*j^*k^3 - 3a^3b^3c^2d^*f^*k^3l - 3a^3b^3c^2 \\
& *d^*e^*k^3m - 3a^2b^2c^4e^3g^*h^*m - 33a^3b^2c^3d^*e^*j^3m - 27a^4b^* \\
& c^3e^*f^*h^2m^2 - 27a^3b^*c^4d^2e^*k^*l^2 - 18a^4b^*c^3d^*e^*j^2m^2 - 18 \\
& a^3b^*c^4e^*f^2j^2k - 18a^3b^*c^4d^*f^2j^2l - 9a^4b^2c^2d^*e^*j^*m^3 \\
& + 9a^4b^*c^3d^*g^*h^2m^2 + 9a^4b^*c^3d^*e^*k^2l^2 + 9a^3b^*c^4f^2g^*h^2 \\
& *k + 9a^3b^*c^4e^2f^*j^*k^2 + 9a^3b^*c^4d^2f^*j^*l^2 + 9a^3b^*c^4e^*f^2* \\
& h^2m + 9a^3b^*c^4d^*e^2k^2l - 9a^2b^5c^*d^*e^*j^2m^2 + 9a^2b^4c^2d \\
& *e^*j^3m - 9a^2b^3c^3d^*g^3h^*m + 9a^2b^*c^5d^2e^2k^*l + 9a^2b^*c^5* \\
& d^2e^2j^*m + 9a*b^4c^3d^2g^2h^*m - 6a^3b^2c^3d^*g^*j^3k - 3a^3b^3 \\
& *c^2f^*g^*h^*k^3 + 3a^3b^2c^3e^*f^*j^3k + 3a^3b^2c^3d^*f^*j^3l + 3a^2* \\
& b^2c^4e^*f^3j^*k + 3a^2b^2c^4d^*f^3j^*l + 45a^3b^*c^4d^2g^*h^*l^2 + 36 \\
& *a^4b^2c^2e^*f^*g^*m^3 + 36a^4b^2c^2d^*f^*h^*m^3 - 27a^3b^*c^4e^2g^*h^*k^ \\
& 2 - 27a^3b^*c^4d^*g^2h^2l - 18a^3b^*c^4f^2g^*h^*j^2 + 18a^3b^*c^4d^*e^ \\
& 2j^*l^2 + 15a^3b^3c^2d^*e^*j^*l^3 + 12a^2b^2c^4e^*f^3g^*m + 12a^2b^2* \\
& c^4d^*f^3h^*m + 9a^3b^*c^4f^*g^2h^2j + 9a^3b^*c^4e^*g^2h^2k + 9a^3b \\
& *c^4d^*f^2j^*k^2 + 9a^2b^*c^5d^2f^2j^*k + 9a*b^5c^2d^2g^*h^*l^2 - 9a* \\
& b^4c^3d^2g^*h^2l - 6a^2b^2c^4e^*f^3h^*l + 3a^3b^2c^3f^*g^*h^*j^3 + 3 \\
& *a^2b^2c^4f^3g^*h^*j + 45a^3b^*c^4d^2f^*g^*m^2 - 27a^2b^*c^5d^2f^2g^*
\end{aligned}$$





$$\begin{aligned}
& k^m^3 - 3a^5b^2c^*d^*j^*l^*m^3 - 36a^4c^4d^*g^*h^*j^*k^2 - 36a^4c^4d^*f^*g^*k^2 \\
& ^2*1 - 36a^4c^4d^*e^*h^*k^2*1 - 36a^4c^4d^*e^*g^*k^2*m + 36a^3c^5d^2g^*h^*j^*k \\
& + 36a^3c^5d^2f^*g^*k*1 - 36a^3c^5d^2f^*g^*j^*m + 36a^3c^5d^2e^*h^*k^*1 \\
& + 36a^3c^5d^2e^*g^*k^*m - 36a^3c^5d^2e^*f^*1^*m + 24a^5b^2c^*e^*h^*1^*m^3 \\
& - 24a^3b^c^4e^3j^*k^*1 - 12a^5b^2c^*f^*h^*k^*m^3 - 12a^5b^2c^*f^*g^*1^*m^3 \\
& - 3a^5b^2c^*g^*h^*j^*m^3 - 3a^4b^3c^*e^*j^*k^*1^3 - 3a^*b^5c^2e^3j^*k^*1 \\
& + 36a^4c^4d^*e^*h^*j^*1^2 + 36a^4c^4d^*e^*g^*k^*1^2 - 36a^3c^5d^e^2h^*j^*1 \\
& - 36a^3c^5d^e^2g^*k^*1 - 36a^3c^5d^e^2f^*k^*m + 24a^4b^c^3e^*h^3k^*m \\
& - 24a^3b^c^4e^3g^*1^*m - 18a^*b^4c^3d^3j^*k^*1 - 12a^4b^c^3g^*h^3j^*1 \\
& - 12a^4b^c^3f^*h^3k^*1 - 12a^4b^c^3d^*h^3*1^*m + 12a^3b^c^4e^3h^*k^*m \\
& + 6a^4b^c^3f^*h^3j^*m - 3a^4b^3c^*g^*h^*j^*1^3 - 3a^4b^3c^*f^*h^*k^*1^3 - \\
& 3a^4b^3c^*e^*g^*1^3*m - 3a^4b^3c^*d^*h^*1^3*m - 3a^*b^5c^2e^3h^*k^*m - 3a^*b^5c^2e^3g^*1^*m \\
& + 36a^4c^4e^*f^*g^*h^*1^2 - 36a^4c^4d^*e^*f^*j^*m^2 - 36a^3c^5e^2f^*g^*h^*1 \\
& - 36a^3c^5d^*f^2g^*j^*k - 36a^3c^5d^*e^*f^2k^*1 + 36a^3c^5d^*e^*f^2j^*m \\
& - 18a^*b^4c^3d^3h^*k^*m - 9a^*b^4c^3d^3g^*1^*m + 30a^5b^c^2d^*g^*k^*m^3 \\
& - 30a^4b^3c^*d^*g^*k^*m^3 - 24a^5b^c^2e^*f^*k^*m^3 - 24a^5b^c^2d^*f^*1^*m^3 \\
& + 24a^4b^c^3e^*g^*j^3*m + 24a^4b^c^3d^*h^*j^3*m + 15a^4b^3c^*e^*f^*k^*m^3 \\
& + 15a^4b^3c^*d^*f^*1^*m^3 + 12a^5b^c^2e^*g^*j^*m^3 + 12a^5b^c^2d^*h^*j^*m^3 \\
& - 12a^4b^c^3f^*h^*j^3*k - 12a^4b^c^3f^*g^*j^3*1 + 6a^4b^3c^*e^*g^*j^*m^3 \\
& + 6a^4b^3c^*d^*h^*j^*m^3 + 6a^4b^c^3e^*h^*j^3*1 + 36a^3c^5d^*e^*g^2h^*1 \\
& - 24a^5b^c^2f^*g^*h^*m^3 + 15a^4b^3c^*f^*g^*h^*m^3 - 9a^*b^6c^*d^2g^*j^*m^2 \\
& - 6a^3b^4c^*d^*g^*k^*1^3 - 6a^*b^4c^3e^3f^*j^*m + 3a^3b^4c^*e^*g^*j^*1^3 \\
& + 3a^3b^4c^*e^*f^*k^*1^3 + 3a^3b^4c^*d^*h^*j^*1^3 + 3a^3b^4c^*d^*e^*1^3*m \\
& + 3a^*b^4c^3e^3h^*j^*k + 3a^*b^4c^3e^3g^*j^*1 + 3a^*b^4c^3e^3f^*k^*1 \\
& + 3a^*b^4c^3d^*e^3*1^*m - 36a^3c^5d^*e^*g^*h^2*k + 30a^2b^c^5d^3f^*j^*m \\
& - 30a^*b^3c^4d^3f^*j^*m + 24a^3b^c^4d^*g^3j^*1 - 24a^2b^c^5d^3h^*j^*k \\
& - 24a^2b^c^5d^3f^*k^*1 - 24a^2b^c^5d^3e^*k^*m + 15a^*b^3c^4d^3h^*j^*k \\
& + 15a^*b^3c^4d^3f^*k^*1 + 15a^*b^3c^4d^3e^*k^*m - 12a^3b^c^4e^*g^3j^*k \\
& + 12a^2b^c^5d^3g^*j^*1 + 6a^*b^3c^4d^3g^*j^*1 + 3a^3b^4c^*f^*g^*h^*1^3 \\
& + 3a^*b^4c^3e^3g^*h^*m + 24a^3b^c^4d^*g^3h^*m - 12a^3b^c^4f^*g^3h^*k \\
& + 12a^2b^c^5d^3g^*h^*m - 9a^3b^4c^*d^*e^*j^*m^3 + 6a^3b^c^4e^*g^3h^*1 \\
& + 6a^*b^3c^4d^3g^*h^*m + 36a^3c^5d^*e^*f^*g^*k^2 - 36a^2c^6d^2e^*f^*g^*k - \\
& 24a^4b^c^3d^*e^*j^*1^3 - 18a^3b^4c^*e^*f^*g^*m^3 - 18a^3b^4c^*d^*f^*h^*m^3 - \\
& 3a^2b^5c^*d^*e^*j^*1^3 - 3a^*b^3c^4d^*e^3j^*1 - 24a^4b^c^3e^*f^*g^*1^3 + 2 \\
& 4a^3b^c^4d^*f^*h^3*1 + 12a^4b^c^3d^*f^*h^*1^3 - 12a^3b^c^4e^*g^*h^3j - 1 \\
& 2a^3b^c^4e^*f^*h^3k - 12a^3b^c^4d^*e^*h^3m - 12a^*b^2c^5d^3e^*j^*k + 6 \\
& a^3b^c^4d^*g^*h^3k - 3a^2b^5c^*e^*f^*g^*1^3 - 3a^2b^5c^*d^*f^*h^*1^3 - 3a^*b^3c^4e^3g^*h^*j \\
& - 3a^*b^3c^4e^3f^*h^*k - 3a^*b^3c^4e^3f^*g^*1 - 3a^*b^3c^4d^*e^3h^*m \\
& + 24a^*b^2c^5d^3e^*h^*1 - 12a^*b^2c^5d^3f^*h^*k - 3a^*b^2c^5d^3g^*h^*j \\
& - 3a^*b^2c^5d^3f^*g^*1 - 3a^*b^2c^5d^3e^*g^*m + 48a^4b^c^3d^*e^*f^*m^3 \\
& + 24a^2b^c^5d^*e^*f^3*m + 21a^2b^5c^*d^*e^*f^*m^3 - 12a^2b^c^5e^*f^3g^*j \\
& - 12a^2b^c^5d^*f^3h^*j - 9a^*b^3c^4d^*e^*f^3*m + 6a^2b^c^5d^*f^3g^*k \\
& + 12a^*b^2c^5d^*e^3f^*1 - 6a^*b^2c^5d^*e^3g^*k + 3a^*b^2c^5d^*e^3h^*j \\
& - 24a^3b^c^4d^*e^*f^*k^3 - 12a^2b^c^5d^*e^*g^3j - 3a^*b^5c^2d^*e^*f^*k^3 \\
& + 3a^*b^2c^5e^3f^*g^*h - 12a^2b^c^5d^*f^*g^3h + 9a^*b^2c^5d^*e^*f
\end{aligned}$$

$$\begin{aligned}
&^3j + 9a^3b^3c^3d^3e^3f^3j^3 + 9a^3b^3c^6d^2e^2f^2j^3 + 3a^3b^4c^3d^3e^3f^3j^3 + 9a^3b^3c^6d^2e^2f^2g^3 \\
&h + 9a^3b^3c^6d^2e^2f^2h^3 - 3a^3b^3c^4d^3e^3f^3h^3 - 18a^3b^3c^6d^2e^2f^2g^2 \\
&+ 9a^3b^3c^6d^2e^2f^2g^3 + 3a^3b^2c^5d^3e^3f^3g^3 - 36a^4b^2c^2e^2k^1l^2m \\
&- 9a^4b^2c^2g^2j^2k^1m + 45a^3b^3c^2d^2k^2l^1m + 36a^4b^2c^2 \\
&*e^2j^1m^2 + 9a^4b^2c^2g^2j^2k^2l^1 + 9a^3b^3c^2e^2j^2l^1m + 9a^4 \\
&4b^2c^2g^2h^2k^2m - 9a^4b^2c^2f^2h^2l^2m - 9a^3b^3c^2f^2j^2k^1 \\
&*l - 45a^3b^3c^2d^2j^2k^1m^2 + 36a^3b^2c^3d^2j^2k^1m + 18a^4b^2c^2 \\
&>f^2h^2k^1m^2 + 18a^4b^2c^2f^2g^1l^2m - 9a^4b^2c^2g^2h^2k^1l^2 - 9 \\
&a^4b^2c^2f^2h^2k^2m - 9a^4b^2c^2f^2g^2l^2m - 9a^4b^2c^2e^2j^2k^2 \\
&l^1 - 9a^4b^2c^2d^2j^2k^2m - 9a^3b^3c^2e^2j^2k^1l^2 - 9a^2b^4c^2 \\
&>d^2j^2k^1m - 36a^3b^2c^3d^2j^2k^2l^1 - 27a^3b^2c^3e^2h^2k^1m + \\
&9a^4b^2c^2g^2h^2j^1l^2 + 9a^4b^2c^2f^2h^2k^1l^2 - 9a^4b^2c^2f^2g^2 \\
&>*k^1m^2 - 9a^4b^2c^2e^2g^2l^1m^2 - 9a^4b^2c^2d^2j^2k^1l^2 + 9a^4b^2c^2 \\
&c^2d^2h^2l^2m - 9a^3b^3c^2e^2g^1l^2m + 9a^2b^4c^2e^2h^2k^1m + 9 \\
&a^2b^4c^2d^2j^2k^2l^1 - 45a^3b^3c^2e^2h^2j^1m^2 + 36a^4b^2c^2e^2h^2 \\
&>2j^1m^2 + 36a^3b^2c^3e^2h^2j^2m - 36a^3b^2c^3d^2h^2k^2m + 36a^2b^3 \\
&>c^3d^2g^2l^1m - 9a^4b^2c^2f^2h^2j^2l^1 - 9a^4b^2c^2d^2h^2k^1m^2 \\
&+ 9a^3b^3c^2f^2h^2j^1l^2 + 9a^3b^3c^2e^2f^1m^2 + 9a^3b^3c^2e^2e \\
&>h^2j^2m - 9a^3b^2c^3f^2h^2j^1l^2 - 9a^2b^4c^2e^2h^2j^2m + 9a^2b^4 \\
&>c^2d^2h^2k^2m + 36a^3b^2c^3d^2h^2k^1l^2 - 27a^4b^2c^2e^2g^2j^2m^2 \\
&>- 27a^4b^2c^2d^2h^2j^2m^2 - 9a^4b^2c^2d^2h^2k^2l^1 - 9a^3b^3c^2e \\
&>^2f^2k^1m^2 - 9a^3b^3c^2d^2f^2l^1m^2 + 9a^3b^2c^3f^2h^2j^2k^1 + 9a^3 \\
&>b^2c^3f^2g^2j^2l^1 - 9a^3b^2c^3e^2g^2k^2l^1 - 9a^3b^2c^3e^2f^2k^2m \\
&>- 9a^3b^2c^3d^2f^2l^2m - 9a^2b^4c^2d^2h^2k^1l^2 + 9a^2b^3c^3d^2 \\
&>h^2k^1l^2 - 81a^3b^2c^3d^2g^2j^1m^2 + 54a^2b^4c^2d^2g^2j^1m^2 - 45a^3 \\
&>b^3c^2d^2g^2j^1m^2 - 45a^2b^3c^3d^2g^2j^2m + 36a^3b^2c^3d^2f^2k^1 \\
&>m^2 + 36a^3b^2c^3d^2g^2j^2m + 18a^3b^2c^3e^2g^2j^1l^2 + 18a^3b^2 \\
&>c^3e^2f^2k^1l^2 + 18a^3b^2c^3d^2e^2l^2m - 9a^4b^2c^2d^2f^2k^2m^2 \\
&- 9a^3b^3c^2f^2g^2h^2m^2 - 9a^3b^3c^2d^2h^2j^1l^2 - 9a^3b^2c^3f^2 \\
&>*g^2j^2k^2 - 9a^3b^2c^3d^2e^2l^1m^2 - 9a^3b^2c^3f^2g^2h^2m - 9a^3b^2 \\
&>c^3e^2g^2j^2l^1 - 9a^3b^2c^3e^2f^2k^2l^1 - 9a^2b^4c^2d^2f^2k^1m^2 - \\
&>9a^2b^4c^2d^2g^2j^2m - 9a^2b^3c^3e^2h^2j^2k^1 - 9a^2b^2c^4d^2f^2 \\
&>k^1m - 27a^2b^2c^4d^2g^2j^1l^2 - 9a^3b^3c^2f^2g^2h^2l^2 + 9a^3b^2 \\
&>c^3e^2g^2j^2k^2 - 9a^3b^2c^3e^2f^2j^1l^2 - 9a^3b^2c^3d^2h^2j^2k^1 - \\
&>9a^3b^2c^3d^2f^2k^1l^2 - 9a^3b^2c^3d^2e^2k^1m^2 - 9a^2b^3c^3e^2g^2 \\
&>h^2m - 9a^2b^3c^3d^2h^2j^2k^2 - 9a^2b^3c^3d^2f^2k^2l^1 - 9a^2b^3 \\
&>c^3d^2e^2k^2m + 36a^3b^3c^2d^2e^2j^2m^2 + 36a^3b^2c^3e^2f^2h^2m^2 \\
&- 27a^2b^2c^4d^2g^2h^2m + 9a^3b^3c^2e^2f^2h^2m^2 + 9a^3b^2c^3f^2g^2 \\
&>h^2k^2 - 9a^2b^4c^2e^2f^2h^2m^2 + 9a^2b^3c^3d^2e^2k^1l^2 - 9a^2b^2 \\
&>c^4e^2f^2h^2m - 45a^2b^3c^3d^2g^2h^2l^2 - 36a^3b^2c^3e^2f^2g^2m^2 \\
&>+ 36a^3b^2c^3d^2g^2h^2l^2 - 36a^3b^2c^3d^2f^2h^2m^2 + 36a^2b^2c^4 \\
&>d^2g^2h^2l^1 - 9a^3b^2c^3e^2g^2h^2k^2 + 9a^2b^4c^2e^2f^2g^2m^2 - 9a^2 \\
&>b^4c^2d^2g^2h^2l^2 + 9a^2b^4c^2d^2f^2h^2m^2 + 9a^2b^3c^3e^2g^2h^2 \\
&>k^2 + 9a^2b^3c^3d^2g^2h^2l^1 - 9a^2b^3c^3d^2e^2j^1l^2 - 9a^2b^2c^4 \\
&>e^2g^2h^2k^1 - 9a^2b^2c^4e^2f^2g^2m - 9a^2b^2c^4d^2f^2j^2k^1 - 9a^2
\end{aligned}$$

$$\begin{aligned}
& 2*b^2*c^4*d^2*f*h^2*m - 9*a^2*b^2*c^4*d^2*e*j^2*1 - 45*a^2*b^3*c^3*d^2*f*g* \\
& m^2 + 36*a^3*b^2*c^3*d*f*g^2*m^2 - 27*a^3*b^2*c^3*d*f*h^2*1^2 + 18*a^2*b^2* \\
& c^4*d^2*e*j*k^2 + 9*a^2*b^4*c^2*d*f*h^2*1^2 - 9*a^2*b^4*c^2*d*f*g^2*m^2 - 9 \\
& *a^2*b^3*c^3*e^2*f*g*1^2 + 9*a^2*b^2*c^4*e^2*g*h^2*j + 9*a^2*b^2*c^4*e^2*f* \\
& h^2*k - 9*a^2*b^2*c^4*e*f^2*g^2*1 - 9*a^2*b^2*c^4*d*f^2*g^2*m - 9*a^2*b^2*c \\
& ^4*d*e^2*j^2*k + 9*a^2*b^2*c^4*d*e^2*h^2*m + 18*a^4*b^2*c^2*f^2*j^2*m^2 + 1 \\
& 8*a^3*b^2*c^3*e^2*h^2*1^2 - 9*a^2*b^4*c^2*e^2*h^2*1^2 + 18*a^2*b^2*c^4*d^2* \\
& g^2*k^2 + 12*a^6*c^2*j^3*k*1*m + 3*a^6*b^2*j*k*1*m^3 - 12*a^6*c^2*g*k^3*1*m \\
& - 12*a^5*c^3*g^3*k*1*m - 24*a^6*c^2*e*k*1^3*m - 24*a^4*c^4*e^3*k*1*m + 12* \\
& a^6*c^2*h*j*k*1^3 + 12*a^6*c^2*f*j*1^3*m + 12*a^5*c^3*h^3*j*k*1 - 3*a^5*b^3 \\
& *h*j*k*m^3 - 3*a^5*b^3*g*j*1*m^3 - 3*a^5*b^3*f*k*1*m^3 + 12*a^6*c^2*g*h*1^3 \\
& *m + 12*a^5*c^3*g*h^3*1*m - 12*a^6*c^2*e*j*k*m^3 - 12*a^6*c^2*d*j*1*m^3 - 1 \\
& 2*a^5*c^3*f*j^3*k*1 - 12*a^5*c^3*e*j^3*k*m - 12*a^5*c^3*d*j^3*1*m - 12*a^4* \\
& c^4*f^3*j*k*1 + 24*a^6*c^2*f*h*k*m^3 + 24*a^6*c^2*f*g*1*m^3 + 24*a^4*c^4*f^ \\
& 3*h*k*m + 24*a^4*c^4*f^3*g*1*m - 12*a^6*c^2*g*h*j*m^3 - 12*a^6*c^2*e*h*1*m^ \\
& 3 - 12*a^5*c^3*g*h*j^3*m + 3*b^6*c^2*d^3*j*k*1 + 3*a^4*b^4*e*j*k*m^3 + 3*a^ \\
& 4*b^4*d*j*1*m^3 - 24*a^5*c^3*d*j*k^3*1 - 24*a^3*c^5*d^3*j*k*1 - 6*a^4*b^4*e \\
& *h*1*m^3 + 3*b^6*c^2*d^3*h*k*m + 3*b^6*c^2*d^3*g*1*m + 3*a^6*b*c*j^2*1^3*m \\
& + 3*a^4*b^4*g*h*j*m^3 + 3*a^4*b^4*f*h*k*m^3 + 3*a^4*b^4*f*g*1*m^3 - 24*a^5* \\
& c^3*d*h*k^3*m - 24*a^3*c^5*d^3*h*k*m + 12*a^5*c^3*g*h*j*k^3 + 12*a^5*c^3*f* \\
& g*k^3*1 + 12*a^5*c^3*e*h*k^3*1 + 12*a^5*c^3*e*g*k^3*m + 12*a^4*c^4*g^3*h*j* \\
& k + 12*a^4*c^4*f*g^3*k*1 + 12*a^4*c^4*f*g^3*j*m + 12*a^4*c^4*e*g^3*k*m + 12 \\
& *a^4*c^4*d*g^3*1*m + 12*a^3*c^5*d^3*g*1*m + 3*a^6*b*c*j*k^3*m^2 - 9*a^6*b*c \\
& *h^2*1*m^3 - 3*a^5*b*c^2*j^4*k*1 + 24*a^5*c^3*e*g*j*1^3 + 24*a^5*c^3*e*f*k* \\
& 1^3 + 24*a^5*c^3*d*e*1^3*m + 24*a^3*c^5*e^3*g*j*1 + 24*a^3*c^5*e^3*f*k*1 + \\
& 24*a^3*c^5*d*e^3*1*m - 12*a^5*c^3*d*h*j*1^3 - 12*a^5*c^3*d*g*k*1^3 - 12*a^4 \\
& *c^4*e*h^3*j*k - 12*a^4*c^4*d*h^3*j*1 - 12*a^3*c^5*e^3*h*j*k - 12*a^3*c^5*e \\
& ^3*f*j*m + 9*a^4*b*c^3*g^4*1*m + 6*b^5*c^3*d^3*f*j*m + 6*a^3*b^5*d*g*k*m^3 \\
& - 3*b^5*c^3*d^3*h*j*k - 3*b^5*c^3*d^3*g*j*1 - 3*b^5*c^3*d^3*f*k*1 - 3*b^5*c \\
& ^3*d^3*e*k*m - 3*a^3*b^5*e*g*j*m^3 - 3*a^3*b^5*e*f*k*m^3 - 3*a^3*b^5*d*h*j* \\
& m^3 - 3*a^3*b^5*d*f*1*m^3 - 12*a^5*c^3*f*g*h*1^3 - 12*a^4*c^4*f*g*h^3*1 - 1 \\
& 2*a^4*c^4*e*g*h^3*m - 12*a^3*c^5*e^3*g*h*m - 9*a^6*b*c*g*k^2*m^3 - 3*b^5*c^ \\
& 3*d^3*g*h*m + 3*a^6*b*c*f*1^3*m^2 - 3*a^3*b^5*f*g*h*m^3 + 12*a^5*c^3*d*e*j* \\
& m^3 + 12*a^4*c^4*e*f*j^3*k + 12*a^4*c^4*d*g*j^3*k + 12*a^4*c^4*d*f*j^3*1 + \\
& 12*a^4*c^4*d*e*j^3*m + 12*a^3*c^5*e*f^3*j*k + 12*a^3*c^5*d*f^3*j*1 - 9*a^6* \\
& b*c*e*1^2*m^3 - 24*a^5*c^3*e*f*g*m^3 - 24*a^5*c^3*d*f*h*m^3 - 24*a^3*c^5*e* \\
& f^3*g*m - 24*a^3*c^5*d*f^3*h*m - 15*a^2*b*c^5*d^4*1*m + 15*a*b^3*c^4*d^4*1* \\
& m + 12*a^4*c^4*f*g*h*j^3 + 12*a^3*c^5*f^3*g*h*j + 12*a^3*c^5*e*f^3*h*1 + 9* \\
& a^3*b*c^4*f^4*k*1 - 9*a^3*b*c^4*f^4*j*m + 3*b^4*c^4*d^3*e*j*k + 3*a^5*b^2*c \\
& *g*j*1^4 + 3*a^5*b^2*c*f*k*1^4 + 3*a^5*b^2*c*d*1^4*m - 3*a^5*b*c^2*h*j*k^4 \\
& - 3*a^5*b*c^2*f*k^4*1 - 3*a^5*b*c^2*e*k^4*m - 3*a^4*b*c^3*h^4*j*k + 3*a^2*b \\
& ^6*d*e*j*m^3 + 3*a*b^4*c^3*e^4*k*m + 24*a^4*c^4*d*e*j*k^3 + 24*a^2*c^6*d^3* \\
& e*j*k - 6*b^4*c^4*d^3*e*h*1 + 3*b^4*c^4*d^3*g*h*j + 3*b^4*c^4*d^3*f*h*k + 3 \\
& *b^4*c^4*d^3*f*g*1 + 3*b^4*c^4*d^3*e*g*m - 3*a^4*b*c^3*g*h^4*m + 3*a^2*b^6* \\
& e*f*g*m^3 + 3*a^2*b^6*d*f*h*m^3 - 3*a*b^6*c*e^3*j*m^2 + 24*a^4*c^4*d*f*h*k^
\end{aligned}$$

$$\begin{aligned}
& 3 + 24a^2c^6d^3f^*h^*k - 12a^4c^4e^*f^*g^*k^3 - 12a^3c^5e^*f^*g^3k - 12 \\
& a^3c^5d^*g^3h^*j - 12a^3c^5d^*f^*g^3l - 12a^3c^5d^*e^*g^3m - 12a^2c^ \\
& ^6d^3g^*h^*j - 12a^2c^6d^3f^*g^*l - 12a^2c^6d^3e^*h^*l - 12a^2c^6d^3 \\
& *e^*g^*m - 12a^*b^2c^5d^4j^*l + 9a^5b^*c^2d^*j^*l^4 + 9a^2b^*c^5e^4j^*k - \\
& 3a^4b^3c^*d^*j^*l^4 - 3a^4b^*c^3e^*j^4k - 3a^4b^*c^3d^*j^4l - 3a^*b^3c^ \\
& ^4e^4j^*k - 24a^4c^4d^*e^*f^*l^3 - 24a^2c^6d^*e^3f^*l - 12a^5b^2c^*e^* \\
& g^*m^4 - 12a^5b^2c^*d^*h^*m^4 + 12a^3c^5d^*e^*h^3j + 12a^2c^6d^*e^3h^*j \\
& + 12a^2c^6d^*e^3g^*k - 12a^*b^2c^5d^4h^*m + 9a^5b^*c^2f^*g^*l^4 - 9a^5 \\
& *b^*c^2e^*h^*l^4 - 9a^2b^*c^5e^4h^*l + 9a^2b^*c^5e^4g^*m + 6a^4b^3c^*e^* \\
& h^*l^4 + 6a^*b^3c^4e^4h^*l - 3b^3c^5d^3e^*g^*j - 3b^3c^5d^3e^*f^*k - 3 \\
& *a^4b^3c^*f^*g^*l^4 - 3a^4b^*c^3g^*h^*j^4 - 3a^3b^*c^4g^4h^*j - 3a^3b^*c^ \\
& ^4f^*g^4l - 3a^3b^*c^4e^*g^4m - 3a^*b^3c^4e^4g^*m + 12a^3c^5e^*f^*g^*h^ \\
& ^3 + 12a^2c^6e^3f^*g^*h - 3b^3c^5d^3f^*g^*h - 12a^3c^5d^*e^*f^*j^3 - 12 \\
& a^2c^6d^*e^*f^3j - 3a^*b^6c^*d^2g^*l^3 - 15a^5b^*c^2d^*e^*m^4 + 15a^4b^3 \\
& *c^*d^*e^*m^4 + 9a^4b^*c^3e^*f^*k^4 - 9a^4b^*c^3d^*g^*k^4 + 3a^3b^4c^*d^*f^*l^ \\
& ^4 - 3a^3b^*c^4d^*h^4j - 3a^2b^*c^5e^*f^4k - 3a^2b^*c^5d^*f^4l + 3a^*b \\
& ^2c^5e^4g^*j + 3a^*b^2c^5e^4f^*k + 3a^*b^2c^5d^*e^4m - 9a^*b^*c^6d^3e^ \\
& ^2l + 3b^2c^6d^3e^*f^*g - 3a^3b^*c^4f^*g^*h^4 - 3a^2b^*c^5f^4g^*h + 1 \\
& 2a^2c^6d^*e^*f^*g^3 - 9a^*b^*c^6d^3f^2j + 3a^*b^*c^6d^2e^3k + 9a^3b^*c \\
& ^4d^*e^*j^4 - 3a^2b^*c^5e^*f^*g^4 - 9a^*b^*c^6d^3e^*h^2 + 3a^*b^*c^6d^2f^3 \\
& g + 3a^*b^*c^6d^*e^3g^2 - 3a^4b^2c^2h^3j^2m + 12a^4b^2c^2g^3j^*m^ \\
& ^2 - 3a^4b^2c^2f^2k^3m + 3a^3b^3c^2g^3j^2m - 9a^3b^4c^*f^2j^2 \\
& *m^2 + 9a^3b^3c^2f^2j^3m - 6a^3b^3c^2f^3j^*m^2 - 6a^3b^2c^3f^ \\
& ^3j^2m - 3a^2b^4c^2f^3j^2m - 27a^4b^2c^2d^2k^*m^3 - 27a^3b^2c \\
& ^3e^3j^*m^2 + 18a^2b^4c^2e^3j^*m^2 - 15a^2b^3c^3e^3j^2m + 12a^4 \\
& *b^2c^2f^2j^*l^3 + 3a^3b^3c^2e^2k^3l + 42a^2b^3c^3d^3j^*m^2 - 2 \\
& 7a^2b^2c^4d^3j^2m - 15a^3b^3c^2d^2k^*l^3 - 3a^4b^2c^2f^*j^2k^ \\
& ^3 - 3a^4b^2c^2f^*h^3m^2 + 3a^3b^3c^2g^3h^*l^2 + 3a^3b^3c^2f^2j \\
& *k^3 - 3a^3b^2c^3g^3h^2l - 3a^3b^2c^3e^2j^3l - 27a^4b^2c^2e \\
& ^2h^*m^3 + 12a^3b^2c^3f^3h^*l^2 + 3a^3b^3c^2f^*g^3m^2 - 3a^2b^4c \\
& ^2f^3h^*l^2 + 3a^2b^3c^3f^3h^2l + 9a^3b^3c^2e^*h^3l^2 + 9a^2b^ \\
& ^3c^3e^2h^3l - 6a^4b^2c^2e^*h^2l^3 - 6a^3b^3c^2e^2h^*l^3 - 6a^2 \\
& *b^3c^3e^3h^*l^2 - 6a^2b^2c^4e^3h^2l + 3a^2b^3c^3d^2j^3k + 42 \\
& *a^3b^3c^2d^2g^*m^3 - 27a^4b^2c^2d^*g^2m^3 - 27a^2b^2c^4d^3h^*l^ \\
& ^2 - 15a^2b^3c^3e^3f^*m^2 + 12a^3b^2c^3e^2h^*k^3 + 3a^3b^3c^2e^*h \\
& ^2k^3 - 3a^3b^2c^3e^*g^3l^2 - 3a^2b^4c^2e^2h^*k^3 + 3a^2b^3c^3f \\
& ^3g^*k^2 - 3a^2b^2c^4f^3g^2k - 27a^3b^2c^3d^2g^*l^3 - 27a^2b^2 \\
& *c^4d^3f^*m^2 + 18a^2b^4c^2d^2g^*l^3 - 15a^3b^3c^2d^*g^2l^3 + 12a \\
& ^2b^2c^4e^3g^*k^2 - 3a^3b^2c^3e^*h^2j^3 + 3a^2b^3c^3e^2h^*j^3 + \\
& 3a^2b^3c^3e^*f^3l^2 - 3a^2b^2c^4d^2h^3k + 9a^2b^3c^3d^*g^3k^2 \\
& - 9a^*b^4c^3d^2g^2k^2 - 6a^3b^2c^3d^*g^2k^3 - 6a^2b^3c^3d^2g^* \\
& k^3 - 3a^2b^4c^2d^*g^2k^3 + 12a^2b^2c^4d^2g^*j^3 + 3a^2b^3c^3d^* \\
& g^2j^3 - 3a^2b^2c^4d^*f^3k^2 - 3a^2b^2c^4d^*g^2h^3 + 12a^7c^*j^*k^* \\
& l^*m^3 - 3b^7c^*d^3k^*l^*m - 3a^6b^*c^*k^4l^*m - 3a^6b^*c^*j^*k^*l^4 - 3a^6b^* \\
& *c^*g^*l^4m - 9a^6b^*c^*f^*j^*m^4 + 9a^6b^*c^*e^*k^*m^4 + 9a^6b^*c^*d^*l^*m^4 + 9*
\end{aligned}$$

$$\begin{aligned}
& a^6 b^6 c^6 g^6 h^6 m^4 - 3 a^6 b^7 d^6 e^6 f^6 m^3 + 9 a^6 b^6 c^6 d^4 h^6 j - 9 a^6 b^6 c^6 d^4 g^6 k \\
& + 9 a^6 b^6 c^6 d^4 f^6 l + 9 a^6 b^6 c^6 d^4 e^6 m + 12 a^6 c^7 d^3 e^6 f^6 g - 3 a^6 b^6 c^6 d^6 \\
& e^6 f^6 j - 3 a^6 b^6 c^6 e^6 f^6 g - 3 a^6 b^6 c^6 d^6 e^6 f^6 + 18 a^6 c^2 h^2 j^2 l^2 m^2 - 1 \\
& 8 a^6 c^2 h^2 j^2 l^2 m^2 + 18 a^6 c^2 f^2 k^2 l^2 m^2 + 36 a^5 c^3 e^2 k^2 l^2 m^2 + 1 \\
& 8 a^6 c^2 g^2 j^2 k^2 m^2 + 18 a^6 c^2 e^2 k^2 l^2 m^2 + 18 a^5 c^3 g^2 j^2 k^2 m^2 + 1 \\
& 8 a^6 c^2 e^2 j^2 l^2 m^2 + 18 a^6 c^2 d^2 k^2 l^2 m^2 - 18 a^5 c^3 e^2 j^2 l^2 m^2 - 1 \\
& 8 a^6 c^2 f^2 h^2 l^2 m^2 + 18 a^5 c^3 f^2 h^2 l^2 m^2 - 36 a^5 c^3 f^2 h^2 k^2 m^2 - 3 \\
& 6 a^5 c^3 f^2 g^2 l^2 m^2 + 18 a^5 c^3 g^2 h^2 k^2 l^2 m^2 - 18 a^5 c^3 g^2 h^2 k^2 l^2 m^2 + 1 \\
& 8 a^5 c^3 f^2 h^2 k^2 l^2 m^2 + 18 a^5 c^3 f^2 g^2 l^2 m^2 + 18 a^5 c^3 e^2 j^2 k^2 l^2 m^2 + 1 \\
& 8 a^5 c^3 d^2 j^2 k^2 l^2 m^2 - 18 a^4 c^4 d^2 j^2 k^2 m^2 + 36 a^4 c^4 d^2 j^2 k^2 l^2 m^2 + 1 \\
& 8 a^5 c^3 f^2 g^2 k^2 m^2 + 18 a^5 c^3 e^2 g^2 l^2 m^2 + 18 a^5 c^3 d^2 j^2 k^2 l^2 m^2 - 1 \\
& 8 a^4 c^4 f^2 g^2 k^2 m^2 + 36 a^4 c^4 d^2 h^2 k^2 m^2 + 18 a^5 c^3 f^2 h^2 j^2 l^2 m^2 - 1 \\
& 8 a^5 c^3 e^2 h^2 j^2 m^2 + 18 a^5 c^3 d^2 h^2 k^2 m^2 + 18 a^4 c^4 f^2 h^2 j^2 l^2 m^2 - 1 \\
& 8 a^4 c^4 e^2 h^2 j^2 m^2 - 18 a^5 c^3 e^2 g^2 k^2 l^2 m^2 + 18 a^5 c^3 d^2 h^2 k^2 l^2 m^2 + 1 \\
& 8 a^4 c^4 e^2 g^2 k^2 l^2 m^2 + 18 a^4 c^4 e^2 f^2 k^2 l^2 m^2 - 18 a^4 c^4 d^2 h^2 k^2 l^2 m^2 + 1 \\
& 8 a^4 c^4 d^2 f^2 l^2 m^2 - 36 a^4 c^4 e^2 g^2 j^2 l^2 m^2 - 36 a^4 c^4 e^2 f^2 k^2 l^2 m^2 - 3 \\
& 6 a^4 c^4 d^2 e^2 l^2 m^2 + 18 a^5 c^3 d^2 f^2 k^2 m^2 + 18 a^4 c^4 f^2 g^2 j^2 k^2 l^2 m^2 + 1 \\
& 8 a^4 c^4 d^2 g^2 j^2 m^2 - 18 a^4 c^4 d^2 f^2 k^2 m^2 + 18 a^4 c^4 d^2 e^2 l^2 m^2 - 1 \\
& 8 a^4 c^4 f^2 g^2 j^2 k^2 l^2 m^2 + 18 a^4 c^4 f^2 g^2 h^2 j^2 l^2 m^2 + 18 a^4 c^4 e^2 g^2 j^2 l^2 m^2 + 1 \\
& 8 a^4 c^4 e^2 f^2 k^2 l^2 m^2 - 18 a^4 c^4 d^2 g^2 j^2 m^2 - 18 a^4 c^4 d^2 f^2 k^2 l^2 m^2 + 1 \\
& 8 a^3 c^5 d^2 f^2 k^2 m^2 + 3 a^4 b^2 c^2 h^4 k^2 m^2 - 3 a^3 b^3 c^2 g^4 l^2 m^2 + 18 a^4 \\
& c^4 e^2 f^2 j^2 l^2 m^2 + 18 a^4 c^4 d^2 h^2 j^2 k^2 l^2 m^2 + 18 a^4 c^4 d^2 f^2 k^2 l^2 m^2 + 18 a^4 \\
& c^4 d^2 e^2 k^2 m^2 - 18 a^3 c^5 e^2 f^2 j^2 l^2 m^2 + 12 a^5 b^2 c^2 g^2 k^2 m^3 - 9 a^5 b^2 c^2 h^3 \\
& j^2 m^2 - 9 a^5 b^2 c^2 f^2 l^3 m^2 + 3 a^5 b^2 c^2 h^2 k^3 l^2 m^2 + 3 a^4 b^3 c^2 h^3 j^2 m^2 + 3 a^4 \\
& b^3 c^2 h^3 j^2 m^2 + 3 a^4 b^3 c^2 f^2 l^3 m^2 - 18 a^4 c^4 e^2 f^2 h^2 m^2 + 18 a^3 c^5 e^2 f^2 h^2 m^2 \\
& + 15 a^5 b^2 c^2 e^2 l^2 m^3 - 15 a^4 b^3 c^2 e^2 l^2 m^3 - 9 a^5 b^2 c^2 g^2 k^2 l^3 m^2 - 9 a^4 b^3 c^2 \\
& g^2 k^2 l^3 m^2 - 9 a^4 b^3 c^2 g^2 j^2 m^2 - 3 a^5 b^2 c^2 g^2 k^2 l^3 m^2 + 3 a^5 b^2 c^2 h^3 j^2 l^2 m^2 \\
& + 3 a^4 b^3 c^2 g^2 k^2 l^3 m^2 - 3 a^3 b^4 c^2 g^3 j^2 m^2 + 36 a^4 c^4 e^2 f^2 g^2 m^2 + 36 a^4 c^4 d^2 f^2 h^2 m^2 \\
& + 18 a^4 c^4 e^2 g^2 h^2 k^2 l^2 m^2 - 18 a^4 c^4 d^2 g^2 h^2 k^2 l^2 m^2 - 18 a^4 c^4 d^2 f^2 j^2 k^2 l^2 m^2 \\
& + 18 a^3 c^5 e^2 g^2 h^2 k^2 l^2 m^2 + 18 a^3 c^5 e^2 f^2 g^2 h^2 k^2 l^2 m^2 - 18 a^3 c^5 d^2 g^2 h^2 k^2 l^2 m^2 \\
& + 18 a^3 c^5 d^2 f^2 j^2 k^2 l^2 m^2 + 18 a^3 c^5 d^2 e^2 j^2 l^2 m^2 - 12 a^2 b^2 c^4 e^4 k^2 m^2 + 9 a^4 b^3 c^2 f^2 \\
& j^3 m^2 - 9 a^4 b^2 c^2 f^2 j^4 m^2 - 6 a^5 b^2 c^2 f^2 j^2 m^3 + 6 a^5 b^2 c^2 f^2 j^2 m^3 - 6 a^5 b^2 c^2 f^2 j^3 m^2 \\
& - 6 a^4 b^3 c^2 f^2 j^3 m^2 + 6 a^4 b^3 c^2 f^2 j^3 m^2 + 6 a^2 b^3 c^3 f^4 j^2 m^2 + 3 a^3 b^2 c^3 g^4 j^2 l^2 m^2 \\
& - 3 a^2 b^5 c^2 f^3 j^2 m^2 - 3 a^2 b^3 c^3 f^4 k^2 l^2 m^2 - 36 a^3 c^5 d^2 e^2 j^2 k^2 l^2 m^2 - 1 \\
& 8 a^4 c^4 d^2 f^2 g^2 m^2 + 18 a^3 c^5 e^2 f^2 g^2 l^2 m^2 + 18 a^3 c^5 d^2 f^2 g^2 l^2 m^2 + 1 \\
& 8 a^3 c^5 d^2 e^2 j^2 k^2 l^2 m^2 + 18 a^3 b^4 c^2 d^2 k^2 m^3 + 15 a^3 b^2 c^4 e^3 j^2 m^2 + 1 \\
& 2 a^5 b^2 c^2 d^2 k^2 m^3 - 9 a^5 b^2 c^2 f^2 j^2 l^3 m^2 - 9 a^4 b^3 c^2 e^2 k^3 l^2 m^2 + 3 a^5 b^2 c^2 e^2 k^3 l^2 m^2 \\
& + 3 a^4 b^3 c^2 f^2 j^2 l^3 m^2 + 3 a^4 b^3 c^2 g^2 j^3 k^2 l^2 m^2 - 3 a^3 b^4 c^2 f^2 j^2 l^3 m^2 + 3 a^3 b^2 c^3 g^4 h^2 m^2 \\
& + 3 a^3 b^5 c^2 e^3 j^2 m^2 - 36 a^3 c^5 d^2 f^2 h^2 k^2 l^2 m^2 - 21 a^3 b^2 c^4 d^3 j^2 m^2 - 21 a^3 b^5 c^2 d^3 j^2 m^2 \\
& + 18 a^3 c^5 e^2 f^2 h^2 j^2 l^2 m^2 - 18 a^3 c^5 e^2 f^2 h^2 j^2 l^2 m^2 + 18 a^3 c^5 d^2 f^2 h^2 k^2 l^2 m^2 + 18 a^3 b^4 c^3 \\
& d^3 j^2 m^2 + 15 a^4 b^3 c^3 d^2 k^2 l^3 m^2 - 9 a^5 b^2 c^2 d^2 k^2 l^3 m^2 - 9 a^4 b^3 c^3 g^3 h^2 l^2 m^2 - 9 a^4 b^3 c^3 \\
& f^2 j^2 k^3 l^2 m^2 + 3 a^4 b^3 c^3 d^2 k^2 l^3 m^2 + 3 a^2 b^5 c^2 d^2 k^2 l^3 m^2 + 3 a^2 b^5 c^2 d^2 k^2 l^3 m^2
\end{aligned}$$

$$\begin{aligned}
&^2k^1^3 - 18a^3c^5d^2e^*g^1^2 + 18a^3c^5d^*e^2h^*k^2 + 18a^3b^4c^*e \\
&^2h^*m^3 - 18a^2c^6d^2e^2h^*k + 18a^2c^6d^2e^2g^*1 + 18a^2c^6d^2 \\
&*e^2f^*m + 15a^5b^*c^2e^*h^2m^3 - 15a^4b^3c^*e^*h^2m^3 - 9a^4b^*c^3f^* \\
&g^3m^2 - 9a^3b^*c^4f^3h^2*1 + 3a^4b^2c^2e^*j^*k^4 + 3a^4b^*c^3g^*h^3 \\
&*k^2 + 3a^3b^*c^4f^2g^3*m + 36a^3c^5d^*e^2f^*1^2 + 18a^3c^5d^*f^*g^2* \\
&j^2 + 18a^2c^6d^2f^2g^*j + 18a^2c^6d^2e^*f^2*1 - 9a^3b^2c^3e^*h^4 \\
&*1 - 9a^3b^*c^4d^2j^3*k + 6a^4b^*c^3e^2h^*1^3 - 6a^4b^*c^3e^*h^3*1^2 \\
&+ 6a^3b^*c^4e^3h^*1^2 - 6a^3b^*c^4e^2h^3*1 + 3a^4b^2c^2f^*h^*k^4 + 3 \\
&*a^4b^*c^3d^*j^3*k^2 - 3a^3b^4c^*e^*h^2*1^3 + 3a^2b^5c^*e^2h^*1^3 + 3a^ \\
&2b^2c^4f^4h^*k + 3a^2b^2c^4f^4g^*1 + 3a^*b^5c^2e^3h^*1^2 - 3a^*b^4 \\
&*c^3e^3h^2*1 - 21a^4b^*c^3d^2g^*m^3 - 21a^2b^5c^*d^2g^*m^3 + 18a^3b^ \\
&^4c^*d^*g^2m^3 + 18a^2c^6d^*e^2f^2*k + 18a^*b^4c^3d^3h^*1^2 + 15a^3b^ \\
&*c^4e^3f^*m^2 + 15a^2b^*c^5d^3h^2*1 - 15a^*b^3c^4d^3h^2*1 - 9a^4b^* \\
&c^3e^*h^2*k^3 - 9a^3b^*c^4f^3g^*k^2 - 9a^2b^*c^5e^3f^2*m + 3a^3b^*c^4 \\
&*f^2h^3*j + 3a^*b^5c^2e^3f^*m^2 + 3a^*b^3c^4e^3f^2*m + 18a^*b^4c^3d^ \\
&^3f^*m^2 + 15a^4b^*c^3d^*g^2*1^3 + 12a^*b^2c^5d^3f^2*m - 9a^3b^*c^4e^ \\
&2h^*j^3 - 9a^3b^*c^4e^*f^3*1^2 - 9a^2b^*c^5e^3g^2*k + 3a^3b^*c^4f^*g^3 \\
&*j^2 + 3a^2b^5c^*d^*g^2*1^3 + 3a^2b^*c^5e^2f^3*1 - 3a^*b^4c^3e^3g^*k^ \\
&2 + 3a^*b^3c^4e^3g^2*k + 18a^2c^6d^2e^*g^*h^2 - 18a^2c^6d^*e^2g^2h^ \\
&- 12a^4b^2c^2d^*f^*1^4 - 9a^2b^2c^4d^*g^4*k + 9a^*b^3c^4d^2g^3*k + \\
&6a^3b^3c^2d^*g^*k^4 + 6a^3b^*c^4d^2g^*k^3 - 6a^3b^*c^4d^*g^3k^2 + 6a^ \\
&a^2b^*c^5d^3g^*k^2 - 6a^2b^*c^5d^2g^3*k - 6a^*b^3c^4d^3g^*k^2 - 6a^*b^ \\
&^2c^5d^3g^2*k - 3a^3b^3c^2e^*f^*k^4 + 3a^3b^2c^3e^*g^*j^4 + 3a^3b^ \\
&2c^3d^*h^*j^4 + 3a^*b^5c^2d^2g^*k^3 + 15a^2b^*c^5d^3e^*1^2 - 15a^*b^3c^ \\
&^4d^3e^*1^2 - 9a^3b^*c^4d^*g^2*j^3 - 9a^2b^*c^5e^3f^*j^2 - 3a^*b^4c^3* \\
&d^2g^*j^3 + 3a^*b^3c^4e^3f^*j^2 - 3a^*b^2c^5e^3f^2*j + 12a^*b^2c^5d^ \\
&3f^*j^2 - 9a^2b^*c^5d^*e^3k^2 + 3a^2b^*c^5e^2g^3h^ + 3a^*b^3c^4d^*e^3 \\
&*k^2 - 9a^2b^*c^5d^2g^*h^3 - 3a^2b^3c^3d^*e^*j^4 + 3a^2b^*c^5e^*f^3h^ \\
&2 + 3a^*b^3c^4d^2g^*h^3 + 3a^2b^2c^4d^*f^*h^4 - 9a^7c^*k^2*1^2m^2 - 6 \\
&*a^6c^2j^2k^3m - 3a^6b^2h^*1^2m^3 + 3a^5b^3h^2*1m^3 - 6a^6c^2* \\
&g^2k^*m^3 - 6a^6c^2h^*k^3*1^2 + 6a^5c^3h^3j^2*m + 6a^6c^2g^*k^2*1^3 \\
&- 6a^6c^2f^*k^3m^2 - 6a^5c^3h^2j^3*1 - 6a^5c^3g^3j^*m^2 + 6a^5c^ \\
&c^3f^2k^3m + 3a^5b^3g^*k^2m^3 - 3a^4b^4g^2k^*m^3 + 12a^6c^2f^*j^ \\
&2m^3 + 12a^4c^4f^3j^2*m + 3a^5b^3e^*1^2m^3 + 3a^3b^5e^2*1m^3 - \\
&6a^6c^2d^*k^2m^3 - 6a^5c^3f^2j^*1^3 + 6a^5c^3d^2k^*m^3 - 6a^5c^3 \\
&*g^*j^3k^2 + 6a^4c^4e^3j^*m^2 - 3b^6c^2d^3j^2*m - 3a^4b^4f^*j^2m^ \\
&3 + 3a^3b^5f^2j^*m^3 + 6a^5c^3f^*j^2k^3 + 6a^5c^3f^*h^3m^2 - 6a^5 \\
&*c^3e^*j^3*1^2 + 6a^4c^4g^3h^2*1 - 6a^4c^4f^2h^3m + 6a^4c^4e^2* \\
&j^3*1 + 6a^3c^5d^3j^2m - 3a^4b^4d^*k^2m^3 - 3a^2b^6d^2k^*m^3 + 6 \\
&*a^5c^3e^2h^*m^3 - 6a^4c^4g^2h^3k - 6a^4c^4f^3h^*1^2 + 12a^5c^3 \\
&*e^*h^2*1^3 + 12a^3c^5e^3h^2*1 - 3b^6c^2d^3h^*1^2 + 3b^5c^3d^3h^2 \\
&*1 - 3a^5b^2c^*j^4m^2 + 3a^3b^5e^*h^2m^3 - 3a^2b^6e^2h^*m^3 + 6a^ \\
&5c^3d^*g^2m^3 - 6a^4c^4e^2h^*k^3 - 6a^4c^4f^*h^3j^2 + 6a^4c^4e^*g^ \\
&^3*1^2 + 6a^3c^5f^3g^2*k - 6a^3c^5e^2g^3*1 + 6a^3c^5d^3h^*1^2 - \\
&3b^6c^2d^3f^*m^2 - 3b^4c^4d^3f^2*m + 6a^4c^4d^2g^*1^3 + 6a^4c^4
\end{aligned}$$

$$\begin{aligned}
& *e^h^2*j^3 - 6*a^4*c^4*d*h^3*k^2 - 6*a^3*c^5*f^2*g^3*j - 6*a^3*c^5*e^3*g*k^2 \\
& + 6*a^3*c^5*d^3*f*m^2 + 6*a^3*c^5*d^2*h^3*k - 6*a^2*c^6*d^3*f^2*m + 4*a^5 \\
& *b^2*c^h^3*m^3 + 3*b^5*c^3*d^3*g*k^2 - 3*b^4*c^4*d^3*g^2*k - 3*a^2*b^6*d*g^2 \\
& *m^3 + a^5*b*c^2*j^3*k^3 + 12*a^4*c^4*d*g^2*k^3 + 12*a^2*c^6*d^3*g^2*k + 6 \\
& *a^5*b*c^2*h^3*l^3 + 5*a^5*b*c^2*g^3*m^3 - 5*a^4*b^3*c*g^3*m^3 + 3*b^5*c^3*d \\
& ^3*e^1^2 + 3*b^3*c^5*d^3*e^2*1 - 3*a^5*b^2*c^h^2*1^4 + a^4*b^3*c^h^3*1^3 + \\
& 12*a^5*b^2*c^f^2*m^4 - 6*a^3*c^5*d^2*g*j^3 + 6*a^3*c^5*d*f^3*k^2 + 6*a^3*b \\
& ^4*c^f^3*m^3 + 6*a^2*c^6*e^3*f^2*j - 6*a^2*c^6*d^2*f^3*k - 3*b^4*c^4*d^3*f*j \\
& ^2 + 3*b^3*c^5*d^3*f^2*j - 3*a^2*b^2*c^4*f^5*m - 7*a^4*b*c^3*e^3*m^3 - 7*a \\
& ^2*b^5*c^e^3*m^3 + 6*a^4*b*c^3*g^3*k^3 - 6*a^3*c^5*e*g^3*h^2 - 6*a^2*c^6*d^3 \\
& *f*j^2 + 5*a^4*b*c^3*f^3*1^3 + a^4*b*c^3*h^3*j^3 + a^2*b^5*c^f^3*1^3 + 6*a \\
& ^3*c^5*d*g^2*h^3 - 6*a^2*c^6*e^2*f^3*h - 3*a^3*b^4*c^e^2*1^4 - 3*a*b^4*c^3 \\
& e^4*1^2 - 7*a^3*b*c^4*d^3*1^3 - 7*a*b^5*c^2*d^3*1^3 + 6*a^3*b*c^4*f^3*j^3 + \\
& 5*a^3*b*c^4*e^3*k^3 + 3*b^3*c^5*d^3*e^h^2 - 3*b^2*c^6*d^3*e^2*h + a*b^5*c^2 \\
& *e^3*k^3 + 12*a*b^2*c^5*d^4*k^2 - 6*a^2*c^6*d*f^3*g^2 + 6*a*b^4*c^3*d^3*k^3 \\
& - 3*a^4*b^2*c^2*d*k^5 + a^3*b*c^4*g^3*h^3 + 5*a^2*b*c^5*d^3*j^3 - 5*a*b^3 \\
& *c^4*d^3*j^3 - 9*a*c^7*d^2*e^2*f^2 + 6*a^2*b*c^5*e^3*h^3 - 3*a*b^2*c^5*e^4 \\
& h^2 + a^2*b*c^5*f^3*g^3 + a*b^3*c^4*e^3*h^3 + 4*a*b^2*c^5*d^3*h^3 - 3*a*b^2 \\
& *c^5*d^2*g^4 - 6*a^7*c*j^1^3*m^2 + 6*a^7*c^h^1^2*m^3 + 6*a^6*c^2*j*k^4*1 + \\
& 6*a^6*c^2*h*k^4*m - 6*a^5*c^3*h^4*k*m + 3*a^6*b^2*h*k*m^4 + 3*a^6*b^2*g*1*m \\
& ^4 - 3*b^5*c^3*d^4*1*m - 6*a^6*c^2*g*j^1^4 - 6*a^6*c^2*f*k^1^4 - 6*a^6*c^2*d \\
& *1^4*m + 6*a^5*c^3*h*j^4*k + 6*a^5*c^3*g*j^4*1 + 6*a^5*c^3*f*j^4*m - 6*a^4 \\
& *c^4*g^4*j*1 + 6*a^3*c^5*e^4*k*m + 6*a^5*b^3*f*j*m^4 - 6*a^4*c^4*g^4*h*m + \\
& 3*b^7*c^d^3*j*m^2 - 3*a^5*b^3*e*k*m^4 - 3*a^5*b^3*d*1*m^4 + 3*b^4*c^4*d^4*j \\
& *1 - 3*a^5*b^3*g^h*m^4 - 6*a^5*c^3*e*j*k^4 + 6*a^2*c^6*d^4*j*1 + 3*b^4*c^4*d \\
& ^4*h*m + 6*a^6*c^2*e*g*m^4 + 6*a^6*c^2*d^h*m^4 + 6*a^6*b*c^j^3*m^3 - 6*a^5 \\
& *c^3*f^h*k^4 + 6*a^4*c^4*g^h^4*j + 6*a^4*c^4*f^h^4*k + 6*a^4*c^4*e^h^4*1 + \\
& 6*a^4*c^4*d^h^4*m - 6*a^3*c^5*f^4*h*k - 6*a^3*c^5*f^4*g*1 + 6*a^2*c^6*d^4*h \\
& *m + 3*a^5*b*c^2*j^5*m + a^6*b*c^k^3*1^3 + 3*a^4*b^4*e*g*m^4 + 3*a^4*b^4*d \\
& h*m^4 + 6*b^3*c^5*d^4*g*k - 3*b^3*c^5*d^4*h*j - 3*b^3*c^5*d^4*f*1 - 3*b^3*c \\
& ^5*d^4*e*m + 3*a*b^7*d^2*g*m^3 + 6*a^5*c^3*d*f*1^4 - 6*a^4*c^4*e*g*j^4 - 6 \\
& a^4*c^4*d^h*j^4 + 6*a^3*c^5*e*g^4*j + 6*a^3*c^5*d*g^4*k - 6*a^2*c^6*e^4*g*j \\
& - 6*a^2*c^6*e^4*f*k - 6*a^2*c^6*d^e^4*m + 3*a^4*b*c^3*h^5*1 + 6*a^3*c^5*f^* \\
& g^4*h - 3*a^3*b^5*d^e*m^4 + 3*b^2*c^6*d^4*e*j + 3*a^5*b*c^2*g*k^5 + 3*a^3*b \\
& *c^4*g^5*k + 8*a*b^6*c^d^3*m^3 + 3*b^2*c^6*d^4*f^h - 3*a^5*b^2*c^e^1^5 - 3* \\
& a*b^2*c^5*e^5*1 - 6*a^3*c^5*d*f^h^4 + 6*a^2*c^6*e^e^f^4*g + 6*a^2*c^6*d^f^4*h \\
& + 3*a^4*b*c^3*f*j^5 + 3*a^2*b*c^5*f^5*j + 6*a*c^7*d^3*e^2*h - 6*a*c^7*d^2* \\
& e^3*g + 3*a^3*b*c^4*e^h^5 + 6*a*b*c^6*d^3*g^3 + 3*a^2*b*c^5*d*g^5 + a*b*c^6 \\
& *e^3*f^3 - 9*a^6*c^2*j^2*k^2*1^2 - 9*a^6*c^2*h^2*k^2*m^2 - 9*a^6*c^2*g^2*1^2 \\
& *m^2 - 18*a^5*c^3*f^2*j^2*m^2 - 9*a^5*c^3*h^2*j^2*k^2 - 9*a^5*c^3*g^2*j^2* \\
& 1^2 - 9*a^5*c^3*f^2*k^2*1^2 - 9*a^5*c^3*e^2*k^2*m^2 - 9*a^5*c^3*d^2*1^2*m^2 \\
& - 9*a^5*c^3*g^2*h^2*m^2 - 9*a^4*c^4*e^2*j^2*k^2 - 9*a^4*c^4*d^2*j^2*1^2 - \\
& 18*a^4*c^4*e^2*h^2*1^2 - 9*a^4*c^4*g^2*h^2*j^2 - 9*a^4*c^4*f^2*h^2*k^2 - 9* \\
& a^4*c^4*f^2*g^2*1^2 - 9*a^4*c^4*e^2*g^2*m^2 - 9*a^4*c^4*d^2*h^2*m^2 - 18*a^ \\
& 3*c^5*d^2*g^2*k^2 - 9*a^3*c^5*e^2*g^2*j^2 - 9*a^3*c^5*e^2*f^2*k^2 - 9*a^3*c
\end{aligned}$$



$$\begin{aligned}
& ^5d^2h^2j^2 - 9a^3c^5d^2f^2l^2 - 9a^3c^5d^2e^2m^2 - 3a^4b^2c^2h^4l^2 - 18a^4b^2c^2f^3m^3 + 12a^3b^2c^3f^4m^2 - 9a^3c^5f^2g^2h^2 + 4a^4b^2c^2g^3l^3 - 3a^2b^4c^2f^4m^2 + 14a^3b^3c^2e^3m^3 - 5a^3b^3c^2f^3l^3 - 3a^4b^2c^2g^2k^4 - 3a^3b^2c^3g^4k^2 + a^3b^3c^2g^3k^3 - 20a^2b^4c^2d^3m^3 - 18a^3b^2c^3e^3l^3 + 16a^3b^2c^3d^3m^3 + 12a^4b^2c^2e^2l^4 + 12a^2b^2c^4e^4l^2 - 9a^2c^6d^2e^2j^2 + 6a^2b^4c^2e^3l^3 + 4a^3b^2c^3f^3k^3 + 14a^2b^3c^3d^3l^3 - 9a^2c^6e^2f^2g^2 - 9a^2c^6d^2f^2h^2 - 5a^2b^3c^3e^3k^3 - 3a^3b^2c^3f^2j^4 - 3a^2b^2c^4f^4j^2 + a^2b^3c^3f^3j^3 - 18a^2b^2c^4d^3k^3 + 12a^3b^2c^3d^2k^4 + 4a^2b^2c^4e^3j^3 - 3a^2b^4c^2d^2k^4 - 3a^2b^2c^4e^2h^4 + 6a^7c^*k^*l^4m - 3a^7b^*k^*l^4m - 6a^7c^*h^*k^*m^4 - 6a^7c^*g^*l^4m + 3a^6b^*c^*h^*l^5 - 6a^*c^7d^4e^*j - 6a^*c^7d^4f^*h - 3b^*c^7d^4e^*f + 6a^*c^7d^4e^4f + 3a^*b^*c^6e^5h - a^5b^2c^*j^3l^3 - a^3b^4c^*g^3l^3 - a^*b^4c^3e^3j^3 - a^*b^2c^5e^3g^3 + 3a^7b^*j^*m^5 + 6a^7c^*f^*m^5 + 6a^*c^7d^5k + 3b^*c^7d^5g - 3a^6c^2j^4m^2 - 3a^6b^2j^2m^4 + 2a^6c^2j^3l^3 + a^5b^3j^3m^3 - 2a^6c^2h^3m^3 - 3a^6c^2h^2l^4 - 3a^5c^3h^4l^2 - a^*b^6c^e^3l^3 + 20a^5c^3f^3m^3 - 15a^6c^2f^2m^4 - 15a^4c^4f^4m^2 + 2a^5c^3h^3k^3 - 2a^5c^3g^3l^3 + a^3b^5g^3m^3 - 3a^5c^3g^2k^4 - 3a^4c^4g^4k^2 - 3a^4b^4f^2m^4 + 20a^4c^4e^3l^3 - 15a^5c^3e^2l^4 - 15a^3c^5e^4l^2 + 2a^4c^4g^3j^3 - 2a^4c^4f^3k^3 - 2a^4c^4d^3m^3 - 3b^4c^4d^4k^2 - 3a^4c^4f^2j^4 - 3a^3c^5f^4j^2 + 20a^3c^5d^3k^3 - 15a^4c^4d^2k^4 - 15a^2c^6d^4k^2 - 2a^3c^5e^3j^3 + b^5c^3d^3j^3 + 2a^3c^5f^3h^3 - 3a^3c^5e^2h^4 - 3a^2c^6e^4h^2 - 3b^2c^6d^4g^2 + 2a^2c^6e^3g^3 - 2a^2c^6d^3h^3 + b^3c^5d^3g^3 - 3a^2c^6d^2g^4 - a^4b^2c^2h^3k^3 - a^3b^2c^3g^3j^3 - a^2b^4c^2f^3k^3 - a^2b^2c^4f^3h^3 + 2a^7c^*k^3m^3 + a^7b^*l^3m^3 - 3a^7c^*j^2m^4 + 6a^3c^5f^5m - 3a^6b^2f^*m^5 + 6a^6c^2e^1^5 + 6a^2c^6e^5l + b^7c^*d^3l^3 + a^*b^7e^3m^3 - 3b^2c^6d^5k + 6a^5c^3d^*k^5 - 3a^*c^7d^4g^2 + 2a^*c^7d^3f^3 + b^*c^7d^3e^3 - a^6b^2k^3m^3 - a^4b^4h^3m^3 - a^2b^6f^3m^3 - b^6c^2d^3k^3 - b^4c^4d^3h^3 - b^2c^6d^3f^3 - b^8d^3m^3 - a^6c^2k^6 - a^5c^3j^6 - a^4c^4h^6 - a^3c^5g^6 - a^2c^6f^6 - a^7c^*l^6 - a^*c^7e^6 - a^8m^6 - c^8d^6, z, k1)*(root(34992a^4b^2c^8z^6 - 8748a^3b^4c^7z^6 + 729a^2b^6c^6z^6 - 46656a^5c^9z^6 + 34992a^4b^3c^6m*z^5 - 8748a^3b^5c^5m*z^5 + 729a^2b^7c^4m*z^5 - 34992a^4b^2c^7j*z^5 + 8748a^3b^4c^6j*z^5 - 729a^2b^6c^5j*z^5 - 46656a^5b^*c^7m*z^5 + 46656a^5c^8*j*z^5 + 34992a^5b^*c^6j^*m*z^4 - 11664a^5b^*c^6k^*l^z^4 + 3888a^4b^*c^7*f^*j^z^4 + 3888a^4b^*c^7e^*k^z^4 + 3888a^4b^*c^7d^*l^z^4 + 3888a^4b^*c^7g^*h^z^4 + 3888a^3b^*c^8d^*e^z^4 + 243a^*b^5c^6d^*e^z^4 - 25272a^4b^3c^5j^*m^z^4 + 9720a^4b^3c^5k^*l^z^4 + 6075a^3b^5c^4j^*m^z^4 - 2673a^3b^5c^4k^*l^z^4 - 486a^2b^7c^3j^*m^z^4 + 243a^2b^7c^3k^*l^z^4 - 7776a^4b^2c^6h^*k^z^4 - 7776a^4b^2c^6g^*l^z^4 - 7776a^4b^2c^6f^*m^z^4 + 2430a^3b^4c^5h^*k^z^4 + 2430a^3b^4c^5g^*l^z^4 + 2430a^3b^4c^5f^*m^z^4 - 243a^2b^6c^4h^*k^z^4 - 243a^2b^6c^4g^*l^z^4 - 243a^2b^6c^4
\end{aligned}$$

$$\begin{aligned}
& *f*m*z^4 - 1944*a^3*b^3*c^6*f*j*z^4 - 1944*a^3*b^3*c^6*e*k*z^4 - 1944*a^3*b^3*c^6*d*l*z^4 + 243*a^2*b^5*c^5*f*j*z^4 + 243*a^2*b^5*c^5*e*k*z^4 + 243*a^2*b^5*c^5*d*l*z^4 - 1944*a^3*b^3*c^6*g*h*z^4 + 243*a^2*b^5*c^5*g*h*z^4 + 3888*a^3*b^2*c^7*e*g*z^4 + 3888*a^3*b^2*c^7*d*h*z^4 - 486*a^2*b^4*c^6*e*g*z^4 - 486*a^2*b^4*c^6*d*h*z^4 - 1944*a^2*b^3*c^7*d*e*z^4 + 7776*a^5*c^7*h*k*z^4 + 7776*a^5*c^7*g*l*z^4 + 7776*a^5*c^7*f*m*z^4 - 7776*a^4*c^8*e*g*z^4 - 7776*a^4*c^8*d*h*z^4 - 13608*a^5*b^2*c^5*m^2*z^4 + 11421*a^4*b^4*c^4*m^2*z^4 - 2916*a^3*b^6*c^3*m^2*z^4 + 243*a^2*b^8*c^2*m^2*z^4 + 13608*a^4*b^2*c^6*j^2*z^4 - 3159*a^3*b^4*c^5*j^2*z^4 + 243*a^2*b^6*c^4*j^2*z^4 + 1944*a^3*b^2*c^7*f^2*z^4 - 243*a^2*b^4*c^6*f^2*z^4 - 3888*a^6*c^6*m^2*z^4 - 19440*a^5*c^7*j^2*z^4 - 3888*a^4*c^8*f^2*z^4 + 3078*a^4*b^4*c^3*k*l*m*z^3 - 2592*a^5*b^2*c^4*k*l*m*z^3 - 891*a^3*b^6*c^2*k*l*m*z^3 - 4536*a^4*b^3*c^4*j*k*l*z^3 + 1053*a^3*b^5*c^3*j*k*l*z^3 - 81*a^2*b^7*c^2*j*k*l*z^3 - 2592*a^4*b^3*c^4*h*k*m*z^3 - 2592*a^4*b^3*c^4*g*l*m*z^3 + 810*a^3*b^5*c^3*h*k*m*z^3 + 810*a^3*b^5*c^3*g*l*m*z^3 - 81*a^2*b^7*c^2*h*k*m*z^3 - 81*a^2*b^7*c^2*g*l*m*z^3 + 7776*a^4*b^2*c^5*f*j*m*z^3 + 3888*a^4*b^2*c^5*h*j*k*z^3 + 3888*a^4*b^2*c^5*g*j*l*z^3 - 3888*a^4*b^2*c^5*f*k*l*z^3 - 2916*a^3*b^4*c^4*f*j*m*z^3 + 1458*a^3*b^4*c^4*f*k*l*z^3 - 972*a^3*b^4*c^4*h*j*k*z^3 - 972*a^3*b^4*c^4*g*j*l*z^3 - 486*a^3*b^4*c^4*e*k*m*z^3 - 486*a^3*b^4*c^4*d*l*m*z^3 + 324*a^2*b^6*c^3*f*j*m*z^3 - 162*a^2*b^6*c^3*f*k*l*z^3 + 81*a^2*b^6*c^3*h*j*k*z^3 + 81*a^2*b^6*c^3*g*j*l*z^3 + 81*a^2*b^6*c^3*e*k*m*z^3 + 81*a^2*b^6*c^3*d*l*m*z^3 - 486*a^3*b^4*c^4*g*h*m*z^3 + 81*a^2*b^6*c^3*g*h*m*z^3 + 648*a^3*b^3*c^5*e*j*k*z^3 + 648*a^3*b^3*c^5*d*j*l*z^3 - 81*a^2*b^5*c^4*e*j*k*z^3 - 81*a^2*b^5*c^4*d*j*l*z^3 + 2592*a^3*b^3*c^5*e*g*m*z^3 + 2592*a^3*b^3*c^5*d*h*m*z^3 - 1296*a^3*b^3*c^5*f*h*k*z^3 - 1296*a^3*b^3*c^5*f*g*l*z^3 - 1296*a^3*b^3*c^5*e*h*l*z^3 + 648*a^3*b^3*c^5*g*h*j*z^3 - 324*a^2*b^5*c^4*e*g*m*z^3 - 324*a^2*b^5*c^4*d*h*m*z^3 + 162*a^2*b^5*c^4*f*h*k*z^3 + 162*a^2*b^5*c^4*f*g*l*z^3 + 162*a^2*b^5*c^4*e*h*l*z^3 - 81*a^2*b^5*c^4*g*h*j*z^3 + 5184*a^3*b^2*c^6*d*e*m*z^3 - 2592*a^3*b^2*c^6*e*g*j*z^3 - 2592*a^3*b^2*c^6*d*h*j*z^3 - 2106*a^2*b^4*c^5*d*e*m*z^3 + 1296*a^3*b^2*c^6*e*f*k*z^3 + 1296*a^3*b^2*c^6*d*g*k*z^3 + 1296*a^3*b^2*c^6*d*f*l*z^3 + 324*a^2*b^4*c^5*e*g*j*z^3 + 324*a^2*b^4*c^5*d*h*j*z^3 - 162*a^2*b^4*c^5*e*f*k*z^3 - 162*a^2*b^4*c^5*d*g*k*z^3 - 162*a^2*b^4*c^5*d*f*l*z^3 + 1296*a^3*b^2*c^6*f*g*h*z^3 - 162*a^2*b^4*c^5*f*g*h*z^3 + 1944*a^2*b^3*c^6*d*e*j*z^3 - 1296*a^2*b^2*c^7*d*e*f*z^3 + 81*a^2*b^8*c*k*l*m*z^3 + 6480*a^5*b*c^5*j*k*l*z^3 + 2592*a^5*b*c^5*h*k*m*z^3 + 2592*a^5*b*c^5*g*l*m*z^3 - 1296*a^4*b*c^6*e*j*k*z^3 - 1296*a^4*b*c^6*d*j*l*z^3 - 5184*a^4*b*c^6*e*g*m*z^3 - 5184*a^4*b*c^6*d*h*m*z^3 + 2592*a^4*b*c^6*f*h*k*z^3 + 2592*a^4*b*c^6*f*g*l*z^3 + 2592*a^4*b*c^6*e*h*l*z^3 - 1296*a^4*b*c^6*g*h*j*z^3 + 243*a*b^6*c^4*d*e*m*z^3 - 3888*a^3*b*c^7*d*e*j*z^3 - 243*a*b^5*c^5*d*e*j*z^3 + 162*a*b^4*c^6*d*e*f*z^3 - 2592*a^6*c^5*k*l*m*z^3 - 5184*a^5*c^6*h*j*k*z^3 - 5184*a^5*c^6*g*j*l*z^3 - 5184*a^5*c^6*f*j*m*z^3 + 2592*a^5*c^6*f*k*l*z^3 + 2592*a^5*c^6*e*k*m*z^3 + 2592*a^5*c^6*d*l*m*z^3 + 2592*a^5*c^6*g*h*m*z^3 + 5184*a^4*c^7*e*g*j*z^3 + 5184*a^4*c^7*d*h*j*z^3 - 2592*a^4*c^7*e*f*k*z^3 - 2592*a^4*c^7*d*g*k*z^3 - 2592*a^4*c^7*d*f*l*z^3 - 2592*a^4*c^7*d*e*m*z^3 - 2592*a^4*c^7*f*g*h*z^3 + 2592*a^3*c^8*d*e*f*z^3 + 6480*a^5*b^2
\end{aligned}$$

$$\begin{aligned}
& *c^4*j*m^2*z^3 + 6480*a^4*b^3*c^4*j^2*m*z^3 - 5022*a^4*b^4*c^3*j*m^2*z^3 - \\
& 1296*a^3*b^5*c^3*j^2*m*z^3 + 1134*a^3*b^6*c^2*j*m^2*z^3 + 81*a^2*b^7*c^2*j^2 \\
& *m*z^3 + 2592*a^4*b^3*c^4*h*l^2*z^3 - 1944*a^4*b^2*c^5*h^2*l*z^3 - 810*a^3 \\
& *b^5*c^3*h*l^2*z^3 + 729*a^3*b^4*c^4*h^2*l*z^3 + 81*a^2*b^7*c^2*h*l^2*z^3 - \\
& 81*a^2*b^6*c^3*h^2*l*z^3 - 5184*a^4*b^3*c^4*f*m^2*z^3 + 1620*a^3*b^5*c^3*f \\
& *m^2*z^3 + 1296*a^3*b^3*c^5*f^2*m*z^3 - 162*a^2*b^7*c^2*f*m^2*z^3 - 162*a^2 \\
& *b^5*c^4*f^2*m*z^3 - 1944*a^4*b^2*c^5*g*k^2*z^3 + 729*a^3*b^4*c^4*g*k^2*z^3 \\
& - 648*a^3*b^3*c^5*g^2*k*z^3 - 81*a^2*b^6*c^3*g*k^2*z^3 + 81*a^2*b^5*c^4*g^2 \\
& *k*z^3 - 1944*a^4*b^2*c^5*e*l^2*z^3 + 729*a^3*b^4*c^4*e*l^2*z^3 + 648*a^3* \\
& b^2*c^6*e^2*l*z^3 - 81*a^2*b^6*c^3*e*l^2*z^3 - 81*a^2*b^4*c^5*e^2*l*z^3 + 1 \\
& 296*a^3*b^3*c^5*f*j^2*z^3 - 1296*a^3*b^2*c^6*f^2*j*z^3 - 162*a^2*b^5*c^4*f*j \\
& ^2*z^3 + 162*a^2*b^4*c^5*f^2*j*z^3 - 648*a^3*b^3*c^5*d*k^2*z^3 + 81*a^2*b^5 \\
& *c^4*d*k^2*z^3 + 648*a^3*b^2*c^6*e*h^2*z^3 - 81*a^2*b^4*c^5*e*h^2*z^3 - 64 \\
& 8*a^2*b^2*c^7*d^2*g*z^3 - 10368*a^5*b*c^5*j^2*m*z^3 - 81*a^2*b^8*c*j*m^2*z^ \\
& 3 - 2592*a^5*b*c^5*h*l^2*z^3 + 5184*a^5*b*c^5*f*m^2*z^3 - 2592*a^4*b*c^6*f^ \\
& 2*m*z^3 + 1296*a^4*b*c^6*g^2*k*z^3 - 2592*a^4*b*c^6*f*j^2*z^3 + 1296*a^4*b* \\
& c^6*d*k^2*z^3 + 81*a*b^4*c^6*d^2*g*z^3 + 2592*a^6*c^5*j*m^2*z^3 + 1296*a^5* \\
& c^6*h^2*l*z^3 + 1296*a^5*c^6*g*k^2*z^3 + 1296*a^5*c^6*e*l^2*z^3 - 1296*a^4* \\
& c^7*e^2*l*z^3 + 2592*a^4*c^7*f^2*j*z^3 - 2592*a^6*b*c^4*m^3*z^3 - 324*a^3*b \\
& ^7*c*m^3*z^3 - 27*a^2*b^8*c*l^3*z^3 - 1296*a^4*c^7*e*h^2*z^3 - 864*a^5*b*c^ \\
& 5*k^3*z^3 + 1296*a^3*c^8*d^2*g*z^3 + 432*a^4*b*c^6*h^3*z^3 + 27*a*b^4*c^6*e \\
& ^3*z^3 - 432*a^2*b*c^8*d^3*z^3 + 216*a*b^3*c^7*d^3*z^3 + 1134*a^4*b^5*c^2*m \\
& ^3*z^3 - 432*a^5*b^3*c^3*m^3*z^3 + 1512*a^5*b^2*c^4*l^3*z^3 - 1107*a^4*b^4* \\
& c^3*l^3*z^3 + 297*a^3*b^6*c^2*l^3*z^3 + 864*a^4*b^3*c^4*k^3*z^3 - 270*a^3*b \\
& ^5*c^3*k^3*z^3 + 27*a^2*b^7*c^2*k^3*z^3 - 2592*a^4*b^2*c^5*j^3*z^3 + 486*a^ \\
& 3*b^4*c^4*j^3*z^3 - 27*a^2*b^6*c^3*j^3*z^3 - 216*a^3*b^3*c^5*h^3*z^3 + 27*a \\
& ^2*b^5*c^4*h^3*z^3 + 216*a^3*b^2*c^6*g^3*z^3 - 27*a^2*b^4*c^5*g^3*z^3 - 216 \\
& *a^2*b^2*c^7*e^3*z^3 - 432*a^6*c^5*l^3*z^3 + 27*a^2*b^9*m^3*z^3 + 4320*a^5* \\
& c^6*j^3*z^3 - 432*a^4*c^7*g^3*z^3 + 432*a^3*c^8*e^3*z^3 - 27*b^5*c^6*d^3*z^ \\
& 3 + 81*a^3*b^6*c*j*k*l*m*z^2 - 1296*a^5*b*c^4*h*j*k*m*z^2 - 1296*a^5*b*c^4* \\
& g*j*l*m*z^2 + 1296*a^5*b*c^4*f*k*l*m*z^2 - 81*a^2*b^7*c*f*k*l*m*z^2 + 2592* \\
& a^4*b*c^5*e*g*j*m*z^2 + 2592*a^4*b*c^5*d*h*j*m*z^2 - 1296*a^4*b*c^5*f*h*j*k \\
& *z^2 - 1296*a^4*b*c^5*f*g*j*l*z^2 - 1296*a^4*b*c^5*e*f*k*m*z^2 - 1296*a^4*b \\
& *c^5*d*f*l*m*z^2 - 648*a^4*b*c^5*e*h*j*l*z^2 - 648*a^4*b*c^5*e*g*k*l*z^2 - \\
& 648*a^4*b*c^5*d*h*k*l*z^2 - 648*a^4*b*c^5*d*g*k*m*z^2 - 1296*a^4*b*c^5*f*g* \\
& h*m*z^2 - 162*a*b^6*c^3*d*e*j*m*z^2 + 81*a*b^6*c^3*d*e*k*l*z^2 + 1296*a^3*b \\
& *c^6*d*e*f*m*z^2 - 648*a^3*b*c^6*d*f*g*k*z^2 - 648*a^3*b*c^6*d*e*h*k*z^2 - \\
& 648*a^3*b*c^6*d*e*g*l*z^2 - 81*a*b^5*c^4*d*e*h*k*z^2 - 81*a*b^5*c^4*d*e*g*l \\
& *z^2 + 81*a*b^5*c^4*d*e*f*m*z^2 - 81*a*b^4*c^5*d*e*f*j*z^2 + 81*a*b^4*c^5*d \\
& *e*g*h*z^2 + 648*a^5*b^2*c^3*j*k*l*m*z^2 - 567*a^4*b^4*c^2*j*k*l*m*z^2 - 19 \\
& 44*a^4*b^3*c^3*f*k*l*m*z^2 + 729*a^3*b^5*c^2*f*k*l*m*z^2 + 648*a^4*b^3*c^3* \\
& h*j*k*m*z^2 + 648*a^4*b^3*c^3*g*j*l*m*z^2 - 81*a^3*b^5*c^2*h*j*k*m*z^2 - 81 \\
& *a^3*b^5*c^2*g*j*l*m*z^2 + 1944*a^4*b^2*c^4*f*j*k*l*z^2 - 729*a^3*b^4*c^3*f \\
& *j*k*l*z^2 + 648*a^4*b^2*c^4*e*j*k*m*z^2 + 648*a^4*b^2*c^4*d*j*l*m*z^2 - 81 \\
& *a^3*b^4*c^3*e*j*k*m*z^2 - 81*a^3*b^4*c^3*d*j*l*m*z^2 + 81*a^2*b^6*c^2*f*j*
\end{aligned}$$

$$\begin{aligned}
& k^1 z^2 + 1296 a^4 b^2 c^4 f h k m z^2 + 1296 a^4 b^2 c^4 f g^1 m z^2 + 648 \\
& a^4 b^2 c^4 g h j m z^2 - 648 a^3 b^4 c^3 f h k m z^2 - 648 a^3 b^4 c^3 f g^1 m z^2 - 324 a^4 b^2 c^4 g h k^1 z^2 - 324 a^4 b^2 c^4 e h^1 m z^2 + 81 a^3 b^4 c^3 g h k^1 z^2 - 81 a^3 b^4 c^3 g h j m z^2 + 81 a^2 b^6 c^2 f h k m z^2 + 81 a^2 b^6 c^2 f g^1 m z^2 - 1296 a^3 b^3 c^4 e g^1 j m z^2 - 1296 a^3 b^3 c^4 d h j m z^2 + 648 a^3 b^3 c^4 f h j k z^2 + 648 a^3 b^3 c^4 f g^1 j m z^2 + 648 a^3 b^3 c^4 e f k m z^2 + 648 a^3 b^3 c^4 d f^1 m z^2 + 486 a^3 b^3 c^4 e g^1 k^1 z^2 + 486 a^3 b^3 c^4 d h k^1 z^2 + 162 a^3 b^3 c^4 e h j m z^2 + 162 a^3 b^3 c^4 d g^1 k m z^2 + 162 a^2 b^5 c^3 e g^1 j m z^2 + 162 a^2 b^5 c^3 d h j m z^2 - 81 a^2 b^5 c^3 f h j k z^2 - 81 a^2 b^5 c^3 f g^1 j m z^2 - 81 a^2 b^5 c^3 e g^1 k^1 z^2 - 81 a^2 b^5 c^3 e f k m z^2 - 81 a^2 b^5 c^3 d h k^1 z^2 - 81 a^2 b^5 c^3 d f^1 m z^2 + 648 a^3 b^3 c^4 f g^1 h m z^2 - 81 a^2 b^5 c^3 f g^1 h m z^2 - 3240 a^3 b^2 c^5 d e j m z^2 + 1620 a^3 b^2 c^5 d e k^1 z^2 + 1377 a^2 b^4 c^4 d e j m z^2 - 648 a^3 b^2 c^5 e f j k z^2 - 648 a^3 b^2 c^5 d f^1 j m z^2 - 648 a^2 b^4 c^4 d e k^1 z^2 - 324 a^3 b^2 c^5 d g^1 j k z^2 + 81 a^2 b^4 c^4 e f j k z^2 + 81 a^2 b^4 c^4 d f^1 j m z^2 + 972 a^3 b^2 c^5 e f h^1 z^2 - 648 a^3 b^2 c^5 f g^1 h j z^2 - 324 a^3 b^2 c^5 e g^1 h k z^2 - 324 a^3 b^2 c^5 d g^1 h^1 z^2 - 162 a^2 b^4 c^4 e f h^1 z^2 + 81 a^2 b^4 c^4 f g^1 h j z^2 + 81 a^2 b^4 c^4 e g^1 h k z^2 + 81 a^2 b^4 c^4 d g^1 h^1 z^2 - 648 a^2 b^3 c^5 d e f m z^2 + 486 a^2 b^3 c^5 d e h k z^2 + 486 a^2 b^3 c^5 d e g^1 z^2 + 162 a^2 b^3 c^5 d f g^1 k z^2 + 648 a^2 b^2 c^6 d e f j z^2 - 324 a^2 b^2 c^6 d e g^1 h z^2 - 1296 a^6 b c^3 k^1 m^2 z^2 - 81 a^4 b^5 c^3 k^1 m^2 z^2 - 1296 a^5 b c^4 j^2 k^1 z^2 - 324 a^5 b c^4 h^2 m^1 z^2 + 324 a^5 b c^4 h k^2 m^1 z^2 - 324 a^5 b c^4 g k^2 m z^2 + 972 a^5 b c^4 h j^1 m^2 z^2 + 324 a^5 b c^4 g k^1 m^2 z^2 - 324 a^5 b c^4 e l^2 m z^2 - 324 a^4 b c^5 e^2 m z^2 - 1944 a^5 b c^4 f j m^2 z^2 + 1296 a^5 b c^4 e k m^2 z^2 + 1296 a^5 b c^4 d l m^2 z^2 + 648 a^4 b c^5 f^2 j m z^2 + 81 a^2 b^7 c^2 f j m^2 z^2 + 1296 a^5 b c^4 g h m^2 z^2 - 324 a^4 b c^5 g^2 j k z^2 + 324 a^4 b c^5 g^2 h^1 z^2 + 972 a^4 b c^5 f h^2 m^1 z^2 + 324 a^4 b c^5 g h^2 k z^2 - 324 a^4 b c^5 e h^2 m z^2 - 324 a^4 b c^5 d j k^2 z^2 - 324 a^3 b c^6 d^2 j k z^2 + 972 a^4 b c^5 f g k^2 z^2 + 972 a^3 b c^6 d^2 g m z^2 + 324 a^4 b c^5 e h k^2 z^2 + 324 a^3 b c^6 d^2 h^1 z^2 + 81 a b^5 c^4 d^2 g m z^2 + 972 a^4 b c^5 e f^1 m^2 z^2 + 324 a^4 b c^5 d g^1 m^2 z^2 - 324 a^3 b c^6 e^2 h j z^2 + 324 a^3 b c^6 e^2 g k z^2 - 324 a^3 b c^6 e^2 f^1 z^2 - 1296 a^4 b c^5 d e m^2 z^2 + 81 a b^7 c^2 d e m^2 z^2 - 324 a^3 b c^6 d g^2 j z^2 - 81 a b^4 c^5 d^2 g j z^2 + 81 a b^4 c^5 d^2 e l z^2 + 324 a^3 b c^6 e g^2 h z^2 + 81 a b^4 c^5 d e^2 k z^2 + 1296 a^3 b c^6 d e j^2 z^2 - 324 a^3 b c^6 e f h^2 z^2 + 324 a^3 b c^6 d g h^2 z^2 + 81 a b^5 c^4 d e j^2 z^2 - 324 a^2 b c^7 d^2 f g z^2 + 324 a^2 b c^7 d^2 e h z^2 + 81 a b^3 c^6 d^2 f g z^2 - 81 a b^3 c^6 d^2 e h z^2 + 324 a^2 b c^7 d e^2 g z^2 - 81 a b^3 c^6 d e^2 g z^2 + 1296 a^6 c^4 j k^1 m z^2 - 1296 a^5 c^5 f j k^1 z^2 - 1296 a^6 a^5 c^5 e j k m z^2 - 1296 a^5 c^5 d j l m z^2 - 1296 a^5 c^5 g h j m z^2 + 1296 a^5 c^5 e h^1 m z^2 + 1296 a^4 c^6 e f j k z^2 + 1296 a^4 c^6 d g^1 k z^2 + 1296 a^4 c^6 d f^1 j m z^2 - 1296 a^4 c^6 d e k^1 z^2 + 1296 a^4 c^6 d e j m z^2 + 1296 a^4 c^6 f g^1 h j z^2 - 1296 a^4 c^6 e f h^1 z^2 - 1296 a
\end{aligned}$$

$$\begin{aligned}
&^3c^7d^*e^*f^*j^*z^2 + 648a^5b^3c^2k^1m^2z^2 + 648a^4b^3c^3j^2k^1m^1z^2 + 486a^5b^2c^3h^1l^2m^2z^2 - 81a^4b^4c^2h^1l^2m^2z^2 + 81a^4b^3c^3h^2l^1m^2z^2 - 81a^3b^5c^2j^2k^1m^1z^2 - 162a^4b^2c^4g^2k^1m^2z^2 - 81a^4b^3c^3h^1k^2l^1z^2 + 81a^4b^3c^3g^1k^2m^2z^2 - 567a^4b^3c^3h^1j^1l^2z^2 + 486a^4b^2c^4h^2j^1l^1z^2 - 81a^4b^3c^3g^1k^1l^2z^2 + 81a^4b^3c^3e^1l^2m^2z^2 + 81a^3b^5c^2h^1j^1l^2z^2 - 81a^3b^4c^3h^2j^1l^1z^2 + 81a^3b^3c^4e^2l^1m^2z^2 + 2430a^4b^3c^3f^1j^1m^2z^2 - 2268a^4b^2c^4f^1j^2m^2z^2 - 810a^3b^5c^2f^1j^1m^2z^2 + 810a^3b^4c^3f^1j^2m^2z^2 - 648a^4b^3c^3e^1k^1m^2z^2 - 648a^4b^3c^3d^1l^1m^2z^2 - 648a^4b^2c^4h^1j^2k^1z^2 - 648a^4b^2c^4g^1j^2l^1z^2 - 162a^3b^3c^4f^2j^1m^2z^2 + 81a^3b^5c^2e^1k^1m^2z^2 + 81a^3b^5c^2d^1l^1m^2z^2 + 81a^3b^4c^3h^1j^2k^1z^2 + 81a^3b^4c^3g^1j^2l^1z^2 - 81a^2b^6c^2f^1j^2m^2z^2 - 648a^4b^3c^3g^1h^1m^2z^2 + 486a^4b^2c^4g^1j^1k^2z^2 - 486a^4b^2c^4e^1k^2l^1z^2 + 486a^3b^2c^5d^2k^1m^2z^2 - 162a^4b^2c^4d^1k^2m^2z^2 + 81a^3b^5c^2g^1h^1m^2z^2 - 81a^3b^4c^3g^1j^1k^2z^2 + 81a^3b^4c^3e^1k^2l^1z^2 + 81a^3b^3c^4g^2j^1k^1z^2 - 81a^2b^4c^4d^2k^1m^2z^2 + 486a^4b^2c^4e^1j^1l^2z^2 - 486a^4b^2c^4d^1k^1l^2z^2 - 162a^3b^2c^5e^2j^1l^1z^2 - 81a^3b^4c^3e^1j^1l^2z^2 + 81a^3b^4c^3d^1k^1l^2z^2 - 81a^3b^3c^4g^2h^1l^1z^2 - 1458a^4b^2c^4f^1h^1l^2z^2 + 648a^3b^4c^3f^1h^1l^2z^2 - 567a^3b^3c^4f^1h^2l^1z^2 + 486a^3b^2c^5e^2h^1m^2z^2 - 81a^3b^3c^4g^1h^2k^1z^2 + 81a^3b^3c^4e^1h^2m^2z^2 - 81a^2b^6c^2f^1h^1l^2z^2 + 81a^2b^5c^3f^1h^2l^1z^2 - 81a^2b^4c^4e^2h^1m^2z^2 - 1296a^4b^2c^4e^1g^1m^2z^2 - 1296a^4b^2c^4d^1h^1m^2z^2 + 648a^3b^4c^3e^1g^1m^2z^2 + 648a^3b^4c^3d^1h^1m^2z^2 + 81a^3b^3c^4d^1j^1k^2z^2 - 81a^2b^6c^2e^1g^1m^2z^2 - 81a^2b^6c^2d^1h^1m^2z^2 + 81a^2b^3c^5d^2j^1k^1z^2 - 567a^3b^3c^4f^1g^1k^2z^2 - 567a^2b^3c^5d^2g^1m^2z^2 + 486a^3b^2c^5f^1g^2k^1z^2 - 486a^3b^2c^5e^1g^2l^1z^2 + 486a^3b^2c^5d^1g^2m^2z^2 - 81a^3b^3c^4e^1h^1k^2z^2 + 81a^2b^5c^3f^1g^1k^2z^2 - 81a^2b^4c^4f^1g^2k^1z^2 + 81a^2b^4c^4e^1g^2l^1z^2 - 81a^2b^4c^4d^1g^2m^2z^2 - 81a^2b^3c^5d^2h^1l^1z^2 - 567a^3b^3c^4e^1f^1l^2z^2 - 486a^3b^2c^5d^1h^2k^1z^2 - 162a^3b^2c^5e^1h^2j^1z^2 - 81a^3b^3c^4d^1g^1l^2z^2 + 81a^2b^5c^3e^1f^1l^2z^2 + 81a^2b^4c^4d^1h^2k^1z^2 + 81a^2b^3c^5e^2h^1j^1z^2 - 81a^2b^3c^5e^2g^1k^1z^2 + 81a^2b^3c^5e^2f^1l^1z^2 + 1944a^3b^3c^4d^1e^1m^2z^2 - 729a^2b^5c^3d^1e^1m^2z^2 + 648a^3b^2c^5e^1g^1j^2z^2 + 648a^3b^2c^5d^1h^1j^2z^2 - 81a^2b^4c^4e^1g^1j^2z^2 - 81a^2b^4c^4d^1h^1j^2z^2 + 486a^3b^2c^5d^1f^1k^2z^2 + 486a^2b^2c^6d^2g^1j^1z^2 - 486a^2b^2c^6d^2e^1l^1z^2 - 162a^2b^2c^6d^2f^1k^1z^2 - 81a^2b^4c^4d^1f^1k^2z^2 + 81a^2b^3c^5d^1g^2j^1z^2 - 486a^2b^2c^6d^2e^1k^1z^2 - 81a^2b^3c^5e^1g^2h^1z^2 - 648a^2b^3c^5d^1e^1j^2z^2 - 162a^2b^2c^6e^2f^1h^1z^2 + 81a^2b^3c^5e^1f^1h^2z^2 - 81a^2b^3c^5d^1g^1h^2z^2 - 162a^2b^2c^6d^1f^1g^2z^2 - 189a^5b^3c^2l^3m^2z^2 + 162a^5b^2c^3k^3m^2z^2 - 27a^4b^4c^2k^3m^2z^2 - 702a^4b^3c^3j^3m^2z^2 - 81a^3b^6c^1j^2m^2z^2 + 81a^3b^5c^2j^3m^2z^2 - 54a^5b^3c^2j^1m^3z^2 - 486a^5b^2c^3j^1l^3z^2 + 216a^4b^4c^2j^1l^3z^2 - 189a^4b^3c^3j^1k^3z^2 - 54a^4b^2c^4h^3m^2z^2 + 27a^3b^5c^2j^1k^3z^2 + 27a^3b^
\end{aligned}$$

$$\begin{aligned}
& 3c^4g^3mz^2 - 810a^4b^4c^2f^3m^3z^2 + 540a^5b^2c^3f^3m^3z^2 - 3 \\
& 24a^3b^2c^5f^3m^3z^2 + 54a^2b^4c^4f^3m^3z^2 + 675a^4b^3c^3f^3l^3 \\
& z^2 - 243a^3b^5c^2f^3l^3z^2 - 189a^2b^3c^5e^3m^3z^2 + 27a^3b^3c \\
& ^4h^3j^3z^2 - 486a^4b^2c^4f^3k^3z^2 - 486a^2b^2c^6d^3m^3z^2 + 216a \\
& ^3b^4c^3f^3k^3z^2 - 54a^3b^2c^5g^3j^3z^2 - 27a^2b^6c^2f^3k^3z^2 \\
& - 270a^3b^3c^4f^3j^3z^2 - 54a^2b^3c^5f^3j^3z^2 + 27a^2b^5c^3f^3 \\
& j^3z^2 + 162a^2b^2c^6e^3j^3z^2 + 162a^3b^2c^5f^3h^3z^2 - 27a^2b^4 \\
& c^4f^3h^3z^2 + 27a^2b^3c^5f^3g^3z^2 + 81a^2b^2c^7d^2e^2z^2 - 648 \\
& a^6c^4h^3l^2m^3z^2 + 648a^5c^5g^2k^3m^3z^2 - 648a^5c^5h^2j^3l^2z^2 + \\
& 1296a^5c^5h^3j^2k^3z^2 + 1296a^5c^5g^3j^2l^3z^2 + 1296a^5c^5f^3j^2m^3 \\
& z^2 - 648a^5c^5g^3j^2k^3z^2 + 648a^5c^5e^3k^2l^3z^2 + 648a^5c^5d^3k^2 \\
& m^3z^2 - 648a^4c^6d^2k^3m^3z^2 - 648a^5c^5e^3j^3l^2z^2 + 648a^5c^5d^3 \\
& k^3l^2z^2 + 648a^4c^6e^2j^3l^3z^2 + 324a^6b^3c^3l^3m^3z^2 + 27a^4b^5c \\
& c^3l^3m^3z^2 + 648a^5c^5f^3h^3l^2z^2 - 648a^4c^6e^2h^3m^3z^2 + 1512a^5c \\
& b^3c^4j^3m^3z^2 + 1080a^6b^3c^3j^3m^3z^2 - 162a^4b^5c^3j^3m^3z^2 - 648a \\
& ^4c^6f^3g^2k^3z^2 + 648a^4c^6e^3g^2l^3z^2 - 648a^4c^6d^3g^2m^3z^2 - 2 \\
& 7a^3b^6c^3j^3l^3z^2 + 648a^4c^6e^3h^2j^3z^2 + 648a^4c^6d^3h^2k^3z^2 + \\
& 324a^5b^3c^4j^3k^3z^2 - 1296a^4c^6e^3g^3j^2z^2 - 1296a^4c^6d^3h^3j^2 \\
& z^2 - 108a^4b^3c^5g^3m^3z^2 - 648a^4c^6d^3f^3k^2z^2 - 648a^3c^7d^2g \\
& j^3z^2 + 648a^3c^7d^2f^3k^3z^2 + 648a^3c^7d^2e^3l^3z^2 + 270a^3b^6c^3 \\
& f^3m^3z^2 + 648a^3c^7d^2e^2k^3z^2 - 540a^5b^3c^4f^3l^3z^2 + 324a^3b^3c \\
& ^6e^3m^3z^2 - 108a^4b^3c^5h^3j^3z^2 + 27a^2b^7c^3f^3l^3z^2 + 27a^3b^5c \\
& ^4e^3m^3z^2 + 648a^3c^7e^2f^3h^3z^2 + 216a^2b^4c^5d^3m^3z^2 + 648a^4 \\
& b^3c^5f^3j^3z^2 + 216a^3b^3c^6f^3j^3z^2 + 648a^3c^7d^3f^3g^2z^2 - 27a \\
& b^4c^5e^3j^3z^2 + 324a^2b^3c^7d^3j^3z^2 - 189a^2b^3c^6d^3j^3z^2 - 10 \\
& 8a^3b^3c^6f^3g^3z^2 - 108a^2b^3c^7e^3f^3z^2 + 27a^2b^3c^6e^3f^3z^2 + \\
& 162a^2b^2c^7d^3f^3z^2 - 1134a^5b^2c^3j^2m^2z^2 + 648a^4b^4c^2j^2 \\
& m^2z^2 + 81a^5b^2c^3k^2l^2z^2 + 162a^4b^2c^4f^2m^2z^2 + 81a^4 \\
& b^2c^4h^2k^2z^2 + 81a^4b^2c^4g^2l^2z^2 + 162a^3b^2c^5f^2j^2 \\
& z^2 + 81a^3b^2c^5e^2k^2z^2 + 81a^3b^2c^5d^2l^2z^2 + 81a^3b^2 \\
& c^5g^2h^2z^2 + 81a^2b^2c^6e^2g^2z^2 + 81a^2b^2c^6d^2h^2z^2 \\
& - 216a^6c^4k^3m^3z^2 + 216a^6c^4j^3l^3z^2 + 27a^3b^7j^3m^3z^2 + \\
& 216a^5c^5h^3m^3z^2 + 432a^6c^4f^3m^3z^2 + 432a^4c^6f^3m^3z^2 - 27 \\
& b^6c^4d^3m^3z^2 - 27a^2b^8f^3m^3z^2 + 216a^5c^5f^3k^3z^2 + 216a^4c \\
& ^6g^3j^3z^2 + 216a^3c^7d^3m^3z^2 + 216a^5b^4c^3m^4z^2 - 216a^3c^7 \\
& e^3j^3z^2 + 27b^5c^5d^3j^3z^2 - 216a^4c^6f^3h^3z^2 - 27b^4c^6d^3f \\
& f^3z^2 - 216a^2c^8d^3f^3z^2 - 648a^6c^4j^2m^2z^2 - 324a^6c^4k^2l^2 \\
& z^2 - 648a^5c^5f^2m^2z^2 - 324a^5c^5h^2k^2z^2 - 324a^5c^5g^2 \\
& l^2z^2 - 648a^4c^6f^2j^2z^2 - 324a^4c^6e^2k^2z^2 - 324a^4c^6 \\
& d^2l^2z^2 - 405a^6b^2c^2m^4z^2 - 324a^4c^6g^2h^2z^2 - 324a^3c^7 \\
& e^2g^2z^2 - 324a^3c^7d^2h^2z^2 + 243a^4b^2c^4j^4z^2 - 27a^3 \\
& b^4c^3j^4z^2 - 324a^2c^8d^2e^2z^2 + 27a^2b^2c^6f^4z^2 - 108a^7 \\
& c^3m^4z^2 - 27a^4b^6m^4z^2 - 540a^5c^5j^4z^2 - 108a^3c^7f^4 \\
& z^2 - 216a^5b^3c^3f^3j^3k^3l^3m^3z - 54a^3b^5c^3f^3j^3k^3l^3m^3z + 27a^3b^5c \\
& ^3g^3h^3k^3l^3m^3z - 27a^2b^6c^3e^3g^3k^3l^3m^3z - 27a^2b^6c^3d^3h^3k^3l^3m^3z + 432a^4
\end{aligned}$$

$$\begin{aligned}
& 4*b*c^4*d*g*j*k*m*z - 432*a^4*b*c^4*d*e*k*l*m*z + 216*a^4*b*c^4*e*g*j*k*l*z \\
& + 216*a^4*b*c^4*e*f*j*k*m*z + 216*a^4*b*c^4*d*h*j*k*l*z + 216*a^4*b*c^4*d* \\
& f*j*l*m*z + 216*a^4*b*c^4*f*g*h*j*m*z - 27*a*b^6*c^2*d*e*j*k*l*z - 27*a*b^6 \\
& *c^2*d*e*h*k*m*z - 27*a*b^6*c^2*d*e*g*l*m*z + 216*a^3*b*c^5*d*e*h*j*k*z + 2 \\
& 16*a^3*b*c^5*d*e*g*j*l*z - 216*a^3*b*c^5*d*e*f*j*m*z + 27*a*b^5*c^3*d*e*h*j \\
& *k*z + 27*a*b^5*c^3*d*e*g*j*l*z + 27*a*b^5*c^3*d*e*g*h*m*z - 27*a*b^4*c^4*d \\
& *e*g*h*j*z + 27*a*b^7*c*d*e*k*l*m*z + 270*a^4*b^3*c^2*f*j*k*l*m*z - 108*a^4 \\
& *b^3*c^2*g*h*k*l*m*z - 216*a^4*b^2*c^3*f*h*j*k*m*z - 216*a^4*b^2*c^3*f*g*j* \\
& l*m*z - 216*a^4*b^2*c^3*e*g*k*l*m*z - 216*a^4*b^2*c^3*d*h*k*l*m*z + 162*a^3 \\
& *b^4*c^2*e*g*k*l*m*z + 162*a^3*b^4*c^2*d*h*k*l*m*z + 108*a^4*b^2*c^3*g*h*j* \\
& k*l*z + 108*a^4*b^2*c^3*e*h*j*l*m*z + 54*a^3*b^4*c^2*f*h*j*k*m*z + 54*a^3*b \\
& ^4*c^2*f*g*j*l*m*z - 27*a^3*b^4*c^2*g*h*j*k*l*z + 540*a^3*b^3*c^3*d*e*k*l*m \\
& *z - 216*a^2*b^5*c^2*d*e*k*l*m*z - 162*a^3*b^3*c^3*e*g*j*k*l*z - 162*a^3*b^ \\
& 3*c^3*d*h*j*k*l*z - 108*a^3*b^3*c^3*d*g*j*k*m*z - 54*a^3*b^3*c^3*e*f*j*k*m* \\
& z - 54*a^3*b^3*c^3*d*f*j*l*m*z + 27*a^2*b^5*c^2*e*g*j*k*l*z + 27*a^2*b^5*c^ \\
& 2*d*h*j*k*l*z - 108*a^3*b^3*c^3*e*g*h*k*m*z - 108*a^3*b^3*c^3*d*g*h*l*m*z - \\
& 54*a^3*b^3*c^3*f*g*h*j*m*z + 27*a^2*b^5*c^2*e*g*h*k*m*z + 27*a^2*b^5*c^2*d \\
& *g*h*l*m*z - 540*a^3*b^2*c^4*d*e*j*k*l*z + 216*a^2*b^4*c^3*d*e*j*k*l*z - 21 \\
& 6*a^3*b^2*c^4*d*e*h*k*m*z - 216*a^3*b^2*c^4*d*e*g*l*m*z + 162*a^2*b^4*c^3*d \\
& *e*h*k*m*z + 162*a^2*b^4*c^3*d*e*g*l*m*z + 108*a^3*b^2*c^4*e*g*h*j*k*z - 10 \\
& 8*a^3*b^2*c^4*e*f*h*j*l*z + 108*a^3*b^2*c^4*d*g*h*j*l*z + 108*a^3*b^2*c^4*d \\
& *f*g*k*m*z - 27*a^2*b^4*c^3*e*g*h*j*k*z - 27*a^2*b^4*c^3*d*g*h*j*l*z - 162* \\
& a^2*b^3*c^4*d*e*h*j*k*z - 162*a^2*b^3*c^4*d*e*g*j*l*z + 54*a^2*b^3*c^4*d*e* \\
& f*j*m*z - 108*a^2*b^3*c^4*d*e*g*h*m*z + 108*a^2*b^2*c^5*d*e*g*h*j*z + 324*a \\
& ^6*b*c^2*j*k*l*m^2*z - 81*a^5*b^3*c*j*k*l*m^2*z + 27*a^4*b^4*c*j^2*k*l*m*z \\
& - 27*a^4*b^4*c*h*k^2*l*m*z - 27*a^4*b^4*c*g*k^2*l*m*z + 216*a^5*b*c^3*h*j^2 \\
& *k*m*z + 216*a^5*b*c^3*g*j^2*l*m*z + 54*a^4*b^4*c*f*k^2*l*m^2*z + 27*a^4*b^4* \\
& c*h*j*k*m^2*z + 27*a^4*b^4*c*g*j^2*l*m^2*z + 27*a^2*b^6*c*f^2*k^2*l*m^2*z + 216*a \\
& ^5*b*c^3*e*k^2*l*m^2*z - 108*a^5*b*c^3*h*j^2*k^2*l*m^2*z + 27*a^3*b^5*c*e*k^2*l*m^2*z \\
& + 216*a^5*b*c^3*d*k^2*l*m^2*z + 216*a^4*b*c^4*e^2*j^2*l*m^2*z - 108*a^5*b*c^3*g* \\
& j*k^2*l*m^2*z + 27*a^3*b^5*c*d*k^2*l*m^2*z - 324*a^5*b*c^3*e*j*k^2*m^2*z - 324*a^5* \\
& b*c^3*d*j^2*l*m^2*z - 216*a^5*b*c^3*f*h^2*l^2*m^2*z - 108*a^4*b*c^4*f^2*j*k^2*l*z - \\
& 27*a^3*b^5*c*e*j*k^2*m^2*z - 27*a^3*b^5*c*d*j^2*l*m^2*z - 324*a^5*b*c^3*g*h*j* \\
& m^2*z + 216*a^5*b*c^3*f*h*k^2*m^2*z + 216*a^5*b*c^3*f*g^2*l^2*m^2*z + 216*a^5*b*c \\
& ^3*e*h^2*l^2*m^2*z - 216*a^4*b*c^4*f^2*h*k^2*m^2*z - 216*a^4*b*c^4*f^2*g^2*l^2*m^2*z - 27 \\
& *a^3*b^5*c*g*h*j^2*m^2*z + 216*a^4*b*c^4*e*g^2*l^2*m^2*z - 108*a^4*b*c^4*g^2*h*j* \\
& l^2*z - 216*a^4*b*c^4*f*h^2*j^2*l^2*z + 216*a^4*b*c^4*e*h^2*j^2*m^2*z + 216*a^4*b*c^4 \\
& *d*h^2*k^2*m^2*z - 108*a^4*b*c^4*g*h^2*j^2*k^2*z - 432*a^4*b*c^4*e*g*j^2*m^2*z - 432* \\
& a^4*b*c^4*d*h*j^2*m^2*z + 216*a^4*b*c^4*f*h^2*j^2*k^2*z + 216*a^4*b*c^4*f*g*j^2*l \\
& *z + 27*a^2*b^6*c*e*g*j^2*m^2*z + 27*a^2*b^6*c*d*h*j^2*m^2*z - 432*a^3*b*c^5*d^ \\
& 2*g*j^2*m^2*z - 216*a^4*b*c^4*f*g*j^2*k^2*z + 216*a^3*b*c^5*d^2*f*k^2*m^2*z + 216*a^3 \\
& *b*c^5*d^2*e^2*l^2*m^2*z - 108*a^4*b*c^4*e*h^2*j^2*k^2*z - 108*a^4*b*c^4*d*g*k^2*l^2*z \\
& - 108*a^3*b*c^5*d^2*h*j^2*l^2*z + 108*a^3*b*c^5*d^2*g*k^2*l^2*z - 54*a*b^5*c^3*d^2* \\
& g*j^2*m^2*z + 27*a*b^5*c^3*d^2*g*k^2*l^2*z + 27*a*b^5*c^3*d^2*e^2*l^2*m^2*z - 216*a^4*b*c \\
& ^4*e*f*j^2*l^2*z + 216*a^3*b*c^5*d^2*e^2*k^2*m^2*z - 108*a^4*b*c^4*d*g*j^2*l^2*z - 10
\end{aligned}$$

$$\begin{aligned}
& 8a^3b^5c^5e^2g^2jk^2z + 27a^3b^5c^3d^2e^2k^2m^2z + 324a^4b^5c^4d^2e^2j^2m^2z + 216a^3b^5c^5e^2f^2h^2m^2z - 108a^4b^5c^4e^2g^2h^2l^2z + 108a^3b^5c^5e^2g^2h^2l^2z + 108a^3b^5c^5e^2f^2j^2k^2z + 108a^3b^5c^5d^2f^2j^2l^2z + 27a^3b^5c^2d^2e^2j^2m^2z - 216a^3b^5c^5e^2f^2h^2l^2z + 108a^3b^5c^5f^2g^2h^2j^2z - 27a^3b^4c^4d^2e^2j^2l^2z + 216a^3b^5c^5d^2f^2g^2m^2z - 108a^3b^5c^5e^2g^2h^2j^2z + 54a^3b^4c^4d^2f^2g^2m^2z - 27a^3b^4c^4d^2g^2h^2k^2z - 27a^3b^4c^4d^2e^2h^2m^2z - 27a^3b^4c^4d^2e^2j^2k^2z - 108a^3b^5c^5d^2g^2h^2j^2z + 54a^3b^4c^4d^2e^2h^2l^2z + 27a^3b^6c^2d^2e^2h^2l^2z - 27a^3b^5c^3d^2e^2h^2l^2z - 27a^3b^4c^4d^2e^2g^2m^2z - 27a^3b^4c^4d^2e^2f^2m^2z + 216a^2b^5c^6d^2f^2g^2j^2z - 108a^3b^5c^5d^2e^2g^2k^2z - 108a^2b^5c^6d^2e^2h^2j^2z + 108a^2b^5c^6d^2e^2g^2k^2z - 54a^3b^5c^5d^2f^2g^2j^2z - 27a^3b^5c^3d^2e^2g^2k^2z + 27a^3b^4c^4d^2e^2g^2k^2z + 27a^3b^3c^5d^2e^2h^2j^2z - 27a^3b^3c^5d^2e^2g^2k^2z - 108a^2b^5c^6d^2e^2g^2j^2z + 27a^3b^3c^5d^2e^2g^2j^2z - 108a^2b^5c^6d^2e^2f^2j^2z + 27a^3b^3c^5d^2e^2f^2j^2z - 432a^5c^4e^2h^2j^2l^2m^2z + 432a^4c^5d^2e^2j^2k^2l^2m^2z + 432a^4c^5e^2f^2h^2j^2l^2m^2z - 432a^4c^5d^2f^2g^2k^2m^2z - 27a^3b^7c^2d^2e^2j^2m^2z - 54a^5b^2c^2j^2k^2l^2m^2z + 108a^5b^2c^2h^2k^2l^2m^2z + 108a^5b^2c^2g^2k^2l^2m^2z - 54a^5b^2c^2h^2j^2l^2m^2z + 378a^4b^2c^3f^2k^2l^2m^2z - 270a^5b^2c^2f^2k^2l^2m^2z - 189a^3b^4c^2f^2k^2l^2m^2z - 108a^5b^2c^2h^2j^2k^2m^2z - 108a^5b^2c^2g^2j^2l^2m^2z - 54a^4b^3c^2h^2j^2k^2m^2z - 54a^4b^3c^2g^2j^2l^2m^2z - 162a^4b^3c^2e^2k^2l^2m^2z + 54a^4b^2c^3g^2j^2k^2m^2z + 27a^4b^3c^2h^2j^2k^2l^2z - 162a^4b^3c^2d^2k^2l^2m^2z + 108a^4b^2c^3g^2h^2l^2m^2z - 54a^3b^3c^3e^2j^2l^2m^2z + 27a^4b^3c^2g^2j^2k^2l^2z - 27a^3b^4c^2g^2h^2l^2m^2z - 270a^4b^2c^3f^2j^2k^2l^2z + 189a^4b^3c^2e^2j^2k^2m^2z + 189a^4b^3c^2d^2j^2l^2m^2z - 162a^4b^2c^3e^2j^2k^2m^2z - 162a^4b^2c^3d^2j^2l^2m^2z + 135a^3b^3c^3f^2j^2k^2l^2z + 108a^4b^2c^3g^2h^2k^2m^2z + 54a^4b^3c^2f^2h^2l^2m^2z - 54a^4b^2c^3f^2h^2l^2m^2z + 54a^3b^4c^2f^2j^2k^2l^2z - 27a^3b^4c^2g^2h^2k^2m^2z + 27a^3b^4c^2e^2j^2k^2m^2z + 27a^3b^4c^2d^2j^2l^2m^2z - 27a^2b^5c^2f^2j^2k^2l^2z - 270a^3b^2c^4d^2j^2k^2m^2z + 189a^4b^3c^2g^2h^2j^2m^2z - 162a^4b^2c^3g^2h^2j^2m^2z + 162a^4b^2c^3e^2j^2k^2l^2z + 162a^3b^3c^3f^2h^2k^2m^2z + 162a^3b^3c^3f^2g^2l^2m^2z - 54a^4b^3c^2f^2h^2k^2m^2z - 54a^4b^3c^2f^2g^2l^2m^2z - 54a^4b^3c^2e^2h^2l^2m^2z + 54a^4b^2c^3d^2j^2k^2m^2z + 54a^2b^4c^3d^2j^2k^2m^2z + 27a^3b^4c^2g^2h^2j^2m^2z - 27a^3b^4c^2e^2j^2k^2l^2z - 27a^2b^5c^2f^2h^2k^2m^2z - 27a^2b^5c^2f^2g^2l^2m^2z + 162a^4b^2c^3d^2j^2k^2l^2z - 162a^3b^3c^3e^2g^2l^2m^2z + 108a^4b^2c^3e^2h^2k^2m^2z + 108a^3b^2c^4d^2h^2l^2m^2z - 54a^4b^2c^3f^2g^2k^2m^2z - 27a^3b^4c^2e^2h^2k^2m^2z - 27a^3b^4c^2d^2j^2k^2l^2z + 27a^3b^3c^3g^2h^2j^2l^2z + 27a^2b^5c^2e^2g^2l^2m^2z - 27a^2b^4c^3d^2h^2l^2m^2z + 270a^4b^2c^3f^2h^2j^2l^2z - 270a^3b^2c^4e^2h^2j^2m^2z - 162a^4b^2c^3e^2h^2k^2l^2z - 162a^3b^3c^3d^2h^2k^2m^2z + 162a^3b^2c^4e^2h^2k^2l^2z + 108a^4b^2c^3d^2g^2l^2m^2z + 108a^3b^2c^4e^2g^2k^2m^2z - 54a^4b^2c^3e^2f^2l^2m^2z - 54a^3b^4c^2f^2h^2j^2l^2z + 54a^3b^3c^3f^2h^2j^2l^2z - 54a^3b^3c^3e^2h^2j^2m^2z + 54a^3b^2c^4e^2f^2l^2m^2z + 54a^2b^4c^3e^2h^2j^2m^2z + 27a^3b^4c^2e^2h^2k^2l^2z - 27a^3b^4c^2d^2g^2l^2m^2z + 27a^3b^3c^3g^2h^2j^2k^2z + 27a^2b^5c^2d^2h^2k^2m^2z - 27a^2b^4c^3e^2h^2k^2
\end{aligned}$$



$$\begin{aligned}
& *1*z - 27*a^2*b^4*c^3*e^2*g*k*m*z + 432*a^4*b^2*c^3*e*g*j*m^2*z + 432*a^4*b^2*c^3*d*h*j*m^2*z - 270*a^4*b^2*c^3*d*g*k*m^2*z - 216*a^3*b^4*c^2*e*g*j*m^2*z - 216*a^3*b^4*c^2*d*h*j*m^2*z + 216*a^3*b^3*c^3*e*g*j^2*m*z + 216*a^3*b^3*c^3*d*h*j^2*m*z - 162*a^3*b^2*c^4*e*f^2*k*m*z - 162*a^3*b^2*c^4*d*f^2*l*m*z - 108*a^3*b^2*c^4*f^2*h*j*k*z - 108*a^3*b^2*c^4*f^2*g*j*l*z + 54*a^4*b^2*c^3*e*f*k*m^2*z + 54*a^4*b^2*c^3*d*f*l*m^2*z + 54*a^3*b^4*c^2*d*g*k*m^2*z - 54*a^3*b^3*c^3*f*h*j^2*k*z - 54*a^3*b^3*c^3*f*g*j^2*l*z - 27*a^2*b^5*c^2*e*g*j^2*m*z - 27*a^2*b^5*c^2*d*h*j^2*m*z + 27*a^2*b^4*c^3*f^2*h*j*k*z + 27*a^2*b^4*c^3*f^2*g*j*l*z + 27*a^2*b^4*c^3*e*f^2*k*m*z + 27*a^2*b^4*c^3*d*f^2*l*m*z + 324*a^2*b^3*c^4*d^2*g*j*m*z - 270*a^3*b^2*c^4*d*g^2*j*m*z - 162*a^3*b^2*c^4*f^2*g*h*m*z + 162*a^3*b^2*c^4*e*g^2*j*l*z - 162*a^2*b^3*c^4*d^2*e*l*m*z - 135*a^2*b^3*c^4*d^2*g*k*l*z + 108*a^3*b^2*c^4*d*g^2*k*l*z + 54*a^4*b^2*c^3*f*g*h*m^2*z + 54*a^3*b^3*c^3*f*g*j*k^2*z - 54*a^3*b^2*c^4*f*g^2*j*k*z + 54*a^2*b^4*c^3*d*g^2*j*m*z - 54*a^2*b^3*c^4*d^2*f*k*m*z + 27*a^3*b^3*c^3*e*h*j*k^2*z + 27*a^3*b^3*c^3*d*g*k^2*l*z + 27*a^2*b^4*c^3*f^2*g*h*m*z - 27*a^2*b^4*c^3*e*g^2*j*l*z - 27*a^2*b^4*c^3*d*g^2*k*l*z + 27*a^2*b^3*c^4*d^2*h*j*l*z + 162*a^3*b^2*c^4*d*h^2*j*k*z - 162*a^2*b^3*c^4*d*e^2*k*m*z + 108*a^3*b^2*c^4*e*g^2*h*m*z + 54*a^3*b^3*c^3*e*f*j*l^2*z + 27*a^3*b^3*c^3*d*g*j*l^2*z - 27*a^2*b^4*c^3*e*g^2*h*m*z - 27*a^2*b^4*c^3*d*h^2*j*k*z + 27*a^2*b^3*c^4*e^2*g*j*k*z - 621*a^3*b^3*c^3*d*e*j*m^2*z + 594*a^3*b^2*c^4*d*e*j^2*m*z + 243*a^2*b^5*c^2*d*e*j*m^2*z - 243*a^2*b^4*c^3*d*e*j^2*m*z + 135*a^3*b^3*c^3*e*g*h*l^2*z - 108*a^3*b^2*c^4*e*g*h^2*l*z + 108*a^3*b^2*c^4*d*g*h^2*m*z + 54*a^3*b^2*c^4*e*f*j^2*k*z + 54*a^3*b^2*c^4*e*f*h^2*m*z + 54*a^3*b^2*c^4*d*g*j^2*k*z + 54*a^3*b^2*c^4*d*f*j^2*l*z - 54*a^2*b^3*c^4*e^2*f*h*m*z - 27*a^2*b^5*c^2*e*g*h*l^2*z + 27*a^2*b^4*c^3*e*g*h^2*l*z - 27*a^2*b^4*c^3*d*g*h^2*m*z - 27*a^2*b^3*c^4*e^2*g*h*l*z - 27*a^2*b^3*c^4*e*f^2*j*k*z - 27*a^2*b^3*c^4*d*f^2*j*l*z + 162*a^2*b^2*c^5*d^2*e*j*l*z + 54*a^3*b^2*c^4*f*g*h*j^2*z - 54*a^3*b^2*c^4*d*f*j*k^2*z + 54*a^2*b^3*c^4*e*f^2*h*l*z + 54*a^2*b^2*c^5*d^2*f*j*k*z - 27*a^2*b^3*c^4*f^2*g*h*j*z - 270*a^2*b^2*c^5*d^2*f*g*m*z - 162*a^3*b^2*c^4*d*g*h*k^2*z + 162*a^2*b^2*c^5*d^2*g*h*k*z + 162*a^2*b^2*c^5*d*e^2*j*k*z + 108*a^2*b^2*c^5*d^2*e*h*m*z - 54*a^2*b^3*c^4*d*f*g^2*m*z + 27*a^2*b^4*c^3*d*g*h*k^2*z + 27*a^2*b^3*c^4*e*g^2*h*j*z + 270*a^3*b^2*c^4*d*e*h*l^2*z - 270*a^2*b^2*c^5*d*e^2*h*l*z - 162*a^2*b^4*c^3*d*e*h*l^2*z + 108*a^2*b^3*c^4*d*e*h^2*l*z + 108*a^2*b^2*c^5*d*e^2*g*m*z + 54*a^2*b^2*c^5*e^2*f*h*j*z + 27*a^2*b^3*c^4*d*g*h^2*j*z + 162*a^2*b^2*c^5*d*e*f^2*m*z - 54*a^3*b^2*c^4*d*e*f*m^2*z - 54*a^2*b^2*c^5*d*f^2*g*k*z + 135*a^2*b^3*c^4*d*e*g*k^2*z - 108*a^2*b^2*c^5*d*e*g^2*k*z + 54*a^2*b^2*c^5*d*f*g^2*j*z - 54*a^2*b^2*c^5*d*e*f*j^2*z - 9*a*b^7*c*d*e*l^3*z - 36*a*b*c^7*d^3*e*g*z - 108*a^6*b*c^2*k^2*l^2*m*z + 27*a^5*b^3*c*k^2*l^2*m*z - 18*a^5*b^2*c^2*j*k^3*m*z - 27*a^4*b^3*c^2*j^3*k*l*z - 108*a^5*b*c^3*h^2*k^2*m*z - 108*a^5*b*c^3*g^2*l^2*m*z + 108*a^5*b*c^3*h^2*k*l^2*z + 108*a^5*b*c^3*g^2*k*m^2*z + 90*a^5*b^2*c^2*f*l^3*m*z - 18*a^5*b^2*c^2*h*k*k^3*z + 18*a^4*b^2*c^3*h^3*k*k^3*z + 18*a^4*b^2*c^3*h^3*j*m*z - 108*a^5*b*c^3*h*j^2*l^2*z + 18*a^4*b^3*c^2*f*k^3*m*z - 18*a^3*b^3*c^3*g^3*j*m*z - 9*a^4*b^3*c^2*g*k^3*l*z + 9*a^3*b^3*c^3*g^3*k*l*z + 252*a^4*b^2*c^3*f*j^3*m*z + 216*a^5*b*c^3*f*j^2*m^2*z + 180*a^3
\end{aligned}$$

$$\begin{aligned}
& *b^2*c^4*f^3*j*m*z - 108*a^4*b*c^4*e^2*k^2*m*z - 108*a^4*b*c^4*d^2*l^2*m*z \\
& + 90*a^5*b^2*c^2*e*k*m^3*z + 90*a^5*b^2*c^2*d*l*m^3*z - 90*a^3*b^2*c^4*f^3* \\
& k*l*z + 54*a^3*b^5*c*f*j^2*m^2*z - 54*a^3*b^4*c^2*f*j^3*m*z + 36*a^5*b^2*c^ \\
& 2*f*j*m^3*z + 36*a^4*b^2*c^3*h*j^3*k*z + 36*a^4*b^2*c^3*g*j^3*l*z - 36*a^2* \\
& b^4*c^3*f^3*j*m*z - 27*a^2*b^6*c*f^2*j*m^2*z + 18*a^2*b^4*c^3*f^3*k*l*z - 2 \\
& 16*a^4*b*c^4*d^2*k*m^2*z + 108*a^5*b*c^3*d*k^2*m^2*z - 108*a^4*b^3*c^2*f*j* \\
& l^3*z - 108*a^4*b*c^4*g^2*h^2*m*z + 108*a^2*b^3*c^4*e^3*j*m*z + 90*a^5*b^2* \\
& c^2*g*h*m^3*z + 54*a^4*b^3*c^2*e*k*l^3*z - 54*a^2*b^3*c^4*e^3*k*l*z + 234*a \\
& ^2*b^2*c^5*d^3*j*m*z - 144*a^2*b^2*c^5*d^3*k*l*z + 90*a^4*b^2*c^3*f*j*k^3*z \\
& - 72*a^4*b^2*c^3*d*k^3*l*z + 27*a^4*b^3*c^2*g*h*l^3*z - 27*a^3*b^3*c^3*g*h \\
& ^3*l*z - 18*a^3*b^4*c^2*f*j*k^3*z + 9*a^3*b^4*c^2*d*k^3*l*z + 216*a^4*b*c^4 \\
& *f^2*h*l^2*z - 216*a^4*b*c^4*e^2*h*m^2*z + 108*a^4*b*c^4*g^2*h*k^2*z - 18*a \\
& ^4*b^2*c^3*g*h*k^3*z + 18*a^3*b^2*c^4*g^3*h*k*z + 18*a^3*b^2*c^4*f*g^3*m*z \\
& + 9*a^3*b^4*c^2*g*h*k^3*z - 9*a^3*b^3*c^3*e*j^3*k*z - 9*a^3*b^3*c^3*d*j^3*l \\
& *z - 144*a^4*b^3*c^2*e*g*m^3*z - 144*a^4*b^3*c^2*d*h*m^3*z - 108*a^3*b*c^5* \\
& e^2*g^2*m*z + 108*a^3*b*c^5*d^2*j^2*k*z - 108*a^3*b*c^5*d^2*h^2*m*z - 18*a^ \\
& 2*b^3*c^4*f^3*h*k*z - 18*a^2*b^3*c^4*f^3*g*l*z - 9*a^3*b^3*c^3*g*h*j^3*z - \\
& 216*a^4*b*c^4*d*g^2*m^2*z + 144*a^4*b^2*c^3*e*g*l^3*z - 126*a^3*b^2*c^4*d*h \\
& ^3*l*z - 108*a^4*b*c^4*d*h^2*l^2*z - 108*a^3*b*c^5*f^2*g^2*k*z - 108*a^3*b* \\
& c^5*e^2*h^2*k*z - 90*a^2*b^2*c^5*e^3*f*m*z + 72*a^2*b^2*c^5*e^3*g*l*z - 63* \\
& a^3*b^4*c^2*e*g*l^3*z - 36*a^3*b^4*c^2*d*h*l^3*z + 27*a^2*b^4*c^3*d*h^3*l*z \\
& + 27*a*b^6*c^2*d^2*g*m^2*z - 18*a^4*b^2*c^3*d*h*l^3*z - 18*a^3*b^2*c^4*f*h \\
& ^3*j*z - 18*a^3*b^2*c^4*e*h^3*k*z + 18*a^2*b^2*c^5*e^3*h*k*z + 108*a^3*b*c^ \\
& 5*e^2*h*j^2*z + 54*a^3*b^3*c^3*d*h*k^3*z + 27*a^3*b^3*c^3*e*g*k^3*z - 27*a^ \\
& 2*b^3*c^4*e*g^3*k*z + 27*a^2*b^3*c^4*d*g^3*l*z - 27*a*b^4*c^4*d^2*g^2*l*z - \\
& 9*a^2*b^5*c^2*e*g*k^3*z - 9*a^2*b^5*c^2*d*h*k^3*z + 207*a^3*b^4*c^2*d*e*m^ \\
& 3*z - 108*a^2*b*c^6*d^2*e^2*m*z - 90*a^4*b^2*c^3*d*e*m^3*z - 72*a^3*b^2*c^4 \\
& *e*g*j^3*z - 72*a^3*b^2*c^4*d*h*j^3*z + 27*a*b^3*c^5*d^2*e^2*m*z + 18*a^2*b \\
& ^2*c^5*e*f^3*k*z + 18*a^2*b^2*c^5*d*f^3*l*z + 9*a^2*b^4*c^3*e*g*j^3*z + 9*a \\
& ^2*b^4*c^3*d*h*j^3*z - 216*a^3*b*c^5*d*e^2*l^2*z - 198*a^3*b^3*c^3*d*e*l^3* \\
& z + 108*a^3*b*c^5*d*g^2*j^2*z - 108*a^3*b*c^5*d*f^2*k^2*z + 72*a^2*b^5*c^2* \\
& d*e*l^3*z - 27*a*b^5*c^3*d*e^2*l^2*z + 27*a*b^4*c^4*d^2*g*j^2*z + 18*a^2*b^ \\
& 2*c^5*f^3*g*h*z + 144*a^3*b^2*c^4*d*e*k^3*z - 63*a^2*b^4*c^3*d*e*k^3*z + 27 \\
& *a*b^4*c^4*d^2*e*k^2*z - 9*a^2*b^3*c^4*e*g*h^3*z - 108*a^2*b*c^6*d^2*g^2*h* \\
& z + 81*a^2*b^3*c^4*d*e*j^3*z + 27*a*b^3*c^5*d^2*g^2*h*z - 27*a*b^2*c^6*d^2* \\
& e^2*j*z - 18*a^2*b^2*c^5*d*g^3*h*z + 108*a^2*b*c^6*d*e^2*h^2*z - 27*a*b^3*c \\
& ^5*d*e^2*h^2*z + 27*a*b^2*c^6*d^2*f^2*g*z - 18*a^2*b^2*c^5*d*e*h^3*z - 216* \\
& a^6*c^3*j^2*k*l*m*z + 216*a^6*c^3*h*j*l^2*m*z + 216*a^6*c^3*f*k*l*m^2*z - 2 \\
& 16*a^5*c^4*f^2*k*l*m*z - 216*a^5*c^4*g^2*j*k*m*z + 216*a^5*c^4*f*j^2*k*l*z \\
& + 216*a^5*c^4*f*h^2*l*m*z + 216*a^5*c^4*e*j^2*k*m*z + 216*a^5*c^4*d*j^2*l*m \\
& *z + 216*a^5*c^4*g*h*j^2*m*z - 216*a^5*c^4*e*j*k^2*l*z - 216*a^5*c^4*d*j*k^ \\
& 2*m*z + 216*a^4*c^5*d^2*j*k*m*z - 18*a^6*b^2*c*k*l*m^3*z + 216*a^5*c^4*f*g* \\
& k^2*m*z - 216*a^5*c^4*d*j*k*l^2*z - 72*a^6*b*c^2*j*l^3*m*z + 18*a^5*b^3*c*j \\
& *l^3*m*z - 216*a^5*c^4*f*h*j*l^2*z + 216*a^5*c^4*e*h*k*l^2*z + 216*a^5*c^4* \\
& e*f*l^2*m*z - 216*a^4*c^5*e^2*h*k*l*z + 216*a^4*c^5*e^2*h*j*m*z - 216*a^4*c
\end{aligned}$$

$$\begin{aligned}
& ^5e^2f^1m^2z - 216a^5c^4e^f^k^m^2z + 216a^5c^4d^g^k^m^2z - 216a^5c^4d^f^1m^2z + 216a^4c^5e^f^2k^m^2z + 216a^4c^5d^f^2l^1m^2z + 108 \\
& a^5b^c^3j^3k^1z - 216a^5c^4f^g^h^m^2z + 216a^4c^5f^2g^h^m^2z + 216a^4c^5f^g^2j^k^z - 216a^4c^5e^g^2j^1z + 216a^4c^5d^g^2j^m^2z \\
& - 72a^6b^c^2h^k^m^3z - 72a^6b^c^2g^1m^3z + 54a^5b^3c^h^k^m^3z + 54a^5b^3c^g^1m^3z - 216a^4c^5d^h^2j^k^z - 18a^4b^4c^f^1l^3m^2z \\
& + 9a^4b^4c^h^k^1l^3z - 216a^4c^5e^f^j^2k^z - 216a^4c^5e^f^h^2m^2z - 216a^4c^5d^g^j^2k^z - 216a^4c^5d^f^j^2l^1z - 216a^4c^5d^e^j^2m^2z \\
& - 72a^5b^c^3f^k^3m^2z + 72a^4b^c^4g^3j^m^2z + 36a^5b^c^3g^k^3l^1z - 36a^4b^c^4g^3k^1z - 216a^4c^5f^g^h^j^2z + 216a^4c^5d^f^j^k^2z \\
& - 216a^3c^6d^2f^j^k^z - 216a^3c^6d^2e^j^1z + 72a^4b^4c^f^j^m^3z - 63a^4b^4c^e^k^m^3z - 63a^4b^4c^d^1m^3z + 216a^4c^5d^g^h^k^2z \\
& - 216a^3c^6d^2g^h^k^z + 216a^3c^6d^2f^g^m^2z - 216a^3c^6d^2e^j^k^z + 144a^5b^c^3f^j^1l^3z - 144a^3b^c^5e^3j^m^2z - 72a^5b^c^3e^k^1l^3z \\
& + 72a^3b^c^5e^3k^1z - 63a^4b^4c^g^h^m^3z + 18a^3b^5c^f^j^1l^3z - 18a^3b^5c^e^3j^m^2z - 9a^3b^5c^e^k^1l^3z + 9a^3b^5c^e^3k^1z \\
& - 216a^4c^5d^e^h^1l^2z - 216a^3c^6e^2f^h^j^z + 216a^3c^6d^e^2h^1z - 126a^4b^4c^4d^3j^m^2z + 108a^4b^c^4g^h^3l^1z + 63a^4b^4c^4d^3k^1z \\
& + 36a^5b^c^3g^h^1l^3z - 9a^3b^5c^g^h^1l^3z + 216a^4c^5d^e^f^m^2z + 216a^3c^6d^f^2g^k^z - 216a^3c^6d^e^f^2m^2z + 36a^4b^c^4e^j^3k^z \\
& + 36a^4b^c^4d^j^3l^1z - 216a^3c^6d^f^g^2j^z + 72a^3b^5c^e^g^m^3z + 72a^3b^5c^d^h^m^3z + 72a^3b^c^5f^3h^k^z + 72a^3b^c^5f^3g^1z \\
& + 36a^4b^c^4g^h^j^3z + 18a^4b^c^4e^3f^m^2z + 9a^2b^6c^e^g^1l^3z + 9a^2b^6c^d^h^1l^3z - 9a^4b^c^4e^3h^k^z - 9a^4b^c^4e^3g^1z \\
& + 216a^3c^6d^e^f^j^2z - 144a^2b^c^6d^3f^m^2z + 108a^3b^c^5e^g^3k^z - 108a^3b^c^5d^g^3l^1z + 108a^3b^c^5d^3f^m^2z - 72a^4b^c^4d^h^k^3z \\
& + 72a^2b^c^6d^3h^k^z - 54a^3b^c^5d^3h^k^z + 36a^4b^c^4e^g^k^3z - 36a^2b^c^6d^3g^1z - 27a^3b^c^5d^3g^1z - 81a^2b^6c^d^e^m^3z \\
& + 216a^4b^c^4d^e^1l^3z + 72a^2b^c^6e^3f^j^z + 72a^2b^c^6d^e^3l^1z - 18a^3b^c^5e^3f^j^z - 18a^3b^c^5d^e^3l^1z - 90a^3b^2c^6d^3f^j^z \\
& + 72a^3b^2c^6d^3e^k^z + 36a^3b^c^5e^g^h^3z - 36a^2b^c^6e^3g^h^z + 9a^3b^6c^2d^e^k^3z + 9a^3b^c^5e^3g^h^z - 180a^3b^c^5d^e^j^3z \\
& + 18a^3b^2c^6d^3g^h^z - 9a^3b^5c^3d^e^j^3z + 18a^3b^2c^6d^e^3h^z + 9a^3b^4c^4d^e^h^3z + 36a^2b^c^6d^e^g^3z - 9a^3b^c^5d^e^g^3z \\
& - 18a^3b^2c^6d^e^f^3z + 27a^5b^2c^2h^2l^1m^2z - 27a^5b^2c^2j^k^2l^1z + 27a^4b^3c^2h^2k^2m^2z + 27a^4b^3c^2g^2l^2m^2z \\
& + 27a^5b^2c^2g^k^2m^2z - 27a^4b^3c^2h^2k^1l^2z - 27a^4b^3c^2g^2k^m^2z - 135a^4b^2c^3e^2l^1m^2z + 27a^5b^2c^2e^1l^2m^2z \\
& + 27a^4b^3c^2h^j^2l^1z - 27a^4b^2c^3h^2j^2l^1z + 27a^3b^4c^2e^2l^1m^2z - 270a^4b^3c^2f^j^2m^2z - 270a^4b^2c^3f^2j^m^2z \\
& + 162a^3b^4c^2f^2j^m^2z - 108a^3b^3c^3f^2j^2m^2z - 27a^4b^2c^3h^2j^k^2z - 27a^4b^2c^3g^2j^1l^2z + 27a^3b^3c^3e^2k^2m^2z \\
& + 27a^3b^3c^3d^2l^2m^2z + 27a^2b^5c^2f^2j^2m^2z + 162a^3b^3c^3d^2k^m^2z - 27a^4b^3c^2d^k^2m^2z - 27a^4b^2c^3g^j^2k^2z + 27a^3b^3c^3g^2h^2m^2z \\
& - 27a^2b^5c^2d^2k^m^2z + 162a^3b^2c^4d^2
\end{aligned}$$

$$\begin{aligned}
& 2k^2l^2z - 108a^4b^2c^3g^2h^2l^2z - 27a^4b^2c^3e^2j^2l^2z + 27a^3b^4c^2g^2h^2l^2z + 27a^3b^2c^4e^2j^2l^2z - 27a^2b^4c^3d^2k^2l^2z - 162a^3b^3c^3f^2h^2l^2z + 162a^3b^3c^3e^2h^2m^2z - 135a^4b^2c^3e^2h^2m^2z + 135a^3b^2c^4f^2h^2l^2z + 27a^3b^4c^2e^2h^2m^2z - 27a^3b^3c^3g^2h^2k^2z - 27a^3b^2c^4e^2j^2k^2z - 27a^3b^2c^4d^2j^2l^2z + 27a^2b^5c^2f^2h^2l^2z - 27a^2b^5c^2e^2h^2m^2z - 27a^2b^4c^3f^2h^2l^2z - 27a^3b^2c^4g^2h^2j^2z + 27a^2b^3c^4e^2g^2m^2z - 27a^2b^3c^4d^2j^2k^2z + 27a^2b^3c^4d^2h^2m^2z + 351a^3b^2c^4d^2g^2m^2z - 189a^2b^4c^3d^2g^2m^2z + 162a^3b^3c^3d^2g^2m^2z - 162a^3b^2c^4e^2g^2l^2z + 135a^3b^3c^3d^2h^2l^2z + 135a^3b^2c^4f^2g^2k^2z - 27a^2b^5c^2d^2h^2l^2z - 27a^2b^5c^2d^2g^2m^2z - 27a^2b^4c^3f^2g^2k^2z + 27a^2b^4c^3e^2g^2l^2z + 27a^2b^3c^4f^2g^2k^2z + 27a^2b^3c^4e^2h^2k^2z + 135a^3b^2c^4e^2f^2l^2z - 108a^3b^2c^4e^2g^2k^2z + 108a^2b^2c^5d^2g^2l^2z + 27a^3b^2c^4e^2h^2j^2z + 27a^2b^4c^3e^2g^2k^2z - 27a^2b^4c^3e^2f^2l^2z - 27a^2b^3c^4e^2h^2j^2z - 27a^2b^2c^5e^2f^2l^2z - 27a^2b^2c^5e^2g^2j^2z - 27a^2b^2c^5d^2h^2j^2z + 162a^2b^3c^4d^2e^2l^2z - 135a^2b^2c^5d^2g^2j^2z - 27a^2b^3c^4d^2g^2j^2z + 27a^2b^3c^4d^2f^2k^2z - 162a^2b^2c^5d^2e^2k^2z - 27a^2b^2c^5e^2f^2h^2z - 72a^7c^2k^2l^2m^3z + 9a^5b^4k^2l^2m^3z + 72a^6c^3j^2k^2m^3z - 72a^6c^3h^2k^2l^2m^3z - 72a^6c^3f^2l^2m^3z - 72a^5c^4h^3k^2l^2m^3z - 72a^5c^4h^3j^2m^3z - 9a^4b^5h^2k^2m^3z - 9a^4b^5g^2l^2m^3z - 144a^6c^3f^2j^2m^3z - 144a^5c^4h^2j^2k^2z - 144a^5c^4g^2j^2l^2z - 144a^5c^4f^2j^2m^3z - 144a^4c^5f^2j^2m^3z + 72a^6c^3e^2k^2m^3z + 72a^6c^3d^2l^2m^3z + 72a^4c^5f^2k^2l^2z + 72a^6c^3g^2h^2m^3z + 18b^6c^3d^3j^2m^3z - 18a^3b^6f^2j^2m^3z - 9b^6c^3d^3k^2l^2z + 9a^3b^6e^2k^2m^3z + 9a^3b^6d^2l^2m^3z + 144a^5c^4d^2k^2l^2z + 144a^3c^6d^3k^2l^2z - 72a^5c^4f^2j^2k^2z - 72a^3c^6d^3j^2m^3z + 9a^3b^6g^2h^2m^3z - 72a^5c^4g^2h^2k^2z - 72a^4c^5g^2h^2k^2z - 72a^4c^5f^2g^2m^3z - 108a^5b^2c^3j^2m^3z + 63a^6b^2c^3j^2m^3z + 36a^6b^2c^2k^2l^2z - 9a^5b^3c^2k^2l^2z - 144a^5c^4e^2g^2l^2z - 144a^3c^6e^2g^2l^2z + 72a^5c^4d^2h^2l^2z + 72a^4c^5f^2h^2j^2z + 72a^4c^5e^2h^2k^2z + 72a^4c^5d^2h^2l^2z + 72a^3c^6e^2h^2k^2z + 72a^3c^6e^2f^2m^3z - 18b^5c^4d^3f^2m^3z + 9b^5c^4d^3h^2k^2z + 9b^5c^4d^3g^2l^2z - 9a^2b^7e^2g^2m^3z - 9a^2b^7d^2h^2m^3z + 144a^4c^5e^2g^2j^2z + 144a^4c^5d^2h^2j^2z - 72a^5c^4d^2e^2m^3z - 72a^3c^6e^2f^2k^2z - 72a^3c^6d^2f^2l^2z + 144a^6b^2c^2f^2m^4z - 108a^5b^3c^2f^2m^4z - 72a^3c^6f^2g^2h^2z + 36a^5b^2c^3h^2k^2z - 36a^3b^2c^5f^2m^4z + 18b^4c^5d^3f^2j^2z - 9b^4c^5d^3e^2k^2z + 9a^4b^4c^2g^2l^2z - 144a^4c^5d^2e^2k^2z - 144a^2c^7d^3e^2k^2z + 72a^2c^7d^3f^2j^2z - 9b^4c^5d^3g^2h^2z + 72a^3c^6d^2g^2h^2z + 72a^2c^7d^3g^2h^2z - 72a^5b^2c^3d^2l^2z - 72a^4b^2c^4f^2j^2z + 45a^2b^2c^6d^4l^2z - 36a^2b^2c^6e^2k^2z - 9a^3b^5c^2d^2l^2z + 9a^2b^3c^5e^2k^2z - 72a^3c^6d^2e^2h^2z - 72a^2c^7d^2e^2h^2z + 9b^3c^6d^3e^2g^2z + 72a^2c^7d^2e^2f^2z + 36a^3b^2c^5d^2h^2z - 9a^2b^2c^6e^2g^2z + 36a^2b^2c^7d^3f^2z + 90a^5b^2c^2j^2m^2z + 45a^5b^2c^2j^2l^2z + 9a^4b^3c^2j^2k^2z - 9a^4b^3c^2h^2m^2z - 45a^4b^2c^2
\end{aligned}$$

$$\begin{aligned}
& c^3 g^3 m^2 z + 9 a^3 b^4 c^2 g^3 m^2 z + 198 a^4 b^3 c^2 f^2 m^3 z - 108 a^3 b^3 c^3 f^3 m^2 z + 18 a^2 b^5 c^2 f^3 m^2 z - 117 a^4 b^2 c^3 f^2 l^3 z \\
& + 117 a^3 b^2 c^4 e^3 m^2 z + 63 a^3 b^4 c^2 f^2 l^3 z - 63 a^2 b^4 c^3 e^3 m^2 z - 171 a^2 b^3 c^4 d^3 m^2 z - 54 a^3 b^3 c^3 f^2 k^3 z + 9 a^3 b^2 c^4 g^3 j^2 z \\
& + 9 a^2 b^5 c^2 f^2 k^3 z + 18 a^3 b^2 c^4 f^2 j^3 z + 18 a^2 b^3 c^4 f^3 j^2 z - 9 a^2 b^4 c^3 f^2 j^3 z - 45 a^2 b^2 c^5 e^3 j^2 z + 9 a^2 b^3 c^4 f^2 h^3 z \\
& - 9 a^2 b^2 c^5 f^2 g^3 z + 9 a^2 b^8 d^* e^* m^3 z - 36 a^2 b^* c^7 d^4 h^* z - 108 a^6 c^3 h^2 l^* m^2 z + 108 a^6 c^3 j^* k^2 l^2 z - 108 a^6 c^3 g^* k^2 m^2 z - 108 a^6 c^3 e^* l^2 m^2 z \\
& + 108 a^5 c^4 h^2 j^2 l^* z + 108 a^5 c^4 e^2 l^* m^2 z + 216 a^5 c^4 f^2 j^* m^2 z + 108 a^5 c^4 h^2 j^* k^2 z + 108 a^5 c^4 g^2 j^* l^2 z + 108 a^5 c^4 g^* j^2 k^2 z \\
& - 216 a^4 c^5 d^2 k^2 l^* z + 108 a^5 c^4 e^* j^2 l^2 z - 108 a^4 c^5 e^2 j^2 l^* z - 9 a^6 b^2 c^* l^3 m^2 z + 108 a^5 c^4 e^* h^2 m^2 z - 108 a^4 c^5 f^2 h^2 l^* z \\
& + 108 a^4 c^5 e^2 j^* k^2 z + 108 a^4 c^5 d^2 j^* l^2 z - 144 a^6 b^* c^2 j^2 m^3 z + 108 a^4 c^5 g^2 h^2 j^* z - 27 a^4 b^4 c^* j^3 m^2 z + 27 a^4 b^3 c^2 j^4 m^* z \\
& + 9 a^5 b^2 c^2 k^4 l^* z + 216 a^4 c^5 e^2 g^* l^2 z - 108 a^4 c^5 f^2 g^* k^2 z - 108 a^4 c^5 d^2 g^* m^2 z - 9 a^4 b^4 c^* j^2 l^3 z - 108 a^4 c^5 e^* h^2 j^2 z \\
& - 108 a^4 c^5 e^* f^2 l^2 z + 108 a^3 c^6 e^2 f^2 l^* z - 36 a^5 b^* c^3 j^2 k^3 z + 36 a^5 b^* c^3 h^3 m^2 z + 108 a^3 c^6 e^2 g^2 j^* z + 108 a^3 c^6 d^2 h^2 j^* z \\
& - 216 a^5 b^* c^3 f^2 m^3 z + 144 a^4 b^* c^4 f^3 m^2 z + 108 a^3 c^6 d^2 g^* j^2 z - 72 a^3 b^5 c^* f^2 m^3 z - 45 a^5 b^2 c^2 g^* l^4 z - 9 a^4 b^3 c^2 h^* k^4 z \\
& - 9 a^3 b^2 c^4 g^4 l^* z + 9 a^2 b^3 c^4 f^4 m^* z + 216 a^3 c^6 d^2 e^* k^2 z - 9 a^2 b^6 c^* f^2 l^3 z + 9 a^* b^6 c^2 e^3 m^2 z + 108 a^3 c^6 e^* f^2 h^2 z + 108 a^3 b^* c^5 d^3 m^2 z \\
& + 108 a^2 c^7 d^2 e^2 j^* z + 72 a^4 b^* c^4 f^2 k^3 z + 72 a^* b^5 c^3 d^3 m^2 z - 72 a^3 b^* c^5 f^3 j^2 z + 54 a^4 b^3 c^2 d^* l^4 z - 45 a^4 b^2 c^3 e^* k^4 z \\
& + 18 a^3 b^3 c^3 f^* j^4 z + 9 a^3 b^4 c^2 e^* k^4 z - 9 a^2 b^2 c^5 f^4 j^* z - 108 a^2 c^7 d^2 f^2 g^* z + 9 a^3 b^2 c^4 g^* h^4 z + 9 a^* b^4 c^4 e^3 j^2 z \\
& - 72 a^2 b^* c^6 d^3 j^2 z + 54 a^* b^3 c^5 d^3 j^2 z - 36 a^3 b^* c^5 f^2 h^3 z - 9 a^2 b^3 c^4 d^* h^4 z + 9 a^2 b^2 c^5 e^* g^4 z + 9 a^* b^2 c^6 e^3 f^2 z \\
& + 36 a^7 c^2 l^3 m^2 z + 72 a^6 c^3 j^3 m^2 z - 36 a^6 c^3 j^2 l^3 z + 9 a^4 b^5 j^2 m^3 z + 36 a^5 c^4 g^3 m^2 z + 36 a^5 c^4 f^2 l^3 z - 36 a^4 c^5 e^3 m^2 z \\
& - 9 b^7 c^2 d^3 m^2 z + 9 a^2 b^7 f^2 m^3 z - 36 a^4 c^5 g^3 j^2 z + 72 a^4 c^5 f^2 j^3 z + 36 a^3 c^6 e^3 j^2 z - 9 b^5 c^4 d^3 j^2 z + 36 a^3 c^6 f^2 g^3 z \\
& - 9 a^4 b^2 c^3 j^5 z - 36 a^2 c^7 e^3 f^2 z - 9 b^3 c^6 d^3 f^2 z + 36 a^7 c^2 j^* m^4 z - 36 a^6 c^3 k^4 l^* z - 18 a^5 b^4 j^* m^4 z + 36 a^6 c^3 g^* l^4 z \\
& + 36 a^4 c^5 g^4 l^* z + 18 a^4 b^5 f^* m^4 z - 9 b^4 c^5 d^4 l^* z + 36 a^5 c^4 e^* k^4 z + 36 a^3 c^6 f^4 j^* z - 36 a^2 c^7 d^4 l^* z - 36 a^4 c^5 g^* h^4 z \\
& + 9 b^3 c^6 d^4 h^* z - 36 a^3 c^6 e^* g^4 z + 36 a^2 c^7 e^4 g^* z - 9 b^2 c^7 d^4 e^* z - 36 a^7 b^* c^* m^5 z + 36 a^* c^8 d^4 e^* z + 9 a^6 b^3 m^5 z \\
& + 36 a^5 c^4 j^5 z + 9 a^4 b^3 c^* g^* h^* j^* k^* l^* m - 9 a^3 b^4 c^* e^* g^* j^* k^* l^* m - 9 a^3 b^4 c^* d^* h^* j^* k^* l^* m - 9 a^3 b^4 c^* f^* g^* h^* k^* l^* m \\
& + 36 a^4 b^* c^3 d^* e^* j^* k^* l^* m + 9 a^2 b^5 c^* d^* e^* j^* k^* l^* m + 36 a^4 b^* c^3 e^* f^* h^* j^* l^* m + 36 a^4 b^* c^3 e^* f^* g^* k^* l^* m \\
& + 36 a^4 b^* c^3 d^* f^* h^* k^* l^* m + 9 a^2 b^5 c^* e^* f^* g^* k^* l^* m + 9 a^2 b^5 c^* d^* f^* h^* k^* l^* m + 36 a^3 b^* c^4 d^* e^* f^* j^* k^* l^* m \\
& + 9 a^* b^5 c^2 d^* e^* f^* j^* k^* l^* m + 36 a^3 b^* c^4 d^* e^* g^* h^* k^* l^* m + 36 a^3 b^* c^4 d^* e^* f^* h^* k^* m + 36 a^3 b^* c^4 d^* e^* f^*
\end{aligned}$$

$$\begin{aligned}
& g^1 m + 9 a^* b^5 c^2 d^* e^* f^* h^* k^* m + 9 a^* b^5 c^2 d^* e^* f^* g^1 m - 9 a^* b^4 c^3 d^* e^* f^* h^* j^* k - 9 a^* b^4 c^3 d^* e^* f^* g^* j^* l - 9 a^* b^4 c^3 d^* e^* f^* g^* h^* m + 9 a^* b^3 c^4 d^* e^* f^* g^* h^* j - 9 a^* b^6 c^* d^* e^* f^* k^* l^* m + 18 a^4 b^2 c^2 e^* g^* j^* k^* l^* m + 18 a^4 b^2 c^2 d^* h^* j^* k^* l^* m + 18 a^4 b^2 c^2 f^* g^* h^* k^* l^* m - 36 a^3 b^3 c^2 d^* e^* j^* k^* l^* m - 36 a^3 b^3 c^2 e^* f^* g^* k^* l^* m - 36 a^3 b^3 c^2 d^* f^* h^* k^* l^* m + 9 a^3 b^3 c^2 f^* g^* h^* j^* k^* l + 9 a^3 b^3 c^2 e^* g^* h^* j^* k^* m + 9 a^3 b^3 c^2 d^* g^* h^* j^* l^* m - 108 a^3 b^2 c^3 d^* e^* f^* k^* l^* m + 54 a^2 b^4 c^2 d^* e^* f^* k^* l^* m - 36 a^3 b^2 c^3 d^* f^* g^* j^* k^* m + 18 a^3 b^2 c^3 e^* f^* g^* j^* k^* l + 18 a^3 b^2 c^3 d^* f^* h^* j^* k^* l + 18 a^3 b^2 c^3 d^* e^* h^* j^* k^* m + 18 a^3 b^2 c^3 d^* e^* g^* j^* l^* m - 9 a^2 b^4 c^2 e^* f^* g^* j^* k^* l - 9 a^2 b^4 c^2 d^* f^* h^* j^* k^* l - 9 a^2 b^4 c^2 d^* e^* h^* j^* k^* m - 9 a^2 b^4 c^2 d^* e^* g^* j^* l^* m + 18 a^3 b^2 c^3 e^* f^* g^* h^* k^* m + 18 a^3 b^2 c^3 d^* f^* g^* h^* l^* m - 9 a^2 b^4 c^2 e^* f^* g^* h^* k^* m - 9 a^2 b^4 c^2 d^* f^* g^* h^* l^* m - 36 a^2 b^3 c^3 d^* e^* f^* j^* k^* l - 36 a^2 b^3 c^3 d^* e^* f^* h^* k^* m - 36 a^2 b^3 c^3 d^* e^* f^* g^1 m + 9 a^2 b^3 c^3 e^* f^* g^* h^* j^* k + 9 a^2 b^3 c^3 d^* f^* g^* h^* j^* l + 9 a^2 b^3 c^3 d^* e^* g^* h^* j^* m + 18 a^2 b^2 c^4 d^* e^* f^* h^* j^* k + 18 a^2 b^2 c^4 d^* e^* f^* g^* j^* l + 18 a^2 b^2 c^4 d^* e^* f^* g^* h^* m - 9 a^5 b^2 c^* h^* j^* k^2 l^* m - 9 a^5 b^2 c^* g^* j^* k^2 l^2 m + 27 a^5 b^2 c^* f^* j^* k^2 l^* m^2 - 9 a^4 b^3 c^* f^* j^2 k^* l^* m + 9 a^3 b^4 c^* f^2 j^* k^* l^* m - 18 a^5 b^* c^2 e^* j^* k^2 l^* m - 9 a^5 b^2 c^* g^* h^* k^2 l^* m^2 + 9 a^4 b^3 c^* e^* j^* k^2 l^* m - 18 a^5 b^* b^* c^2 f^* h^* k^2 l^* m - 18 a^5 b^* b^* c^2 d^* j^* k^2 l^2 m + 9 a^4 b^3 c^* f^* h^* k^2 l^* m + 9 a^4 b^3 c^* d^* j^* k^2 l^2 m + 36 a^5 b^* b^* c^2 e^* h^* k^2 l^2 m - 36 a^4 b^* b^* c^3 e^2 h^* k^2 l^* m + 18 a^5 b^* b^* c^2 f^* h^* j^* l^2 m - 18 a^5 b^* b^* c^2 f^* g^* k^2 l^2 m - 18 a^4 b^3 c^* e^* h^* k^2 l^2 m + 9 a^4 b^3 c^* f^* g^* k^2 l^2 m + 9 a^3 b^4 c^* e^* h^2 k^* l^* m - 9 a^2 b^5 c^* e^2 h^* k^2 l^* m - 54 a^5 b^* b^* c^2 e^* h^* j^* l^* m^2 - 18 a^5 b^* b^* c^2 e^* g^* k^2 l^* m^2 - 18 a^5 b^* b^* c^2 d^* h^* k^2 l^* m^2 + 18 a^4 b^3 c^* e^* h^* j^* l^* m^2 - 9 a^4 b^3 c^* f^* h^* j^* k^* m^2 - 9 a^4 b^3 c^* f^* g^* j^* l^* m^2 + 9 a^4 b^3 c^* e^* g^* k^2 l^* m^2 + 9 a^4 b^3 c^* d^* h^* k^2 l^* m^2 + 18 a^4 b^* b^* c^3 f^* g^2 j^* k^* m - 18 a^4 b^* b^* c^3 e^* g^2 j^* l^* m + 18 a^3 b^4 c^* d^* g^* k^2 l^* m - 9 a^3 b^4 c^* e^* f^* k^2 l^* m - 9 a^2 b^5 c^* d^* g^2 k^* l^* m - 18 a^4 b^* b^* c^3 f^* g^2 h^* l^* m - 18 a^4 b^* b^* c^3 d^* h^2 j^* k^* m - 9 a^3 b^4 c^* d^* f^* k^2 l^2 m - 54 a^4 b^* b^* c^3 d^* g^* j^2 k^* m - 18 a^4 b^* b^* c^3 f^* g^* h^2 k^* m - 18 a^4 b^* b^* c^3 e^* g^* j^2 k^* l - 18 a^4 b^* b^* c^3 d^* h^* j^2 k^* l - 18 a^3 b^4 c^* d^* g^* j^* k^* m^2 + 9 a^3 b^4 c^* e^* f^* j^* k^* m^2 + 9 a^3 b^4 c^* d^* f^* j^* l^* m^2 - 9 a^3 b^4 c^* d^* e^* k^2 l^* m^2 - 54 a^3 b^* b^* c^4 d^2 f^* j^* k^* m + 36 a^4 b^* b^* c^3 d^* g^* j^* k^2 l - 36 a^3 b^* b^* c^4 d^2 g^* j^* k^* l - 18 a^4 b^* b^* c^3 e^* f^* j^* k^2 l + 18 a^4 b^* b^* c^3 d^* f^* j^* k^2 m - 18 a^3 b^* b^* c^4 d^2 e^* j^* l^* m + 9 a^3 b^4 c^* f^* g^* h^* j^* m^2 - 9 a^* b^5 c^2 d^2 g^* j^* k^* l + 36 a^4 b^* b^* c^3 d^* g^* h^* k^2 m - 36 a^3 b^* b^* c^4 d^2 g^* h^* k^* m + 18 a^4 b^* b^* c^3 e^* g^* h^* k^2 l - 18 a^4 b^* b^* c^3 e^* f^* h^* k^2 m - 18 a^4 b^* b^* c^3 d^* f^* j^* k^2 l - 18 a^3 b^* b^* c^4 d^2 f^* h^* l^* m - 18 a^3 b^* b^* c^4 d^2 e^2 j^* k^* m - 9 a^* b^5 c^2 d^2 g^* h^* k^* m - 54 a^4 b^* b^* c^3 d^* g^* h^* k^2 l - 54 a^3 b^* b^* c^4 e^2 f^* h^* j^* m - 18 a^4 b^* b^* c^3 d^* f^* g^1 l^2 m - 18 a^3 b^* b^* c^4 e^2 f^* g^* k^* m - 54 a^4 b^* b^* c^3 d^* f^* g^* k^* m^2 - 36 a^4 b^* b^* c^3 e^* f^* g^* j^* m^2 - 36 a^4 b^* b^* c^3 d^* f^* h^* j^* m^2 + 36 a^3 b^* b^* c^4 e^* f^2 g^* j^* m + 36 a^3 b^* b^* c^4 d^* f^2 h^* j^* m - 18 a^4 b^* b^* c^3 d^* e^* h^* k^* m^2 - 18 a^4 b^* b^* c^3 d^* e^* g^1 m^2 + 18 a^3 b^* b^* c^4 e^* f^2 h^* j^* l - 18 a^3 b^* b^* c^4 e^* f^2 g^* k^* l - 18 a^3 b^* b^* c^4 d^* f^2 h^* k^* l + 18 a^3 b^* b^* c^4 d^* f^2 g^* k^* m - 9 a^2 b^5 c^* e^* f^* g^* j^* m^2 - 9 a^2 b^5 c^* d^* f^* h^* j^* m^2 - 54 a^3 b^* b^* c^4 d^* f^* g^2 j^* m - 18 a^3 b^* b^* c^4 e^* f^* g^2 j^* l - 18 a^* b^4 c^3 d^2 f^* g^* j^* m + 9 a^* b^4 c^3 d^2 g^* h^* j^* k + 9 a^* b^4 c^3 d^2 f^* g^* k^* l + 9 a^* b^4 c^3 d^2 e^* g^* k^* m - 9 a^* b^4 c^3 d^2 e^* f^* l^* m - 18
\end{aligned}$$

$$\begin{aligned}
& a^3 b^4 c^4 e f g^2 h^m - 18 a^3 b^4 c^4 d f h^2 j^k - 9 a^3 b^4 c^4 d e^2 f k^m \\
& + 18 a^3 b^4 c^4 d f g^2 j^k - 18 a^3 b^4 c^4 d f g h^2 m - 18 a^3 b^4 c^4 d e h^2 \\
& j^2 k - 18 a^3 b^4 c^4 d e g^2 j^2 k + 18 a^3 b^4 c^4 d e f^2 j^2 m - 9 a^3 b^5 c^2 d \\
& e f j^2 m - 9 a^3 b^4 c^3 d e f^2 k^2 l - 18 a^2 b^3 c^5 d^2 e f j^2 k - 9 a^3 b^3 c^4 \\
& d^2 e g^2 j^2 k + 9 a^3 b^3 c^4 d^2 e f j^2 k - 54 a^2 b^3 c^5 d^2 e g h^2 k - 18 a^2 \\
& b^3 c^5 d^2 e f h^2 k - 18 a^2 b^3 c^5 d e^2 f j^2 k + 18 a^3 b^3 c^4 d^2 e g h^2 k - \\
& 9 a^3 b^3 c^4 d^2 f g h^2 k + 9 a^3 b^3 c^4 d^2 e f h^2 k + 9 a^3 b^3 c^4 d e^2 f j^2 k \\
& k - 36 a^3 b^3 c^4 d e f h^2 k + 36 a^2 b^3 c^5 d e^2 f h^2 k + 18 a^2 b^3 c^5 d e^2 \\
& g h^2 k - 18 a^2 b^3 c^5 d e^2 f g^2 k - 18 a^3 b^3 c^4 d e^2 f h^2 k - 9 a^3 b^5 c^2 \\
& d e f h^2 k + 9 a^3 b^4 c^3 d e f h^2 k + 9 a^3 b^3 c^4 d e^2 f g^2 k - 18 a^2 b^3 \\
& c^5 d e f^2 h^2 k - 18 a^2 b^3 c^5 d e f^2 g^2 k + 9 a^3 b^3 c^4 d e f^2 h^2 k + 9 a^3 \\
& b^3 c^4 d e f^2 g^2 k + 27 a^3 b^2 c^5 d^2 e f g^2 k + 9 a^3 b^4 c^3 d e f g^2 k^2 - \\
& 9 a^3 b^3 c^4 d e f g^2 k - 9 a^3 b^2 c^5 d^2 e f h^2 j - 9 a^3 b^2 c^5 d e^2 f g^2 \\
& j - 9 a^3 b^2 c^5 d e f^2 g^2 h + 72 a^4 c^4 d f g^2 j^2 k^2 m + 72 a^4 c^4 d e f^2 k^2 \\
& m + 9 a^3 b^6 c^2 d^2 g^2 k^2 l^2 m + 9 a^3 b^6 c^2 d e f^2 j^2 m^2 - 27 a^4 b^2 c^2 f^2 j^2 k \\
& l^2 m - 9 a^4 b^2 c^2 g^2 h^2 j^2 k^2 l^2 m + 36 a^3 b^3 c^2 e^2 h^2 k^2 l^2 m - 18 a^4 b^2 c^2 \\
& e^2 h^2 k^2 l^2 m - 9 a^4 b^2 c^2 g^2 h^2 j^2 k^2 m + 18 a^4 b^2 c^2 f^2 h^2 j^2 k^2 m + \\
& 18 a^4 b^2 c^2 f^2 g^2 j^2 k^2 l^2 m - 18 a^4 b^2 c^2 e^2 h^2 j^2 k^2 l^2 m - 9 a^4 b^2 c^2 g^2 h \\
& j^2 k^2 l - 9 a^3 b^3 c^2 f^2 h^2 j^2 k^2 m - 9 a^3 b^3 c^2 f^2 g^2 j^2 k^2 l^2 m - 63 a^4 b^2 \\
& c^2 d g^2 k^2 l^2 m + 63 a^3 b^2 c^3 d^2 g^2 k^2 l^2 m - 45 a^2 b^4 c^2 d^2 g^2 k^2 l^2 \\
& m + 36 a^4 b^2 c^2 e f k^2 l^2 m + 27 a^3 b^3 c^2 d g^2 k^2 l^2 m - 9 a^4 b^2 c^2 \\
& f h^2 j^2 k^2 l - 9 a^4 b^2 c^2 e h^2 j^2 k^2 m + 9 a^3 b^3 c^2 e g^2 j^2 k^2 l^2 m - 9 a^3 \\
& b^2 c^3 d^2 h^2 j^2 k^2 l^2 m + 36 a^4 b^2 c^2 d f k^2 l^2 m + 27 a^4 b^2 c^2 e h^2 j^2 k^2 \\
& l^2 - 27 a^3 b^2 c^3 e^2 h^2 j^2 k^2 l - 18 a^3 b^2 c^3 e^2 f^2 j^2 k^2 l^2 m - 9 a^4 b^2 c^2 \\
& f^2 g^2 j^2 k^2 l^2 - 9 a^4 b^2 c^2 d g^2 j^2 k^2 l^2 m + 9 a^3 b^3 c^2 f^2 g^2 h^2 k^2 l^2 m - 9 \\
& a^3 b^3 c^2 e h^2 j^2 k^2 l + 9 a^3 b^3 c^2 d h^2 j^2 k^2 m - 9 a^3 b^2 c^3 e^2 g^2 j^2 k^2 m \\
& + 9 a^2 b^4 c^2 e^2 h^2 j^2 k^2 l + 72 a^4 b^2 c^2 d g^2 j^2 k^2 m^2 + 36 a^4 b^2 \\
& c^2 d e k^2 l^2 m^2 + 27 a^4 b^2 c^2 e g^2 h^2 k^2 l^2 m - 27 a^4 b^2 c^2 e f j^2 k^2 m^2 \\
& - 27 a^4 b^2 c^2 d f j^2 k^2 l^2 m - 27 a^3 b^2 c^3 e^2 g^2 h^2 k^2 l^2 m + 27 a^3 b^2 c^3 e \\
& f^2 j^2 k^2 m + 27 a^3 b^2 c^3 d f^2 j^2 k^2 l^2 m + 18 a^3 b^3 c^2 d g^2 j^2 k^2 m + 9 a^3 \\
& b^3 c^2 f^2 g^2 h^2 k^2 m + 9 a^3 b^3 c^2 e g^2 j^2 k^2 l - 9 a^3 b^3 c^2 e g^2 h^2 k^2 \\
& l^2 m - 9 a^3 b^3 c^2 e f j^2 k^2 m + 9 a^3 b^3 c^2 d h^2 j^2 k^2 l - 9 a^3 b^3 c^2 \\
& d f j^2 k^2 l^2 m + 9 a^2 b^4 c^2 e^2 g^2 h^2 k^2 l^2 m + 36 a^2 b^3 c^3 d^2 g^2 j^2 k^2 l - 27 a^4 \\
& b^2 c^2 f^2 g^2 h^2 j^2 m^2 + 27 a^3 b^2 c^3 f^2 g^2 h^2 j^2 m - 18 a^4 b^2 c^2 e f h^2 \\
& k^2 l^2 m - 18 a^3 b^3 c^2 d g^2 j^2 k^2 l - 18 a^3 b^2 c^3 d g^2 j^2 k^2 l + 18 a^2 b^3 \\
& c^3 d^2 f^2 j^2 k^2 m - 9 a^4 b^2 c^2 e g^2 h^2 k^2 m^2 - 9 a^4 b^2 c^2 d g^2 h^2 k^2 l^2 m^2 \\
& - 9 a^3 b^3 c^2 f^2 g^2 h^2 j^2 k^2 m + 9 a^3 b^3 c^2 e f j^2 k^2 l - 9 a^3 b^2 c^3 f^2 \\
& g^2 h^2 k^2 l + 9 a^2 b^4 c^2 d g^2 j^2 k^2 l + 9 a^2 b^3 c^3 d^2 e j^2 k^2 l^2 m + 36 a^3 b^2 \\
& c^3 e f g^2 k^2 l^2 m + 36 a^2 b^3 c^3 d^2 g^2 h^2 k^2 m - 18 a^3 b^3 c^2 d g^2 h^2 k^2 m \\
& - 18 a^3 b^2 c^3 d g^2 h^2 k^2 m + 9 a^3 b^3 c^2 e f h^2 k^2 m + 9 a^3 b^3 c^2 d \\
& f j^2 k^2 l^2 - 9 a^3 b^2 c^3 f^2 g^2 h^2 j^2 k^2 l - 9 a^3 b^2 c^3 e g^2 h^2 j^2 m - 9 a^2 \\
& b^4 c^2 e f g^2 k^2 l^2 m + 9 a^2 b^4 c^2 d g^2 h^2 k^2 m + 9 a^2 b^3 c^3 d^2 f h^2 k^2 l^2 m \\
& + 9 a^2 b^3 c^3 d e^2 j^2 k^2 m + 36 a^3 b^2 c^3 d f h^2 k^2 m + 36 a^3 b^2 c^3 \\
& d e j^2 k^2 l + 18 a^3 b^3 c^2 d g^2 h^2 k^2 l^2 + 18 a^3 b^2 c^3 e g^2 h^2 j^2 k^2 l + 18 \\
& a^3 b^2 c^3 e f h^2 k^2 l - 18 a^3 b^2 c^3 e f h^2 j^2 k^2 m - 18 a^3 b^2 c^3 d g^2
\end{aligned}$$

$$\begin{aligned}
& h^2k^1 + 18a^3b^2c^3d^3e^2f^2h^2l^1m + 18a^2b^3c^3e^2f^2h^2j^1m - 9a^3b^3c^2e^2g^2h^2j^1l^2 - 9a^3b^3c^2e^2f^2h^2k^1l^2 + 9a^3b^3c^2d^2f^2g^2l^2m \\
& - 9a^3b^3c^2d^2e^2h^2l^2m - 9a^3b^2c^3f^2g^2h^2j^2k - 9a^3b^2c^3d^2g^2h^2j^2m - 9a^2b^4c^2d^2f^2h^2k^2m - 9a^2b^4c^2d^2e^2j^2k^1l - 9a^2b^3c^3e^2g^2h^2j^1l \\
& - 9a^2b^3c^3e^2f^2h^2k^1l + 9a^2b^3c^3e^2f^2g^2k^2m - 9a^2b^3c^3d^2e^2h^2l^1m + 36a^3b^3c^2e^2f^2g^2j^2m^2 + 36a^3b^3c^2d^2f^2h^2j^2m^2 \\
& + 18a^3b^3c^2d^2f^2g^2k^2m^2 - 18a^3b^2c^3e^2f^2g^2j^2m - 18a^2b^3c^3d^2f^2h^2j^2m + 9a^3b^3c^2d^2e^2h^2k^2m^2 + 9a^3b^3c^2d^2e^2g^2l^2m^2 \\
& - 9a^3b^2c^3e^2g^2h^2j^2k - 9a^3b^2c^3d^2g^2h^2j^2l + 9a^2b^4c^2e^2f^2g^2j^2m + 9a^2b^4c^2d^2f^2h^2j^2m + 9a^2b^3c^3e^2f^2g^2k^1l + 9a^2b^3c^3d^2f^2h^2k^1l \\
& + 72a^2b^2c^4d^2f^2g^2j^2m + 36a^2b^2c^4d^2e^2f^2l^1m + 27a^3b^2c^3d^2g^2h^2j^2k^2 + 27a^3b^2c^3d^2f^2g^2k^2l + 27a^3b^2c^3d^2e^2g^2k^2m - 27a^2b^2c^4d^2g^2h^2j^2k \\
& - 27a^2b^2c^4d^2f^2g^2k^1l - 27a^2b^2c^4d^2e^2g^2k^1m + 18a^2b^3c^3d^2f^2g^2j^2m - 18a^2b^2c^4d^2e^2h^2k^1l - 9a^3b^2c^3e^2f^2h^2j^2k^2 + 9a^2b^3c^3e^2f^2g^2j^2l \\
& - 9a^2b^3c^3d^2g^2h^2j^2k - 9a^2b^3c^3d^2f^2g^2k^1l - 9a^2b^3c^3d^2e^2g^2k^2m - 9a^2b^2c^4d^2f^2h^2j^2l - 9a^2b^2c^4d^2e^2h^2j^2m + 36a^2b^2c^4d^2e^2f^2k^2m - 27a^3b^2c^3d^2e^2h^2j^1l^2 \\
& + 27a^2b^2c^4d^2e^2h^2j^1l - 18a^3b^2c^3d^2e^2g^2k^1l^2 - 9a^3b^2c^3d^2f^2g^2j^1l^2 + 9a^2b^4c^2d^2e^2h^2j^1l^2 + 9a^2b^3c^3e^2f^2g^2h^2m + 9a^2b^3c^3d^2f^2h^2j^2k \\
& - 9a^2b^3c^3d^2e^2h^2j^2l - 9a^2b^2c^4e^2f^2g^2j^2k - 9a^2b^2c^4d^2e^2g^2j^2m + 63a^3b^2c^3d^2e^2f^2j^2m^2 - 63a^2b^2c^4d^2e^2f^2j^2m - 45a^2b^4c^2d^2e^2f^2j^2m^2 \\
& + 36a^2b^2c^4d^2e^2f^2k^1l - 27a^3b^2c^3e^2f^2g^2h^2l^2 + 27a^2b^3c^3d^2e^2f^2j^2m + 27a^2b^2c^4e^2f^2g^2h^2l + 9a^2b^4c^2e^2f^2g^2h^2l^2 - 9a^2b^3c^3e^2f^2g^2h^2l^1 \\
& + 9a^2b^3c^3d^2f^2g^2h^2m + 9a^2b^3c^3d^2e^2h^2j^2k + 9a^2b^3c^3d^2e^2g^2j^2l + 18a^2b^2c^4d^2e^2g^2j^2k - 9a^3b^2c^3d^2e^2g^2h^2m^2 - 9a^2b^3c^3d^2e^2g^2j^2k^2 \\
& - 9a^2b^2c^4e^2f^2g^2h^2k - 9a^2b^2c^4d^2f^2g^2h^2l + 18a^2b^2c^4d^2e^2g^2h^2l - 9a^2b^3c^3d^2f^2g^2h^2k^2 - 9a^2b^2c^4e^2f^2g^2h^2j + 36a^2b^3c^3d^2e^2f^2h^2l^2 \\
& - 18a^2b^2c^4d^2e^2f^2h^2l - 9a^2b^2c^4d^2f^2g^2h^2j - 9a^2b^2c^4d^2e^2g^2h^2j^2 - 27a^2b^2c^4d^2e^2f^2g^2k^2 + 18a^2b^2c^4d^2f^2h^2k^2 - 9a^2b^3c^3e^2f^2g^2k^2 \\
& - 9a^2b^2c^4e^2f^2h^2j^2 - 9a^2b^2c^4d^2f^2h^2k + 45a^2b^3c^3d^2e^2f^2m^2 + 36a^2b^2c^4d^2e^2g^2l^2 + 9a^2b^3c^3d^2e^2g^2l^2 + 9a^2b^2c^4e^2f^2g^2j^2 + 9a^2b^2c^4d^2f^2h^2j^2 - 9a^2b^2c^4d^2e^2h^2k^2 \\
& - 36a^2b^2c^4d^2e^2f^2l^2 - 9a^2b^2c^4d^2f^2g^2j^2 - 12a^6b^2c^3h^2k^1l^3m + 3a^2b^6c^3d^2e^2f^2l^3 - 12a^2b^6c^3d^2e^2f^2h + 9a^5b^2c^2h^2k^1l^2m + 18a^5b^2c^2g^2k^2l^1m - 9a^5b^2c^2h^2j^1l^1m^2 + 9a^5b^2c^2h^2j^2l^1m \\
& - 9a^4b^3c^2g^2k^2l^1m - 3a^4b^2c^2g^3k^1l^1m + 18a^5b^2c^2f^2k^1l^1m^2 + 15a^3b^3c^2f^3k^1l^1m + 9a^5b^2c^2h^2j^2k^2m^2 + 9a^5b^2c^2g^2j^2l^1m^2 - 9a^5b^2c^2f^2k^2l^1m^2 + 9a^5b^2c^2h^2j^2k^2m + 9a^5b^2c^2g^2j^2l^1m^2 - 9a^4b^3c^2f^2k^1l^1m^2 + 36a^3b^2c^3e^2f^2k^1l^1m - 27a^5b^2c^2g^2j^2k^2m^2 - 18a^5b^2c^2h^2j^2k^1l^2 - 18a^2b^4c^2e^2f^2k^1l^1m - 9a^5b^2c^2g^2j^2k^2m^2 - 9a^5b^2c^2e^2k^2l^1m^2 + 9a^5b^2c^2h^2j^2k^2l + 9a^5b^2c^2g^2j^2k^2l
\end{aligned}$$



$$\begin{aligned}
& m + 9a^4b^3c^2g^2j^2k^2m^2 + 9a^3b^4c^2e^2k^2l^2m + 3a^4b^2c^2h^3j \\
& *k^2l - 54a^4b^3c^3d^2k^2l^2m - 51a^2b^3c^3d^3k^2l^2m - 27a^4b^3c^3e \\
& ^2j^2l^2m - 18a^5b^3c^2g^2h^2l^2m - 9a^5b^2c^2e^2j^2l^2m^2 - 9a^5b^2 \\
& *c^2d^2k^2l^2m^2 + 9a^5b^3c^2g^2h^2l^2m^2 + 9a^5b^3c^2g^2j^2k^2l^2 + 9a^5b \\
& *c^2e^2j^2l^2m - 9a^3b^4c^2e^2j^2l^2m - 9a^2b^5c^2d^2k^2l^2m + 3a \\
& ^4b^2c^2g^2h^3l^2m - 3a^3b^3c^2g^3j^2k^2l + 18a^5b^3c^2e^2j^2k^2m^2 + \\
& 18a^5b^3c^2d^2j^2l^2m^2 + 18a^4b^3c^3f^2j^2k^2l + 9a^5b^3c^2g^2h^2k^2 \\
& m^2 + 9a^5b^3c^2f^2h^2l^2m^2 + 9a^5b^3c^2f^2j^2k^2l^2 - 9a^4b^3c^2e^2j^2 \\
& *k^2m^2 - 9a^4b^3c^2d^2j^2l^2m^2 + 9a^4b^2c^2f^2j^3k^2l + 9a^4b^2c^2e \\
& ^2j^3k^2m + 9a^4b^2c^2d^2j^3l^2m + 9a^4b^2c^3f^2h^2l^2m + 9a^4b^2c^3 \\
& *e^2j^2k^2m + 9a^4b^2c^3d^2j^2l^2m - 3a^3b^3c^2g^3h^2k^2m - 3a^3b^2 \\
& *c^3f^3j^2k^2l + 3a^2b^4c^2f^3j^2k^2l + 45a^4b^3c^3d^2j^2k^2m^2 - 27a \\
& ^5b^3c^2d^2j^2k^2m^2 + 18a^5b^3c^2g^2h^2j^2m^2 + 18a^4b^3c^3e^2j^2k^2l^2 \\
& + 15a^2b^3c^3e^3j^2k^2l - 12a^3b^2c^3f^3h^2k^2m - 12a^3b^2c^3f^3g \\
& *l^2m + 9a^5b^3c^2g^2h^2k^2l^2 - 9a^4b^3c^2g^2h^2j^2m^2 + 9a^4b^3c^2d^2j \\
& *k^2m^2 + 9a^4b^2c^2g^2h^2j^3m + 9a^4b^2c^3g^2h^2k^2l + 9a^4b^2c^3g \\
& ^2h^2j^2m + 9a^2b^5c^2d^2j^2k^2m^2 + 3a^2b^4c^2f^3h^2k^2m + 3a^2b^4 \\
& *c^2f^3g^2l^2m + 36a^2b^2c^4d^3j^2k^2l + 18a^4b^3c^3e^2g^2l^2m + 15a \\
& ^2b^3c^3e^3g^2l^2m + 12a^4b^2c^2d^2j^2k^3l + 9a^5b^3c^2f^2g^2k^2m^2 + \\
& 9a^5b^3c^2e^2h^2k^2m^2 + 9a^4b^3c^3g^2h^2j^2l + 9a^4b^3c^3f^2h^2k^2 \\
& l + 9a^4b^3c^3f^2g^2k^2m + 9a^4b^3c^3d^2h^2l^2m - 9a^3b^3c^2e^2h^3 \\
& *k^2m + 6a^2b^3c^3e^3h^2k^2m + 45a^4b^3c^3e^2h^2j^2m^2 + 36a^2b^2c^4d \\
& ^3h^2k^2m - 33a^3b^2c^3d^2g^3l^2m - 27a^4b^3c^3f^2h^2j^2l - 27a^4b^3 \\
& c^3e^2f^2l^2m - 27a^4b^3c^3e^2h^2j^2m - 18a^4b^3c^3g^2h^2j^2k^2 - 18a \\
& ^4b^3c^3f^2g^2k^2l - 18a^4b^3c^3e^2g^2k^2m - 18a^3b^3c^4d^2g^2l^2m \\
& + 12a^4b^2c^2d^2h^2k^3m + 9a^5b^3c^2e^2f^2l^2m^2 + 9a^5b^3c^2d^2g^2l^2 \\
& *m^2 + 9a^4b^3c^3f^2g^2k^2l^2 + 9a^4b^3c^3e^2g^2k^2m^2 + 9a^4b^3c^3g^2h^ \\
& ^2j^2k^2 + 9a^4b^3c^3f^2h^2j^2l + 9a^4b^3c^3e^2f^2l^2m - 9a^3b^4c^2e \\
& ^2h^2j^2m^2 + 9a^3b^4c^4e^2f^2l^2m + 9a^2b^5c^2e^2h^2j^2m^2 + 9a^2b^4c \\
& ^2d^2g^3l^2m - 9a^2b^2c^4d^3g^2l^2m - 9a^2b^5c^2d^2g^2l^2m - 6a^4b^2 \\
& *c^2e^2h^2k^3l - 6a^3b^2c^3f^2g^3j^2m + 3a^4b^2c^2g^2h^2j^2k^3 + 3a^4 \\
& b^2c^2f^2g^2k^3l + 3a^4b^2c^2e^2g^2k^3m + 3a^3b^2c^3g^3h^2j^2k + 3 \\
& *a^3b^2c^3f^2g^3k^2l + 3a^3b^2c^3e^2g^3k^2m - 27a^3b^3c^4d^2h^2k^2l \\
& + 18a^4b^3c^3e^2f^2k^2m^2 + 18a^4b^3c^3d^2f^2l^2m^2 + 9a^4b^3c^3f^2h^2 \\
& j^2k^2 + 9a^4b^3c^3f^2g^2j^2l^2 + 9a^4b^3c^3e^2g^2k^2l^2 + 9a^4b^3c^3d^2h \\
& ^2k^2l + 9a^3b^4c^2e^2g^2j^2m^2 + 9a^3b^4c^2d^2h^2j^2m^2 - 9a^3b^3c^2 \\
& *e^2g^2j^3m - 9a^3b^3c^2d^2h^2j^3m + 9a^3b^3c^4e^2g^2k^2l + 9a^3b^3c \\
& ^4e^2g^2j^2m + 9a^3b^3c^4d^2h^2j^2m - 3a^2b^3c^3f^3h^2j^2k - 3a^2b^3 \\
& c^3f^3g^2j^2l - 3a^2b^3c^3e^2f^3k^2m - 3a^2b^3c^3d^2f^3l^2m + 45a \\
& ^4b^3c^3d^2g^2j^2m^2 + 45a^3b^3c^4d^2g^2j^2m + 24a^4b^2c^2d^2g^2k^2l^3 \\
& + 24a^2b^2c^4e^3f^2j^2m + 18a^4b^3c^3f^2g^2h^2m^2 + 18a^4b^3c^3d^2h^2 \\
& *j^2l^2 + 18a^3b^3c^4e^2h^2j^2k - 12a^4b^2c^2e^2g^2j^2l^3 - 12a^4b^2c \\
& ^2e^2f^2k^2l^3 - 12a^4b^2c^2d^2e^2l^3m - 12a^2b^2c^4e^3g^2j^2l - 12a^2 \\
& *b^2c^4e^3f^2k^2l - 12a^2b^2c^4d^2e^3l^2m + 9a^4b^3c^3f^2g^2j^2k^2 + 9 \\
& *a^4b^3c^3e^2h^2j^2k^2 + 9a^3b^2c^3e^2h^3j^2k + 9a^3b^2c^3d^2h^3j^2l
\end{aligned}$$

$$\begin{aligned}
& + 9a^3b^4c^4f^2g^2j^2k + 9a^3b^4c^4d^2h^2j^2k + 9a^2b^5c^4d^2g^2j^2k \\
& + 9a^2b^5c^4d^2g^2j^2k - 3a^4b^2c^2d^2h^2j^2k - 3a^2b^3c^3f^3g^3h^3m \\
& - 3a^2b^2c^4e^3h^2j^2k + 18a^4b^2c^3f^2g^2h^2k + 18a^3b^4c^4e^2g^2h^2k \\
& + 18a^3b^4c^4d^2h^2j^2k + 18a^3b^4c^4d^2f^2k^2 + 18a^3b^4c^4d^2e^2k^2 \\
& + 9a^4b^2c^3e^2g^2h^2m + 9a^4b^2c^3e^2f^2j^2k + 9a^4b^2c^3d^2g^2j^2k \\
& + 9a^4b^2c^3d^2g^2j^2k + 9a^3b^2c^3f^2g^2h^3k + 9a^3b^2c^3e^2g^2h^3m \\
& + 9a^3b^2c^4f^2g^2h^2k + 9a^3b^2c^4e^2g^2j^2k + 9a^3b^2c^4e^2f^2j^2k \\
& - 9a^2b^3c^3d^2g^2j^2k + 9a^2b^4c^3d^2g^2j^2k - 3a^4b^2c^2f^2g^2h^2k \\
& - 3a^3b^3c^2e^2g^2j^2k - 3a^3b^3c^2d^2h^2j^2k - 3a^3b^3c^2d^2f^2k^2 \\
& - 3a^3b^3c^2d^2e^2k^2 - 3a^2b^2c^4e^3g^2h^2m - 33a^3b^2c^3d^2e^2j^3m \\
& - 27a^4b^2c^3e^2f^2h^2m^2 - 27a^3b^2c^4d^2e^2k^2 - 18a^4b^2c^3d^2e^2j^2m^2 \\
& - 18a^3b^2c^4e^2f^2j^2k - 18a^3b^2c^4d^2f^2j^2k - 9a^4b^2c^2d^2e^2j^2m^3 \\
& + 9a^4b^2c^3d^2g^2h^2m^2 + 9a^4b^2c^3d^2e^2k^2 + 9a^4b^2c^3d^2e^2j^2m^2 \\
& + 9a^4b^2c^3d^2e^2j^2m^2 + 9a^3b^2c^4e^2f^2j^2k + 9a^3b^2c^4d^2f^2j^2k \\
& + 9a^3b^2c^4e^2f^2h^2m + 9a^3b^2c^4d^2e^2k^2 - 9a^2b^5c^4d^2e^2j^2m^2 \\
& + 9a^2b^4c^2d^2e^2j^3m - 9a^2b^3c^3d^2g^2h^2m + 9a^2b^3c^5d^2e^2k^2 \\
& + 9a^2b^3c^5d^2e^2j^2m + 9a^2b^4c^3d^2g^2h^2m - 6a^3b^2c^3d^2g^2j^3k \\
& - 3a^3b^3c^2f^2g^2h^2k + 3a^3b^2c^3e^2f^2j^3k + 3a^3b^2c^3d^2f^2j^3k \\
& + 3a^2b^2c^4e^2f^3j^2k + 3a^2b^2c^4d^2f^3j^2k + 45a^3b^2c^4d^2g^2h^2k \\
& + 36a^4b^2c^2e^2f^2g^2m^3 + 36a^4b^2c^2d^2f^2h^2m^3 - 27a^3b^2c^4e^2g^2h^2k^2 \\
& - 27a^3b^2c^4d^2g^2h^2k^2 - 18a^3b^2c^4f^2g^2h^2j^2 + 18a^3b^2c^4d^2e^2j^2k \\
& + 15a^3b^3c^2d^2e^2j^2k + 12a^2b^2c^4e^2f^3g^2m + 12a^2b^2c^4d^2f^3h^2m \\
& + 9a^3b^2c^4f^2g^2h^2j + 9a^3b^2c^4e^2g^2h^2k + 9a^3b^2c^4d^2f^2j^2k \\
& + 9a^2b^5c^4d^2e^2f^2j^2k + 9a^2b^5c^4d^2g^2h^2k - 9a^2b^4c^3d^2g^2h^2k \\
& - 6a^2b^2c^4e^2f^3h^2k + 3a^3b^2c^3f^2g^2h^2j^3 + 3a^2b^2c^4f^3g^2h^2j \\
& + 45a^3b^2c^4d^2f^2g^2m^2 - 27a^2b^2c^5d^2f^2g^2m + 18a^3b^2c^4e^2f^2g^2k \\
& + 15a^3b^3c^2e^2f^2g^2k - 12a^3b^2c^3d^2e^2j^2k + 9a^3b^2c^4d^2e^2h^2m^2 \\
& + 9a^3b^2c^4e^2g^2h^2j^2 + 9a^3b^2c^4e^2f^2h^2k^2 - 9a^2b^3c^3d^2f^2h^3k \\
& + 9a^2b^3c^5d^2f^2h^2k + 9a^2b^3c^4d^2f^2g^2m + 6a^3b^3c^2d^2f^2h^2k^3 \\
& + 3a^2b^4c^2d^2e^2j^2k^3 + 18a^3b^2c^4e^2f^2g^2k^2 + 18a^2b^3c^5d^2g^2h^2j \\
& + 18a^2b^3c^5d^2f^2g^2k + 18a^2b^3c^5d^2e^2g^2m - 12a^3b^2c^3d^2f^2h^2k^3 \\
& + 9a^3b^2c^4e^2f^2h^2j^2 + 9a^3b^2c^4d^2f^2g^2k^2 + 9a^3b^2c^4d^2e^2f^2g^2m \\
& + 9a^3b^2c^4d^2e^2g^2m^2 + 9a^3b^2c^4d^2g^2h^2j^2 + 9a^2b^2c^4e^2f^2g^3k \\
& + 9a^2b^2c^4d^2g^3h^2j + 9a^2b^2c^4d^2f^2g^3k + 9a^2b^2c^4d^2e^2g^3m \\
& + 9a^2b^2c^5e^2f^2h^2j + 9a^2b^2c^5e^2f^2g^2k - 9a^2b^3c^4d^2g^2h^2j \\
& - 9a^2b^3c^4d^2f^2g^2k - 9a^2b^3c^4d^2e^2g^2m - 3a^3b^2c^3e^2f^2g^2k^3 \\
& + 3a^2b^4c^2e^2f^2g^2k^3 + 3a^2b^4c^2d^2f^2h^2k^3 - 54a^3b^2c^4d^2e^2f^2m^2 \\
& - 51a^3b^3c^2d^2e^2f^2m^3 - 27a^3b^2c^4d^2e^2g^2k^2 + 9a^3b^2c^4d^2e^2h^2k^2 \\
& + 9a^2b^3c^5e^2f^2g^2j + 9a^2b^3c^5d^2f^2h^2j + 9a^2b^3c^5d^2e^2h^2k \\
& + 9a^2b^3c^5d^2e^2g^2k - 9a^2b^5c^2d^2e^2f^2m^2 - 9a^2b^4c^3d^2e^2g^2k \\
& - 9a^2b^2c^5d^2e^2g^2k - 9a^2b^2c^5d^2e^2f^2m - 3a^2b^3c^3e^2f^2g^2j^3 \\
& - 3a^2b^3c^3d^2f^2h^2j^3 + 36a^3b^2c^3d^2e^2f^2k^3 - 27a^2b^2c^5d^2f^2g^2j^2 \\
& - 18a^2b^4c^2d^2e^2f^2k^3 - 18a^2b^2c^5d^2e^2h^2j + 9a^2b^2c^5d^2e^2h^2j^2 \\
& + 9a^2b^2c^5d^2e^2h^2j^2 + 9a^2b^2c^5d^2f^2g^2j + 9a^2b^4
\end{aligned}$$

$$\begin{aligned}
& *c^3*d*e^2*f*1^2 + 9*a*b^3*c^4*d^2*f*g*j^2 - 9*a*b^2*c^5*d^2*f^2*g*j - 9*a* \\
& b^2*c^5*d^2*e*f^2*1 + 3*a^2*b^2*c^4*d*e*h^3*j - 18*a^2*b*c^5*e^2*f*g*h^2 + \\
& 18*a^2*b*c^5*d^2*e*f*k^2 + 15*a^2*b^3*c^3*d*e*f*k^3 + 9*a^2*b*c^5*e*f^2*g^2 \\
& *h + 9*a^2*b*c^5*d*e^2*g*j^2 - 9*a*b^3*c^4*d^2*e*f*k^2 + 9*a*b^2*c^5*d^2*e* \\
& g^2*j - 9*a*b^2*c^5*d*e^2*f^2*k + 3*a^2*b^2*c^4*e*f*g*h^3 + 18*a^2*b*c^5*d* \\
& e*f^2*j^2 + 9*a^2*b*c^5*d*f^2*g*h^2 - 9*a*b^3*c^4*d*e*f^2*j^2 + 9*a*b^2*c^5 \\
& *d^2*f*g^2*h - 3*a^2*b^2*c^4*d*e*f*j^3 + 9*a^2*b*c^5*d*e*g^2*h^2 - 9*a*b^2*c^5 \\
& *d^2*e*g*h^2 + 9*a*b^2*c^5*d*e^2*f*h^2 - 36*a^6*c^2*f*j*k*1*m^2 + 36*a^5 \\
& *c^3*f^2*j*k*1*m - 36*a^5*c^3*f*h^2*j*1*m + 36*a^5*c^3*e*h*j^2*1*m - 18*a^6 \\
& *b*c*j^2*k*1*m^2 + 9*a^6*b*c*j*k^2*1^2*m + 3*a^5*b^2*c*j^3*k*1*m - 36*a^5*c \\
& ^3*f*g*j*k^2*m - 36*a^5*c^3*e*f*k^2*1*m + 36*a^5*c^3*d*g*k^2*1*m - 36*a^4*c \\
& ^4*d^2*g*k*1*m - 36*a^5*c^3*e*h*j*k*1^2 - 36*a^5*c^3*e*f*j*1^2*m - 36*a^5*c \\
& ^3*d*f*k*1^2*m + 36*a^4*c^4*e^2*h*j*k*1 + 36*a^4*c^4*e^2*f*j*1*m + 9*a^6*b* \\
& c*h*k^2*1*m^2 - 3*a^4*b^3*c*h^3*k*1*m - 36*a^5*c^3*e*g*h*1^2*m + 36*a^5*c^3 \\
& *e*f*j*k*m^2 - 36*a^5*c^3*d*g*j*k*m^2 + 36*a^5*c^3*d*f*j*1*m^2 - 36*a^5*c^3 \\
& *d*e*k*1*m^2 + 36*a^4*c^4*e^2*g*h*1*m - 36*a^4*c^4*e*f^2*j*k*m - 36*a^4*c^4 \\
& *d*f^2*j*1*m + 9*a^6*b*c*h*j*1^2*m^2 + 9*a^6*b*c*g*k*1^2*m^2 + 9*a^5*b^2*c* \\
& g*k^3*1*m + 3*a^3*b^4*c*g^3*k*1*m + 36*a^5*c^3*f*g*h*j*m^2 + 36*a^5*c^3*e*f \\
& *h*1*m^2 - 36*a^4*c^4*f^2*g*h*j*m - 36*a^4*c^4*e*f^2*h*1*m - 24*a^4*b*c^3*f \\
& ^3*k*1*m - 12*a^5*b*c^2*h*j^3*k*m - 12*a^5*b*c^2*g*j^3*1*m - 3*a^2*b^5*c*f^ \\
& 3*k*1*m - 36*a^4*c^4*e*g^2*h*k*1 - 36*a^4*c^4*e*f*g^2*1*m + 12*a^5*b^2*c*e* \\
& k*1^3*m - 6*a^5*b^2*c*f*j*1^3*m + 3*a^5*b^2*c*h*j*k*1^3 + 48*a^3*b*c^4*d^3* \\
& k*1*m + 36*a^4*c^4*e*f*h^2*j*m + 36*a^4*c^4*d*g*h^2*k*1 - 36*a^4*c^4*d*f*h^ \\
& 2*k*m - 36*a^4*c^4*d*e*j^2*k*1 + 24*a^5*b*c^2*d*k^3*1*m + 21*a*b^5*c^2*d^3* \\
& k*1*m - 12*a^5*b*c^2*g*j*k^3*1 - 9*a^4*b^3*c*d*k^3*1*m + 6*a^5*b*c^2*f*j*k^ \\
& 3*m + 3*a^5*b^2*c*g*h*1^3*m - 36*a^4*c^4*e*f*h*j^2*1 - 12*a^5*b*c^2*g*h*k^3 \\
& *m - 3*a^5*b^2*c*e*j*k*m^3 - 3*a^5*b^2*c*d*j*1*m^3 - 36*a^4*c^4*d*g*h*j*k^2 \\
& - 36*a^4*c^4*d*f*g*k^2*1 - 36*a^4*c^4*d*e*h*k^2*1 - 36*a^4*c^4*d*e*g*k^2*m \\
& + 36*a^3*c^5*d^2*g*h*j*k + 36*a^3*c^5*d^2*f*g*k*1 - 36*a^3*c^5*d^2*f*g*j*m \\
& + 36*a^3*c^5*d^2*e*h*k*1 + 36*a^3*c^5*d^2*e*g*k*m - 36*a^3*c^5*d^2*e*f*1*m \\
& + 24*a^5*b^2*c*e*h*1*m^3 - 24*a^3*b*c^4*e^3*j*k*1 - 12*a^5*b^2*c*f*h*k*m^3 \\
& - 12*a^5*b^2*c*f*g*1*m^3 - 3*a^5*b^2*c*g*h*j*m^3 - 3*a^4*b^3*c*e*j*k*1^3 - \\
& 3*a*b^5*c^2*e^3*j*k*1 + 36*a^4*c^4*d*e*h*j*1^2 + 36*a^4*c^4*d*e*g*k*1^2 - \\
& 36*a^3*c^5*d*e^2*h*j*1 - 36*a^3*c^5*d*e^2*g*k*1 - 36*a^3*c^5*d*e^2*f*k*m + \\
& 24*a^4*b*c^3*e*h^3*k*m - 24*a^3*b*c^4*e^3*g*1*m - 18*a*b^4*c^3*d^3*j*k*1 - \\
& 12*a^4*b*c^3*g*h^3*j*1 - 12*a^4*b*c^3*f*h^3*k*1 - 12*a^4*b*c^3*d*h^3*1*m + \\
& 12*a^3*b*c^4*e^3*h*k*m + 6*a^4*b*c^3*f*h^3*j*m - 3*a^4*b^3*c*g*h*j*1^3 - 3* \\
& a^4*b^3*c*f*h*k*1^3 - 3*a^4*b^3*c*e*g*1^3*m - 3*a^4*b^3*c*d*h*1^3*m - 3*a*b \\
& ^5*c^2*e^3*h*k*m - 3*a*b^5*c^2*e^3*g*1*m + 36*a^4*c^4*e*f*g*h*1^2 - 36*a^4* \\
& c^4*d*e*f*j*m^2 - 36*a^3*c^5*e^2*f*g*h*1 - 36*a^3*c^5*d*f^2*g*j*k - 36*a^3* \\
& c^5*d*e*f^2*k*1 + 36*a^3*c^5*d*e*f^2*j*m - 18*a*b^4*c^3*d^3*h*k*m - 9*a*b^4 \\
& *c^3*d^3*g*1*m + 30*a^5*b*c^2*d*g*k*m^3 - 30*a^4*b^3*c*d*g*k*m^3 - 24*a^5*b \\
& *c^2*e*f*k*m^3 - 24*a^5*b*c^2*d*f*1*m^3 + 24*a^4*b*c^3*e*g*j^3*m + 24*a^4*b \\
& *c^3*d*h*j^3*m + 15*a^4*b^3*c*e*f*k*m^3 + 15*a^4*b^3*c*d*f*1*m^3 + 12*a^5*b \\
& *c^2*e*g*j*m^3 + 12*a^5*b*c^2*d*h*j*m^3 - 12*a^4*b*c^3*f*h*j^3*k - 12*a^4*b
\end{aligned}$$

$$\begin{aligned}
& *c^3*f*g*j^3*1 + 6*a^4*b^3*c*e*g*j*m^3 + 6*a^4*b^3*c*d*h*j*m^3 + 6*a^4*b*c^3 \\
& *e*h*j^3*1 + 36*a^3*c^5*d*e*g^2*h*1 - 24*a^5*b*c^2*f*g*h*m^3 + 15*a^4*b^3* \\
& c*f*g*h*m^3 - 9*a*b^6*c*d^2*g*j*m^2 - 6*a^3*b^4*c*d*g*k*1^3 - 6*a*b^4*c^3*e \\
& ^3*f*j*m + 3*a^3*b^4*c*e*g*j*1^3 + 3*a^3*b^4*c*e*f*k*1^3 + 3*a^3*b^4*c*d*h* \\
& j*1^3 + 3*a^3*b^4*c*d*e*1^3*m + 3*a*b^4*c^3*e^3*h*j*k + 3*a*b^4*c^3*e^3*g*j \\
& *1 + 3*a*b^4*c^3*e^3*f*k*1 + 3*a*b^4*c^3*d*e^3*1*m - 36*a^3*c^5*d*e*g*h^2*k \\
& + 30*a^2*b*c^5*d^3*f*j*m - 30*a*b^3*c^4*d^3*f*j*m + 24*a^3*b*c^4*d*g^3*j*1 \\
& - 24*a^2*b*c^5*d^3*h*j*k - 24*a^2*b*c^5*d^3*f*k*1 - 24*a^2*b*c^5*d^3*e*k*m \\
& + 15*a*b^3*c^4*d^3*h*j*k + 15*a*b^3*c^4*d^3*f*k*1 + 15*a*b^3*c^4*d^3*e*k*m \\
& - 12*a^3*b*c^4*e*g^3*j*k + 12*a^2*b*c^5*d^3*g*j*1 + 6*a*b^3*c^4*d^3*g*j*1 \\
& + 3*a^3*b^4*c*f*g*h*1^3 + 3*a*b^4*c^3*e^3*g*h*m + 24*a^3*b*c^4*d*g^3*h*m - \\
& 12*a^3*b*c^4*f*g^3*h*k + 12*a^2*b*c^5*d^3*g*h*m - 9*a^3*b^4*c*d*e*j*m^3 + 6 \\
& *a^3*b*c^4*e*g^3*h*1 + 6*a*b^3*c^4*d^3*g*h*m + 36*a^3*c^5*d*e*f*g*k^2 - 36* \\
& a^2*c^6*d^2*e*f*g*k - 24*a^4*b*c^3*d*e*j*1^3 - 18*a^3*b^4*c*e*f*g*m^3 - 18* \\
& a^3*b^4*c*d*f*h*m^3 - 3*a^2*b^5*c*d*e*j*1^3 - 3*a*b^3*c^4*d*e^3*j*1 - 24*a^4 \\
& *b*c^3*e*f*g*1^3 + 24*a^3*b*c^4*d*f*h^3*1 + 12*a^4*b*c^3*d*f*h*1^3 - 12*a^3 \\
& *b*c^4*e*g*h^3*j - 12*a^3*b*c^4*e*f*h^3*k - 12*a^3*b*c^4*d*e*h^3*m - 12*a* \\
& b^2*c^5*d^3*e*j*k + 6*a^3*b*c^4*d*g*h^3*k - 3*a^2*b^5*c*e*f*g*1^3 - 3*a^2*b \\
& ^5*c*d*f*h*1^3 - 3*a*b^3*c^4*e^3*g*h*j - 3*a*b^3*c^4*e^3*f*h*k - 3*a*b^3*c^4 \\
& *e^3*f*g*1 - 3*a*b^3*c^4*d*e^3*h*m + 24*a*b^2*c^5*d^3*e*h*1 - 12*a*b^2*c^5 \\
& *d^3*f*h*k - 3*a*b^2*c^5*d^3*g*h*j - 3*a*b^2*c^5*d^3*f*g*1 - 3*a*b^2*c^5*d^3 \\
& *e*g*m + 48*a^4*b*c^3*d*e*f*m^3 + 24*a^2*b*c^5*d*e*f^3*m + 21*a^2*b^5*c*d* \\
& e*f*m^3 - 12*a^2*b*c^5*e*f^3*g*j - 12*a^2*b*c^5*d*f^3*h*j - 9*a*b^3*c^4*d*e \\
& *f^3*m + 6*a^2*b*c^5*d*f^3*g*k + 12*a*b^2*c^5*d*e^3*f*1 - 6*a*b^2*c^5*d*e^3 \\
& *g*k + 3*a*b^2*c^5*d*e^3*h*j - 24*a^3*b*c^4*d*e*f*k^3 - 12*a^2*b*c^5*d*e*g^3 \\
& *j - 3*a*b^5*c^2*d*e*f*k^3 + 3*a*b^2*c^5*e^3*f*g*h - 12*a^2*b*c^5*d*f*g^3* \\
& h + 9*a*b^2*c^5*d*e*f^3*j + 9*a*b*c^6*d^2*e^2*f*j + 3*a*b^4*c^3*d*e*f*j^3 + \\
& 9*a*b*c^6*d^2*e^2*g*h + 9*a*b*c^6*d^2*e^2*f^2*h - 3*a*b^3*c^4*d*e*f*h^3 - 18 \\
& *a*b*c^6*d^2*e*f*g^2 + 9*a*b*c^6*d*e^2*f^2*g + 3*a*b^2*c^5*d*e*f*g^3 - 36*a \\
& ^4*b^2*c^2*e^2*k*1^2*m - 9*a^4*b^2*c^2*g^2*j^2*k*m + 45*a^3*b^3*c^2*d^2*k^2 \\
& *1*m + 36*a^4*b^2*c^2*e^2*j*1*m^2 + 9*a^4*b^2*c^2*g^2*j*k^2*1 + 9*a^3*b^3*c^2 \\
& *e^2*j^2*1*m + 9*a^4*b^2*c^2*g^2*h*k^2*m - 9*a^4*b^2*c^2*f^2*h*1^2*m - 9* \\
& a^3*b^3*c^2*f^2*j^2*k*1 - 45*a^3*b^3*c^2*d^2*j*k*m^2 + 36*a^3*b^2*c^3*d^2*j \\
& ^2*k*m + 18*a^4*b^2*c^2*f^2*h*k*m^2 + 18*a^4*b^2*c^2*f^2*g*1*m^2 - 9*a^4*b^2 \\
& *c^2*g^2*h*k*1^2 - 9*a^4*b^2*c^2*f^2*h^2*k^2*m - 9*a^4*b^2*c^2*f*g^2*1^2*m - \\
& 9*a^4*b^2*c^2*e*j^2*k^2*1 - 9*a^4*b^2*c^2*d*j^2*k^2*m - 9*a^3*b^3*c^2*e^2* \\
& j*k*1^2 - 9*a^2*b^4*c^2*d^2*j^2*k*m - 36*a^3*b^2*c^3*d^2*j*k^2*1 - 27*a^3*b \\
& ^2*c^3*e^2*h^2*k*m + 9*a^4*b^2*c^2*g*h^2*j*1^2 + 9*a^4*b^2*c^2*f*h^2*k*1^2 \\
& - 9*a^4*b^2*c^2*f*g^2*k*m^2 - 9*a^4*b^2*c^2*e*g^2*1*m^2 - 9*a^4*b^2*c^2*d*j \\
& ^2*k*1^2 + 9*a^4*b^2*c^2*d*h^2*1^2*m - 9*a^3*b^3*c^2*e^2*g*1^2*m + 9*a^2*b^4 \\
& *c^2*e^2*h^2*k*m + 9*a^2*b^4*c^2*d^2*j*k^2*1 - 45*a^3*b^3*c^2*e^2*h*j*m^2 \\
& + 36*a^4*b^2*c^2*e*h^2*j*m^2 + 36*a^3*b^2*c^3*e^2*h*j^2*m - 36*a^3*b^2*c^3*d \\
& ^2*h*k^2*m + 36*a^2*b^3*c^3*d^2*g^2*1*m - 9*a^4*b^2*c^2*f*h*j^2*1^2 - 9*a^4 \\
& *b^2*c^2*d*h^2*k*m^2 + 9*a^3*b^3*c^2*f^2*h*j*1^2 + 9*a^3*b^3*c^2*e^2*f*1*m \\
& ^2 + 9*a^3*b^3*c^2*e*h^2*j^2*m - 9*a^3*b^2*c^3*f^2*h^2*j*1 - 9*a^2*b^4*c^2*
\end{aligned}$$

$$\begin{aligned}
& e^2 h^j j^2 m + 9 a^2 b^4 c^2 d^2 h^k k^2 m + 36 a^3 b^2 c^3 d^2 h^k k^1 l^2 - 27 a^4 b^2 c^2 e g^j j^2 m^2 - 27 a^4 b^2 c^2 d h^k j^2 m^2 - 9 a^4 b^2 c^2 d h^k k^2 l^2 - 9 a^3 b^3 c^2 e f^2 k^m m^2 - 9 a^3 b^3 c^2 d f^2 l^m m^2 + 9 a^3 b^2 c^3 f^2 h^j j^2 k + 9 a^3 b^2 c^3 f^2 g^j j^2 l - 9 a^3 b^2 c^3 e^2 g^k k^2 l - 9 a^3 b^2 c^3 e^2 f^k k^2 m - 9 a^3 b^2 c^3 d^2 f^l l^2 m - 9 a^2 b^4 c^2 d^2 h^k k^1 l^2 + 9 a^2 b^3 c^3 d^2 h^2 k^k l - 81 a^3 b^2 c^3 d^2 g^j j^m m^2 + 54 a^2 b^4 c^2 d^2 g^j j^m m^2 - 45 a^3 b^3 c^2 d g^2 j^m m^2 - 45 a^2 b^3 c^3 d^2 g^j j^2 m + 36 a^3 b^2 c^3 d^2 f^k k^m m^2 + 36 a^3 b^2 c^3 d g^2 j^2 m + 18 a^3 b^2 c^3 e^2 g^j j^1 l^2 + 18 a^3 b^2 c^3 e^2 f^k k^1 l^2 + 18 a^3 b^2 c^3 d e^2 l^2 m - 9 a^4 b^2 c^2 d f^k k^2 m^2 - 9 a^3 b^3 c^2 f^2 g^h h^m m^2 - 9 a^3 b^3 c^2 d h^2 j^1 l^2 - 9 a^3 b^2 c^3 f^2 g^j j^k^2 - 9 a^3 b^2 c^3 d^2 e^1 m m^2 - 9 a^3 b^2 c^3 f^2 g^2 h^2 m - 9 a^3 b^2 c^3 e^2 g^2 j^2 l - 9 a^3 b^2 c^3 e^2 f^2 k^2 l - 9 a^2 b^4 c^2 d^2 f^k k^m m^2 - 9 a^2 b^4 c^2 d g^2 j^2 m - 9 a^2 b^3 c^3 e^2 h^2 j^k - 9 a^2 b^2 c^4 d^2 f^2 k^m - 27 a^2 b^2 c^4 d^2 g^2 j^1 l - 9 a^3 b^3 c^2 f^2 g^h h^2 l^2 + 9 a^3 b^2 c^3 e^2 g^2 j^k^2 - 9 a^3 b^2 c^3 e^2 f^2 j^1 l^2 - 9 a^3 b^2 c^3 d h^2 j^2 k - 9 a^3 b^2 c^3 d f^2 k^1 l^2 - 9 a^3 b^2 c^3 d e^2 k^m m^2 - 9 a^2 b^3 c^3 e^2 g^h h^2 m - 9 a^2 b^3 c^3 d^2 h^j j^k^2 - 9 a^2 b^3 c^3 d^2 f^k k^2 l - 9 a^2 b^3 c^3 d^2 e^k k^2 m + 36 a^3 b^3 c^2 d e^j j^2 m^2 + 36 a^3 b^2 c^3 e^2 f^h h^m m^2 - 27 a^2 b^2 c^4 d^2 g^2 h^m + 9 a^3 b^3 c^2 e f^h h^2 m^2 + 9 a^3 b^2 c^3 f^2 g^2 h^k k^2 - 9 a^2 b^4 c^2 e^2 f^h h^m m^2 + 9 a^2 b^3 c^3 d^2 e^k k^1 l^2 - 9 a^2 b^2 c^4 e^2 f^2 h^m - 45 a^2 b^3 c^3 d^2 g^h h^1 l^2 - 36 a^3 b^2 c^3 e^2 f^2 g^m m^2 + 36 a^3 b^2 c^3 d g^2 h^1 l^2 - 36 a^3 b^2 c^3 d f^2 h^m m^2 + 36 a^2 b^2 c^4 d^2 g^h h^2 l - 9 a^3 b^2 c^3 e^2 g^h h^2 k^2 + 9 a^2 b^4 c^2 e^2 f^2 g^m m^2 - 9 a^2 b^4 c^2 d g^2 h^1 l^2 + 9 a^2 b^4 c^2 d f^2 h^m m^2 + 9 a^2 b^3 c^3 e^2 g^h h^k^2 + 9 a^2 b^3 c^3 d g^2 h^2 l - 9 a^2 b^3 c^3 d e^2 j^1 l^2 - 9 a^2 b^2 c^4 e^2 g^2 h^k - 9 a^2 b^2 c^4 e^2 f^2 g^2 m - 9 a^2 b^2 c^4 d^2 f^2 j^2 k - 9 a^2 b^2 c^4 d^2 f^2 h^2 m - 9 a^2 b^2 c^4 d^2 e^2 j^2 l - 45 a^2 b^3 c^3 d^2 f^2 g^m m^2 + 36 a^3 b^2 c^3 d f^2 g^2 m^2 - 27 a^3 b^2 c^3 d f^2 h^2 l^2 + 18 a^2 b^2 c^4 d^2 e^2 j^k^2 + 9 a^2 b^4 c^2 d f^2 h^2 l^2 - 9 a^2 b^4 c^2 d f^2 g^2 m^2 - 9 a^2 b^3 c^3 e^2 f^2 g^1 l^2 + 9 a^2 b^2 c^4 e^2 g^h h^2 j + 9 a^2 b^2 c^4 e^2 f^2 h^2 k - 9 a^2 b^2 c^4 e^2 f^2 g^2 l - 9 a^2 b^2 c^4 d f^2 g^2 m - 9 a^2 b^2 c^4 d e^2 j^2 k + 9 a^2 b^2 c^4 d e^2 h^2 m + 18 a^4 b^2 c^2 f^2 j^2 m^2 + 18 a^3 b^2 c^3 e^2 h^2 l^2 - 9 a^2 b^4 c^2 e^2 h^2 l^2 + 18 a^2 b^2 c^4 d^2 g^2 k^2 + 12 a^6 c^2 j^3 k^1 m + 3 a^6 b^2 j^k^1 m^3 - 12 a^6 c^2 g^k^3 l^1 m - 12 a^5 c^3 g^3 k^1 m - 24 a^6 c^2 e^k k^1 l^3 m - 24 a^4 c^4 e^3 k^1 m + 12 a^6 c^2 h^j j^k^1 l^3 + 12 a^6 c^2 f^j j^1 l^3 m + 12 a^5 c^3 h^3 j^k^1 - 3 a^5 b^3 h^j j^k^1 m^3 - 3 a^5 b^3 g^j j^1 m^3 - 3 a^5 b^3 f^k k^1 m^3 + 12 a^6 c^2 g^h h^1 l^3 m + 12 a^5 c^3 g^h h^3 l^1 m - 12 a^6 c^2 e^j j^k^1 m^3 - 12 a^6 c^2 d^j j^1 m^3 - 12 a^5 c^3 f^j j^3 k^1 l - 12 a^5 c^3 e^j j^3 k^1 m - 12 a^5 c^3 d^j j^3 l^1 m - 12 a^4 c^4 f^3 j^k^1 l + 24 a^6 c^2 f^h h^k^1 m^3 + 24 a^6 c^2 f^g^1 m^3 + 24 a^4 c^4 f^3 h^k^1 m + 24 a^4 c^4 f^3 g^1 m - 12 a^6 c^2 g^h h^j j^m^3 - 12 a^6 c^2 e^h h^1 m^3 - 12 a^5 c^3 g^h h^j j^3 m + 3 b^6 c^2 d^3 j^k^1 l + 3 a^4 b^4 e^j j^k^1 m^3 + 3 a^4 b^4 d^j j^1 m^3 - 24 a^5 c^3 d^j j^k^1 l^3 - 24 a^3 c^5 d^3 j^k^1 l - 6 a^4 b^4 e^h h^1 m^3 + 3 b^6 c^2 d^3 h^k^1 m + 3 b^6 c^2 d^3 g^1 m + 3 a^6 b^c^j^2 l^3 m + 3 a^4 b^4 g^h h^j j^m^3 + 3 a^4 b^4 f^h h^k^1 m^3 + 3 a^4 b^4
\end{aligned}$$

$$\begin{aligned}
& 4*f*g^1*m^3 - 24*a^5*c^3*d*h*k^3*m - 24*a^3*c^5*d^3*h*k*m + 12*a^5*c^3*g*h* \\
& j*k^3 + 12*a^5*c^3*f*g*k^3*l + 12*a^5*c^3*e*h*k^3*l + 12*a^5*c^3*e*g*k^3*m \\
& + 12*a^4*c^4*g^3*h*j*k + 12*a^4*c^4*f*g^3*k*l + 12*a^4*c^4*f*g^3*j*m + 12*a \\
& ^4*c^4*e*g^3*k*m + 12*a^4*c^4*d*g^3*l*m + 12*a^3*c^5*d^3*g^1*m + 3*a^6*b*c* \\
& j*k^3*m^2 - 9*a^6*b*c*h^2*l*m^3 - 3*a^5*b*c^2*j^4*k*l + 24*a^5*c^3*e*g*j*l^ \\
& 3 + 24*a^5*c^3*e*f*k^1^3 + 24*a^5*c^3*d*e^1^3*m + 24*a^3*c^5*e^3*g*j^1 + 24 \\
& *a^3*c^5*e^3*f*k^1 + 24*a^3*c^5*d*e^3*l*m - 12*a^5*c^3*d*h*j^1^3 - 12*a^5*c \\
& ^3*d*g*k^1^3 - 12*a^4*c^4*e*h^3*j*k - 12*a^4*c^4*d*h^3*j^1 - 12*a^3*c^5*e^3 \\
& *h*j*k - 12*a^3*c^5*e^3*f*j*m + 9*a^4*b*c^3*g^4*l*m + 6*b^5*c^3*d^3*f*j*m + \\
& 6*a^3*b^5*d*g*k^1^3 - 3*b^5*c^3*d^3*h*j*k - 3*b^5*c^3*d^3*g*j^1 - 3*b^5*c^ \\
& 3*d^3*f*k^1 - 3*b^5*c^3*d^3*e*k^1^3 - 3*a^3*b^5*e*g*j^1^3 - 3*a^3*b^5*e*f*k^1^3 \\
& - 3*a^3*b^5*d*h*j^1^3 - 3*a^3*b^5*d*f^1^3*m^3 - 12*a^5*c^3*f*g*h^1^3 - 12* \\
& a^4*c^4*f*g*h^3*l - 12*a^4*c^4*e*g*h^3*m - 12*a^3*c^5*e^3*g*h^1^3 - 9*a^6*b*c \\
& *g*k^2*m^3 - 3*b^5*c^3*d^3*g*h^1^3 + 3*a^6*b*c*f^1^3*m^2 - 3*a^3*b^5*f*g*h^1^3 \\
& 3 + 12*a^5*c^3*d*e*j^1^3 + 12*a^4*c^4*e*f*j^3*k + 12*a^4*c^4*d*g*j^3*k + 12 \\
& *a^4*c^4*d*f*j^3*l + 12*a^4*c^4*d*e*j^3*m + 12*a^3*c^5*e*f^3*j*k + 12*a^3*c \\
& ^5*d*f^3*j^1 - 9*a^6*b*c*e^1^2*m^3 - 24*a^5*c^3*e*f*g^1^3 - 24*a^5*c^3*d*f* \\
& h^1^3 - 24*a^3*c^5*e*f^3*g^1^3 - 24*a^3*c^5*d*f^3*h^1^3 - 15*a^2*b*c^5*d^4*l^1^3 \\
& + 15*a*b^3*c^4*d^4*l^1^3 + 12*a^4*c^4*f*g*h^1^3 + 12*a^3*c^5*f^3*g*h^1^3 + 12*a \\
& ^3*c^5*e*f^3*h^1^3 + 9*a^3*b*c^4*f^4*k^1 - 9*a^3*b*c^4*f^4*j^1 + 3*b^4*c^4*d^ \\
& 3*e*j^1^3 + 3*a^5*b^2*c*g*j^1^4 + 3*a^5*b^2*c*f*k^1^4 + 3*a^5*b^2*c*d^1^4*m - \\
& 3*a^5*b*c^2*h*j^1^4 - 3*a^5*b*c^2*f*k^1^4 - 3*a^5*b*c^2*e*k^1^4 - 3*a^4*b* \\
& c^3*h^4*j^1^3 + 3*a^2*b^6*d*e*j^1^3 + 3*a*b^4*c^3*e^4*k^1^3 + 24*a^4*c^4*d*e*j* \\
& k^3 + 24*a^2*c^6*d^3*e*j^1^3 - 6*b^4*c^4*d^3*e*h^1^3 + 3*b^4*c^4*d^3*g*h^1^3 + 3* \\
& b^4*c^4*d^3*f*h^1^3 + 3*b^4*c^4*d^3*f*g^1^3 + 3*b^4*c^4*d^3*e*g^1^3 - 3*a^4*b*c^3 \\
& *g*h^4*m + 3*a^2*b^6*e*f*g^1^3 + 3*a^2*b^6*d*f*h^1^3 - 3*a*b^6*c^3*j^1^2 \\
& + 24*a^4*c^4*d*f*h^1^3 + 24*a^2*c^6*d^3*f*h^1^3 - 12*a^4*c^4*e*f*g^1^3 - 12*a \\
& ^3*c^5*e*f*g^1^3 - 12*a^3*c^5*d*g^1^3*h^1^3 - 12*a^3*c^5*d*f*g^1^3 - 12*a^3*c^5 \\
& *d*e*g^1^3 - 12*a^2*c^6*d^3*g*h^1^3 - 12*a^2*c^6*d^3*f*g^1^3 - 12*a^2*c^6*d^3*e \\
& *h^1^3 - 12*a^2*c^6*d^3*e*g^1^3 - 12*a*b^2*c^5*d^4*j^1^3 + 9*a^5*b*c^2*d*j^1^4 + \\
& 9*a^2*b*c^5*e^4*j^1^3 - 3*a^4*b^3*c*d*j^1^4 - 3*a^4*b*c^3*e*j^1^4 - 3*a^4*b*c \\
& ^3*d*j^1^4 - 3*a*b^3*c^4*e^4*j^1^3 - 24*a^4*c^4*d*e*f^1^3 - 24*a^2*c^6*d*e^3* \\
& f^1^3 - 12*a^5*b^2*c*e*g^1^4 - 12*a^5*b^2*c*d*h^1^4 + 12*a^3*c^5*d*e*h^1^3*j^1 + \\
& 12*a^2*c^6*d*e^3*h^1^3 + 12*a^2*c^6*d*e^3*g^1^3 - 12*a*b^2*c^5*d^4*h^1^3 + 9*a^5* \\
& b*c^2*f*g^1^4 - 9*a^5*b*c^2*e*h^1^4 - 9*a^2*b*c^5*e^4*h^1^3 + 9*a^2*b*c^5*e^4 \\
& *g^1^3 + 6*a^4*b^3*c*e*h^1^4 + 6*a*b^3*c^4*e^4*h^1^3 - 3*b^3*c^5*d^3*e*g^1^3 - 3* \\
& b^3*c^5*d^3*e*f^1^3 - 3*a^4*b^3*c*f*g^1^4 - 3*a^4*b*c^3*g^1^3*h^1^3 - 3*a^3*b*c^4 \\
& *g^4*h^1^3 - 3*a^3*b*c^4*f*g^4*l - 3*a^3*b*c^4*e*g^4*m - 3*a*b^3*c^4*e^4*g^1^3 \\
& + 12*a^3*c^5*e*f*g^1^3 + 12*a^2*c^6*e^3*f*g^1^3 - 3*b^3*c^5*d^3*f*g^1^3 - 12*a^ \\
& 3*c^5*d*e*f^1^3 - 12*a^2*c^6*d*e^3*f^1^3 - 3*a*b^6*c*d^2*g^1^3 - 15*a^5*b*c^2 \\
& *d*e^1^4 + 15*a^4*b^3*c*d*e^1^4 + 9*a^4*b*c^3*e*f^1^4 - 9*a^4*b*c^3*d*g^1^4 \\
& + 3*a^3*b^4*c*d*f^1^4 - 3*a^3*b*c^4*d*h^1^4 - 3*a^2*b*c^5*e*f^4*k^1 - 3*a^2* \\
& b*c^5*d*f^4*l + 3*a*b^2*c^5*e^4*g^1^3 + 3*a*b^2*c^5*e^4*f^1^3 + 3*a*b^2*c^5*d*e \\
& ^4*m - 9*a*b*c^6*d^3*e^2*l + 3*b^2*c^6*d^3*e*f^1^3 - 3*a^3*b*c^4*f*g^1^4 - 3* \\
& a^2*b*c^5*f^4*g^1^3 + 12*a^2*c^6*d*e*f^1^3 - 9*a*b*c^6*d^3*f^2*j^1 + 3*a*b*c^6*
\end{aligned}$$

$$\begin{aligned}
& d^2e^3k + 9a^3b^4c^4d^4e^4j^4 - 3a^2b^3c^5e^4f^4g^4 - 9a^6b^3c^6d^3e^4h^2 \\
& + 3a^6b^3c^6d^2f^3g^4 + 3a^6b^3c^6d^4e^3g^2 - 3a^4b^2c^2h^3j^2m + 12 \\
& a^4b^2c^2g^3j^2m^2 - 3a^4b^2c^2f^2k^3m + 3a^3b^3c^2g^3j^2m \\
& - 9a^3b^4c^2f^2j^2m^2 + 9a^3b^3c^2f^2j^3m - 6a^3b^3c^2f^3j^2m \\
& ^2 - 6a^3b^2c^3f^3j^2m - 3a^2b^4c^2f^3j^2m - 27a^4b^2c^2d^2 \\
& k^3m - 27a^3b^2c^3e^3j^2m + 18a^2b^4c^2e^3j^2m - 15a^2b^3c^ \\
& ^3e^3j^2m + 12a^4b^2c^2f^2j^1^3 + 3a^3b^3c^2e^2k^3l + 42a^2b^ \\
& b^3c^3d^3j^2m^2 - 27a^2b^2c^4d^3j^2m - 15a^3b^3c^2d^2k^1^3 - 3 \\
& a^4b^2c^2f^2j^2k^3 - 3a^4b^2c^2f^2h^3m^2 + 3a^3b^3c^2g^3h^1^2 \\
& + 3a^3b^3c^2f^2j^2k^3 - 3a^3b^2c^3g^3h^2^1 - 3a^3b^2c^3e^2j^3 \\
& l - 27a^4b^2c^2e^2h^3m^3 + 12a^3b^2c^3f^3h^1^2 + 3a^3b^3c^2f^2 \\
& g^3m^2 - 3a^2b^4c^2f^3h^1^2 + 3a^2b^3c^3f^3h^2^1 + 9a^3b^3c^2 \\
& e^2h^3l^2 + 9a^2b^3c^3e^2h^3^1 - 6a^4b^2c^2e^2h^2^1^3 - 6a^3b^3c^ \\
& c^2e^2h^1^3 - 6a^2b^3c^3e^3h^1^2 - 6a^2b^2c^4e^3h^2^1 + 3a^2b^ \\
& ^3c^3d^2j^3k + 42a^3b^3c^2d^2g^2m^3 - 27a^4b^2c^2d^2g^2m^3 - 27 \\
& a^2b^2c^4d^3h^1^2 - 15a^2b^3c^3e^3f^2m^2 + 12a^3b^2c^3e^2h^3k^ \\
& 3 + 3a^3b^3c^2e^2h^2k^3 - 3a^3b^2c^3e^2g^3l^2 - 3a^2b^4c^2e^2h^ \\
& k^3 + 3a^2b^3c^3f^3g^2k^2 - 3a^2b^2c^4f^3g^2k - 27a^3b^2c^3d^ \\
& ^2g^1^3 - 27a^2b^2c^4d^3f^2m^2 + 18a^2b^4c^2d^2g^1^3 - 15a^3b^3 \\
& c^2d^2g^2l^3 + 12a^2b^2c^4e^3g^2k^2 - 3a^3b^2c^3e^2h^2j^3 + 3a^2 \\
& b^3c^3e^2h^2j^3 + 3a^2b^3c^3e^2f^3l^2 - 3a^2b^2c^4d^2h^3k + 9a^ \\
& a^2b^3c^3d^2g^3k^2 - 9a^2b^4c^3d^2g^2k^2 - 6a^3b^2c^3d^2g^2k^3 - \\
& 6a^2b^3c^3d^2g^2k^3 - 3a^2b^4c^2d^2g^2k^3 + 12a^2b^2c^4d^2g^2j^ \\
& ^3 + 3a^2b^3c^3d^2g^2j^3 - 3a^2b^2c^4d^2f^3k^2 - 3a^2b^2c^4d^2g^ \\
& 2h^3 + 12a^7c^2j^2k^1m^3 - 3b^7c^2d^3k^1m - 3a^6b^3c^4k^1m - 3a^6 \\
& b^3c^2j^2k^1^4 - 3a^6b^3c^2g^1^4m - 9a^6b^3c^2f^2j^2m^4 + 9a^6b^3c^2e^2k^1m^4 + 9 \\
& a^6b^3c^2d^1m^4 + 9a^6b^3c^2g^2h^1m^4 - 3a^6b^3c^2d^1e^2f^2m^3 + 9a^6b^3c^2d^1e^4h^ \\
& j - 9a^6b^3c^2d^1e^4g^2k + 9a^6b^3c^2d^1e^4f^2l + 9a^6b^3c^2d^1e^4e^2m + 12a^6c^7d^ \\
& 3e^2f^2g - 3a^6b^3c^2d^1e^4j - 3a^6b^3c^2d^1e^4f^2g - 3a^6b^3c^2d^1e^4e^2f^4 + 18a^ \\
& 6c^2h^2j^2l^2m^2 - 18a^6c^2h^2j^2l^2^1^2m + 18a^6c^2f^2k^2l^2^1^2m + 36a^ \\
& 5c^3e^2k^1^2m + 18a^6c^2g^2j^2k^2m^2 + 18a^6c^2e^2k^2l^2m^2 + 18a^ \\
& 5c^3g^2j^2k^2m + 18a^6c^2e^2j^2l^2m^2 + 18a^6c^2d^2k^1^2m^2 - 18a^ \\
& 5c^3e^2j^2l^2m^2 - 18a^6c^2f^2h^1^2m^2 + 18a^5c^3f^2h^1^2m - 36a^ \\
& 5c^3f^2h^1k^2m^2 - 36a^5c^3f^2g^1m^2 + 18a^5c^3g^2h^1k^1^2 - 18a^ \\
& 5c^3g^2h^2k^2^1 + 18a^5c^3f^2h^2k^2^2m + 18a^5c^3f^2g^2l^2^1m + 18a^ \\
& 5c^3e^2j^2k^2^1 + 18a^5c^3d^2j^2k^2^2m - 18a^4c^4d^2j^2k^2m + 36a^ \\
& 4c^4d^2j^2k^2^1 + 18a^5c^3f^2g^2k^2m^2 + 18a^5c^3e^2g^2l^2m^2 + 18a^ \\
& 5c^3d^2j^2k^1^2 - 18a^4c^4f^2g^2k^2m + 36a^4c^4d^2h^1k^2m + 18a^ \\
& 5c^3f^2h^1j^2l^2 - 18a^5c^3e^2h^2j^2m^2 + 18a^5c^3d^2h^2k^2m^2 + 18a^ \\
& 4c^4f^2h^2j^2l^1 - 18a^4c^4e^2h^2j^2m - 18a^5c^3e^2g^2k^2l^2 + 18a^ \\
& 5c^3d^2h^1k^2l^2 + 18a^4c^4e^2g^2k^2l^1 + 18a^4c^4e^2f^2k^2m - 18a^ \\
& 4c^4d^2h^1k^1^2 + 18a^4c^4d^2f^2l^2m - 36a^4c^4e^2g^2j^2l^2 - 36a^ \\
& 4c^4e^2f^2k^1^2 - 36a^4c^4d^2e^2l^2m + 18a^5c^3d^2f^2k^2m^2 + 18a^ \\
& 4c^4f^2g^2j^2k^2 + 18a^4c^4d^2g^2j^2m^2 - 18a^4c^4d^2f^2k^2m^2 + 18a^ \\
& 4c^4d^2e^2l^2m^2 - 18a^4c^4f^2g^2j^2k + 18a^4c^4f^2g^2h^2m + 18a^
\end{aligned}$$

$$\begin{aligned}
& 4*c^4*e*g^2*j^2*m + 18*a^4*c^4*e*f^2*k^2*m - 18*a^4*c^4*d*g^2*j^2*m - 18*a^4*c^4*d*f^2*k^2*m + 18*a^3*c^5*d^2*f^2*k*m + 3*a^4*b^2*c^2*h^4*k*m - 3*a^3*b^3*c^2*g^4*l*m + 18*a^4*c^4*e*f^2*j^1^2 + 18*a^4*c^4*d*h^2*j^2*k + 18*a^4*c^4*d*f^2*k^1^2 + 18*a^4*c^4*d*e^2*k*m^2 - 18*a^3*c^5*e^2*f^2*j^1 + 12*a^5*b^2*c*g^2*k*m^3 - 9*a^5*b*c^2*h^3*j*m^2 - 9*a^5*b*c^2*f^2*l^3*m + 3*a^5*b*c^2*h^2*k^3*m + 3*a^4*b^3*c*h^3*j*m^2 + 3*a^4*b^3*c*f^2*l^3*m - 18*a^4*c^4*e^2*f*h*m^2 + 18*a^3*c^5*e^2*f^2*h*m + 15*a^5*b*c^2*e^2*l^3*m - 15*a^4*b^3*c*e^2*l^3*m - 9*a^5*b*c^2*g^2*k^1^3 - 9*a^4*b*c^3*g^3*j^2*m - 3*a^5*b^2*c*g*k^2*l^3 + 3*a^5*b*c^2*h*j^3*l^2 + 3*a^4*b^3*c*g^2*k^1^3 - 3*a^3*b^4*c*g^3*j*m^2 + 36*a^4*c^4*e*f^2*g*m^2 + 36*a^4*c^4*d*f^2*h*m^2 + 18*a^4*c^4*e*g*h^2*k^2 - 18*a^4*c^4*d*g^2*h^1^2 - 18*a^4*c^4*d*f*j^2*k^2 + 18*a^3*c^5*e^2*g^2*h*k + 18*a^3*c^5*e^2*f*g^2*m - 18*a^3*c^5*d^2*g*h^2*m + 18*a^3*c^5*d^2*f*j^2*k + 18*a^3*c^5*d^2*f*h^2*m + 18*a^3*c^5*d^2*e*j^2*m - 12*a^2*b^2*c^4*e^4*k*m + 9*a^4*b^3*c*f*j^3*m^2 - 9*a^4*b^2*c^2*f*j^4*m - 6*a^5*b^2*c*f*j^2*m^3 + 6*a^5*b*c^2*f^2*j*m^3 - 6*a^5*b*c^2*f*j^3*m^2 - 6*a^4*b^3*c*f^2*j*m^3 + 6*a^4*b*c^3*f^3*j*m^2 - 6*a^4*b*c^3*f^2*j^3*m + 6*a^2*b^3*c^3*f^4*j*m + 3*a^3*b^2*c^3*g^4*j^1 + 3*a^2*b^5*c*f^3*j*m^2 - 3*a^2*b^3*c^3*f^4*k^1 - 36*a^3*c^5*d^2*e*j*k^2 - 18*a^4*c^4*d*f*g^2*m^2 + 18*a^3*c^5*e*f^2*g^2*m + 18*a^3*c^5*d*f^2*g^2*m + 18*a^3*c^5*d*e^2*j^2*k + 18*a^3*b^4*c*d^2*k*m^3 + 15*a^3*b*c^4*e^3*j^2*m + 12*a^5*b^2*c*d*k^2*m^3 - 9*a^5*b*c^2*f*j^2*l^3 - 9*a^4*b*c^3*e^2*k^3*m + 3*a^5*b*c^2*e*k^3*l^2 + 3*a^4*b^3*c*f*j^2*l^3 + 3*a^4*b*c^3*g^2*j^3*k - 3*a^3*b^4*c*f^2*j^1^3 + 3*a^3*b^2*c^3*g^4*h*m + 3*a*b^5*c^2*e^3*j^2*m - 36*a^3*c^5*d^2*f*h*k^2 - 21*a^3*b*c^4*d^3*j*m^2 - 21*a*b^5*c^2*d^3*j*m^2 + 18*a^3*c^5*e^2*f*h*j^2 - 18*a^3*c^5*e*f^2*h^2*j + 18*a^3*c^5*d*f^2*h^2*k + 18*a*b^4*c^3*d^3*j^2*m + 15*a^4*b*c^3*d^2*k^1^3 - 9*a^5*b*c^2*d*k^2*l^3 - 9*a^4*b*c^3*g^3*h^1^2 - 9*a^4*b*c^3*f^2*j*k^3 + 3*a^4*b^3*c*d*k^2*l^3 + 3*a^2*b^5*c*d^2*k^1^3 - 18*a^3*c^5*d^2*e*g^1^2 + 18*a^3*c^5*d*e^2*h*k^2 + 18*a^3*b^4*c*e^2*h*m^3 - 18*a^2*c^6*d^2*e^2*h*k + 18*a^2*c^6*d^2*e^2*g^1 + 18*a^2*c^6*d^2*e^2*f*m + 15*a^5*b*c^2*e*h^2*m^3 - 15*a^4*b^3*c*e*h^2*m^3 - 9*a^4*b*c^3*f*g^3*m^2 - 9*a^3*b*c^4*f^3*h^2*m + 3*a^4*b^2*c^2*e*j*k^4 + 3*a^4*b*c^3*g*h^3*k^2 + 3*a^3*b*c^4*f^2*g^3*m + 36*a^3*c^5*d*e^2*f^1^2 + 18*a^3*c^5*d*f*g^2*j^2 + 18*a^2*c^6*d^2*f^2*g*j + 18*a^2*c^6*d^2*e*f^2*m - 9*a^3*b^2*c^3*e*h^4*m - 9*a^3*b*c^4*d^2*j^3*k + 6*a^4*b*c^3*e^2*h^1^3 - 6*a^4*b*c^3*e*h^3*l^2 + 6*a^3*b*c^4*e^3*h^1^2 - 6*a^3*b*c^4*e^2*h^3*m + 3*a^4*b^2*c^2*f*h*k^4 + 3*a^4*b*c^3*d*j^3*k^2 - 3*a^3*b^4*c*e*h^2*m^3 + 3*a^2*b^5*c*e^2*h^1^3 + 3*a^2*b^2*c^4*f^4*h*k + 3*a^2*b^2*c^4*f^4*g^1 + 3*a*b^5*c^2*e^3*h^1^2 - 3*a*b^4*c^3*e^3*h^2*m - 21*a^4*b*c^3*d^2*g*m^3 - 21*a^2*b^5*c*d^2*g*m^3 + 18*a^3*b^4*c*d*g^2*m^3 + 18*a^2*c^6*d*e^2*f^2*k + 18*a*b^4*c^3*d^3*h^1^2 + 15*a^3*b*c^4*e^3*f*m^2 + 15*a^2*b*c^5*d^3*h^2*m - 15*a*b^3*c^4*d^3*h^2*m - 9*a^4*b*c^3*e*h^2*k^3 - 9*a^3*b*c^4*f^3*g*k^2 - 9*a^2*b*c^5*e^3*f^2*m + 3*a^3*b*c^4*f^2*h^3*j + 3*a*b^5*c^2*e^3*f*m^2 + 3*a*b^3*c^4*e^3*f^2*m + 18*a*b^4*c^3*d^3*f*m^2 + 15*a^4*b*c^3*d*g^2*l^3 + 12*a*b^2*c^5*d^3*f^2*m - 9*a^3*b*c^4*e^2*h*j^3 - 9*a^3*b*c^4*e*f^3*l^2 - 9*a^2*b*c^5*e^3*g^2*k + 3*a^3*b*c^4*f*g^3*j^2 + 3*a^2*b^5*c*d*g^2*l^3 + 3*a^2*b*c^5*e^2*f^3*m - 3*a*b^4*c^3*e^3*g*k^2 + 3*a*b^3*c^4*e^3*g^2*k + 18*a^2*c^6*d^2*e*g*h^2 - 1
\end{aligned}$$



$$\begin{aligned}
& 8a^2c^6de^2g^2h - 12a^4b^2c^2d^2f^2l^4 - 9a^2b^2c^4d^2g^4k + 9a^3b^3c^4d^2g^3k + 6a^3b^3c^2d^2g^2k^4 + 6a^3b^3c^4d^2g^2k^3 - 6a^3b^3c^4d^2g^3k^2 + 6a^2b^3c^5d^3g^2k^2 - 6a^2b^3c^5d^2g^3k - 6a^2b^3c^4d^3g^2k^2 - 6a^2b^2c^5d^3g^2k - 3a^3b^3c^2ef^2k^4 + 3a^3b^2c^3eg^2j^4 + 3a^3b^2c^3d^2h^2j^4 + 3a^2b^5c^2d^2g^2k^3 + 15a^2b^3c^5d^3e^2l^2 - 15a^2b^3c^4d^3e^2l^2 - 9a^3b^3c^4d^2g^2j^3 - 9a^2b^3c^5e^3f^2j^2 - 3a^2b^4c^3d^2g^2j^3 + 3a^2b^3c^4e^3f^2j^2 - 3a^2b^2c^5e^3f^2j^2 + 12a^2b^2c^5d^3f^2j^2 - 9a^2b^3c^5d^2e^3k^2 + 3a^2b^3c^5e^2g^3h + 3a^2b^3c^4d^2e^3k^2 - 9a^2b^3c^5d^2g^2h^3 - 3a^2b^3c^3d^2e^2j^4 + 3a^2b^3c^5e^2f^3h^2 + 3a^2b^3c^4d^2g^2h^3 + 3a^2b^2c^4d^2f^2h^4 - 9a^7c^2k^2l^2m^2 - 6a^6c^2j^2k^3m - 3a^6b^2h^2l^2m^3 + 3a^5b^3h^2l^2m^3 - 6a^6c^2g^2k^3m - 6a^6c^2h^2k^3l^2 + 6a^5c^3h^3j^2m + 6a^6c^2g^2k^2l^3 - 6a^6c^2f^2k^3m^2 - 6a^5c^3h^2j^3l - 6a^5c^3g^3j^2m^2 + 6a^5c^3f^2k^3m + 3a^5b^3g^2k^2m^3 - 3a^4b^4g^2k^2m^3 + 12a^6c^2f^2j^2m^3 + 12a^4c^4f^3j^2m + 3a^5b^3e^2l^2m^3 + 3a^3b^5e^2l^2m^3 - 6a^6c^2d^2k^2m^3 - 6a^5c^3f^2j^2l^3 + 6a^5c^3d^2k^2m^3 - 6a^5c^3g^2j^3k^2 + 6a^4c^4e^3j^2m^2 - 3b^6c^2d^3j^2m - 3a^4b^4f^2j^2m^3 + 3a^3b^5f^2j^2m^3 + 6a^5c^3f^2j^2k^3 + 6a^5c^3f^2h^3m^2 - 6a^5c^3e^2j^3l^2 + 6a^4c^4g^3h^2l - 6a^4c^4f^2h^3m + 6a^4c^4e^2j^3l + 6a^3c^5d^3j^2m - 3a^4b^4d^2k^2m^3 - 3a^2b^6d^2k^2m^3 + 6a^5c^3e^2h^2m^3 - 6a^4c^4g^2h^3k - 6a^4c^4f^3h^2l + 12a^5c^3e^2h^2l^3 + 12a^3c^5e^3h^2l - 3b^6c^2d^3h^2l^2 + 3b^5c^3d^3h^2l - 3a^5b^2c^2j^4m^2 + 3a^3b^5e^2h^2m^3 - 3a^2b^6e^2h^2m^3 + 6a^5c^3d^2g^2m^3 - 6a^4c^4e^2h^2k^3 - 6a^4c^4f^2h^3j^2 + 6a^4c^4e^2g^3l^2 + 6a^3c^5f^3g^2k - 6a^3c^5e^2g^3l + 6a^3c^5d^3h^2l - 3b^6c^2d^3f^2m - 3b^4c^4d^3f^2m + 6a^4c^4d^2g^2l^3 + 6a^4c^4e^2h^2j^3 - 6a^4c^4d^2h^3k^2 - 6a^3c^5f^2g^3j - 6a^3c^5e^3g^2k^2 + 6a^3c^5d^3f^2m^2 + 6a^3c^5d^2h^3k - 6a^2c^6d^3f^2m + 4a^5b^2c^2h^3m^3 + 3b^5c^3d^3g^2k^2 - 3b^4c^4d^3g^2k - 3a^2b^6d^2g^2m^3 + a^5b^2c^2j^3k^3 + 12a^4c^4d^2g^2k^3 + 12a^2c^6d^3g^2k + 6a^5b^2c^2h^3l^3 + 5a^5b^2c^2g^3m^3 - 5a^4b^3c^2g^3m^3 + 3b^5c^3d^3e^2l^2 + 3b^3c^5d^3e^2l - 3a^5b^2c^2h^2l^4 + a^4b^3c^2h^3l^3 + 12a^5b^2c^2f^2m^4 - 6a^3c^5d^2g^2j^3 + 6a^3c^5d^2f^3k^2 + 6a^3b^4c^2f^3m^3 + 6a^2c^6e^3f^2j - 6a^2c^6d^2f^3k - 3b^4c^4d^3f^2j^2 + 3b^3c^5d^3f^2j - 3a^2b^2c^4f^5m - 7a^4b^3c^3e^3m^3 - 7a^2b^5c^2e^3m^3 + 6a^4b^3c^3g^3k^3 - 6a^3c^5e^2g^3h^2 - 6a^2c^6d^3f^2j^2 + 5a^4b^3c^3f^3l^3 + a^4b^3c^3h^3j^3 + a^2b^5c^2f^3l^3 + 6a^3c^5d^2g^2h^3 - 6a^2c^6e^2f^3h - 3a^3b^4c^2e^2l^4 - 3a^2b^4c^3e^4l^2 - 7a^3b^3c^4d^3l^3 - 7a^2b^5c^2d^3l^3 + 6a^3b^3c^4f^3j^3 + 5a^3b^3c^4e^3k^3 + 3b^3c^5d^3e^2h^2 - 3b^2c^6d^3e^2h + a^2b^5c^2e^3k^3 + 12a^2b^2c^5d^4k^2 - 6a^2c^6d^2f^3g^2 + 6a^2b^4c^3d^3k^3 - 3a^4b^2c^2d^2k^5 + a^3b^2c^4g^3h^3 + 5a^2b^2c^5d^3j^3 - 5a^2b^3c^4d^3j^3 - 9a^2c^7d^2e^2f^2 + 6a^2b^3c^5e^3h^3 - 3a^2b^2c^5e^4h^2 + a^2b^2c^5f^3g^3 + a^2b^3c^4e^3h^3 + 4a^2b^2c^5d^3h^3 - 3a^2b^2c^5d^2g^4 - 6a^7c^2j^2l^3m^2 + 6a^7c^2h^2l^2m^3 +
\end{aligned}$$

$$\begin{aligned}
& 6a^6c^2jk^4l + 6a^6c^2hk^4m - 6a^5c^3h^4k^2m + 3a^6b^2hk^2m^4 + 3a^6b^2g^2l^2m^4 - 3b^5c^3d^4l^2m - 6a^6c^2g^2j^2l^4 - 6a^6c^2f^2k^2l^4 - 6a^6c^2d^2l^4m + 6a^5c^3hj^4k + 6a^5c^3g^2j^4l + 6a^5c^3f^2j^4m - 6a^4c^4g^4j^2l + 6a^3c^5e^4k^2m + 6a^5b^3f^2j^2m^4 - 6a^4c^4g^4h^2m + 3b^7c^3d^3j^2m^2 - 3a^5b^3e^2k^2m^4 - 3a^5b^3d^2l^2m^4 + 3b^4c^4d^4j^2l - 3a^5b^3g^2h^2m^4 - 6a^5c^3e^2jk^4 + 6a^2c^6d^4j^2l + 3b^4c^4d^4h^2m + 6a^6c^2e^2g^2m^4 + 6a^6c^2d^2h^2m^4 + 6a^6b^2c^2j^3m^3 - 6a^5c^3f^2hk^4 + 6a^4c^4g^2h^4j + 6a^4c^4f^2h^4k + 6a^4c^4e^2h^4l + 6a^4c^4d^2h^4m - 6a^3c^5f^4hk - 6a^3c^5f^4g^2l + 6a^2c^6d^4h^2m + 3a^5b^2c^2j^5m + a^6b^2c^2k^3l^3 + 3a^4b^4e^2g^2m^4 + 3a^4b^4d^2h^2m^4 + 6b^3c^5d^4g^2k - 3b^3c^5d^4h^2j - 3b^3c^5d^4f^2l - 3b^3c^5d^4e^2m + 3a^2b^7d^2g^2m^3 + 6a^5c^3d^2f^2l^4 - 6a^4c^4e^2g^2j^4 - 6a^4c^4d^2h^2j^4 + 6a^3c^5e^2g^4j + 6a^3c^5d^2g^4k - 6a^2c^6e^4g^2j - 6a^2c^6e^4f^2k - 6a^2c^6d^2e^4m + 3a^4b^2c^3h^5l + 6a^3c^5f^2g^4h - 3a^3b^5d^2e^2m^4 + 3b^2c^6d^4e^2j + 3a^5b^2c^2g^2k^5 + 3a^3b^2c^4g^5k + 8a^2b^6c^2d^3m^3 + 3b^2c^6d^4f^2h - 3a^5b^2c^2e^2l^5 - 3a^2b^2c^5e^5l - 6a^3c^5d^2f^2h^4 + 6a^2c^6e^2f^4g + 6a^2c^6d^2f^4h + 3a^4b^2c^3f^2j^5 + 3a^2b^2c^5f^5j + 6a^2c^7d^3e^2h - 6a^2c^7d^2e^3g + 3a^3b^2c^4e^2h^5 + 6a^2b^2c^6d^3g^3 + 3a^2b^2c^5d^2g^5 + a^2b^2c^6e^3f^3 - 9a^6c^2j^2k^2l^2 - 9a^6c^2h^2k^2m^2 - 9a^6c^2g^2l^2m^2 - 18a^5c^3f^2j^2m^2 - 9a^5c^3h^2j^2k^2 - 9a^5c^3g^2j^2l^2 - 9a^5c^3f^2k^2l^2 - 9a^5c^3e^2k^2m^2 - 9a^5c^3d^2l^2m^2 - 9a^5c^3g^2h^2m^2 - 9a^4c^4e^2j^2k^2 - 9a^4c^4d^2j^2l^2 - 18a^4c^4e^2h^2l^2 - 9a^4c^4g^2h^2j^2 - 9a^4c^4f^2h^2k^2 - 9a^4c^4f^2g^2l^2 - 9a^4c^4e^2g^2m^2 - 9a^4c^4d^2h^2m^2 - 18a^3c^5d^2g^2k^2 - 9a^3c^5e^2g^2j^2 - 9a^3c^5e^2f^2k^2 - 9a^3c^5d^2h^2j^2 - 9a^3c^5d^2f^2l^2 - 9a^3c^5d^2e^2m^2 - 3a^4b^2c^2h^4l^2 - 18a^4b^2c^2f^3m^3 + 12a^3b^2c^3f^4m^2 - 9a^3c^5f^2g^2h^2 + 4a^4b^2c^2g^3l^3 - 3a^2b^4c^2f^4m^2 + 14a^3b^3c^2e^3m^3 - 5a^3b^3c^2f^3l^3 - 3a^4b^2c^2g^2k^4 - 3a^3b^2c^3g^4k^2 + a^3b^3c^2g^3k^3 - 20a^2b^4c^2d^3m^3 - 18a^3b^2c^3e^3l^3 + 16a^3b^2c^3d^3m^3 + 12a^4b^2c^2e^2l^4 + 12a^2b^2c^4e^4l^2 - 9a^2c^6d^2e^2j^2 + 6a^2b^4c^2e^3l^3 + 4a^3b^2c^3f^3k^3 + 14a^2b^3c^3d^3l^3 - 9a^2c^6e^2f^2g^2 - 9a^2c^6d^2f^2h^2 - 5a^2b^3c^3e^3k^3 - 3a^3b^2c^3f^2j^4 - 3a^2b^2c^4f^4j^2 + a^2b^3c^3f^3j^3 - 18a^2b^2c^4d^3k^3 + 12a^3b^2c^3d^2k^4 + 4a^2b^2c^4e^3j^3 - 3a^2b^4c^2d^2k^4 - 3a^2b^2c^4e^2h^4 + 6a^7c^2k^2l^4m - 3a^7b^2k^2l^4m - 6a^7c^2hk^2m^4 - 6a^7c^2g^2l^4m + 3a^6b^2c^2h^2l^5 - 6a^2c^7d^4e^2j - 6a^2c^7d^4f^2h - 3b^2c^7d^4e^2f + 6a^2c^7d^4e^2f + 3a^2b^2c^6e^5h - a^5b^2c^2j^3l^3 - a^3b^4c^2g^3l^3 - a^2b^4c^3e^3j^3 - a^2b^2c^5e^3g^3 + 3a^7b^2j^2m^5 + 6a^7c^2f^2m^5 + 6a^2c^7d^5k + 3b^2c^7d^5g - 3a^6c^2j^4m^2 - 3a^6b^2j^2m^4 + 2a^6c^2j^3l^3 + a^5b^3j^3m^3 - 2a^6c^2h^3m^3 - 3a^6c^2h^2l^4 - 3a^5c^3h^4l^2 - a^2b^6c^2e^3l^3 + 20a^5c^3f^3m^3 - 15a^6c^2f^2m^4 - 15a^4c^4f^4m^2 + 2a^5c^3h^3k^3 - 2a^5c^3g^3l^3 + a^3b
\end{aligned}$$

$$\begin{aligned}
& ^5g^3m^3 - 3a^5c^3g^2k^4 - 3a^4c^4g^4k^2 - 3a^4b^4f^2m^4 + 20 \\
& a^4c^4e^3l^3 - 15a^5c^3e^2l^4 - 15a^3c^5e^4l^2 + 2a^4c^4g^3j^3 - 2a^4c^4f^3k^3 - 2a^4c^4d^3m^3 - 3b^4c^4d^4k^2 - 3a^4c^4 \\
& f^2j^4 - 3a^3c^5f^4j^2 + 20a^3c^5d^3k^3 - 15a^4c^4d^2k^4 - 15 \\
& a^2c^6d^4k^2 - 2a^3c^5e^3j^3 + b^5c^3d^3j^3 + 2a^3c^5f^3h^3 \\
& - 3a^3c^5e^2h^4 - 3a^2c^6e^4h^2 - 3b^2c^6d^4g^2 + 2a^2c^6e^3 \\
& g^3 - 2a^2c^6d^3h^3 + b^3c^5d^3g^3 - 3a^2c^6d^2g^4 - a^4b^2c^ \\
& 2h^3k^3 - a^3b^2c^3g^3j^3 - a^2b^4c^2f^3k^3 - a^2b^2c^4f^3h^3 \\
& + 2a^7c^k^3m^3 + a^7b^l^3m^3 - 3a^7c^j^2m^4 + 6a^3c^5f^5m - 3 \\
& a^6b^2f^m^5 + 6a^6c^2e^l^5 + 6a^2c^6e^5l + b^7c^d^3l^3 + a^b^7e \\
& ^3m^3 - 3b^2c^6d^5k + 6a^5c^3d^k^5 - 3a^c^7d^4g^2 + 2a^c^7d^3f^3 \\
& + b^c^7d^3e^3 - a^6b^2k^3m^3 - a^4b^4h^3m^3 - a^2b^6f^3m^3 - \\
& b^6c^2d^3k^3 - b^4c^4d^3h^3 - b^2c^6d^3f^3 - b^8d^3m^3 - a^6c^ \\
& 2k^6 - a^5c^3j^6 - a^4c^4h^6 - a^3c^5g^6 - a^2c^6f^6 - a^7c^l^6 - \\
& a^c^7e^6 - a^8m^6 - c^8d^6, z, k1)*((1296a^3c^8f - 1296a^4c^7m - \\
& 648a^2b^2c^7f + 1944a^2b^3c^6j - 2025a^2b^4c^5m + 4536a^3b^2c^6m \\
& + 81a^b^4c^6f - 243a^b^5c^5j - 3888a^3b^c^7j + 243a^b^6c^4 \\
& m)/c^3 + (\text{root}(34992a^4b^2c^8z^6 - 8748a^3b^4c^7z^6 + 729a^2b^6c^6z^6 \\
& - 46656a^5c^9z^6 + 34992a^4b^3c^6mz^5 - 8748a^3b^5c^5mz^5 \\
& + 729a^2b^7c^4mz^5 - 34992a^4b^2c^7jz^5 + 8748a^3b^4c^6jz^5 \\
& - 729a^2b^6c^5jz^5 - 46656a^5b^c^7mz^5 + 46656a^5c^8jz^5 + \\
& 34992a^5b^c^6j^mz^4 - 11664a^5b^c^6k^l^z^4 + 3888a^4b^c^7f^jz^4 \\
& + 3888a^4b^c^7e^k^z^4 + 3888a^4b^c^7d^l^z^4 + 3888a^4b^c^7g^h^z^4 \\
& + 3888a^3b^c^8d^e^z^4 + 243a^b^5c^6d^e^z^4 - 25272a^4b^3c^5j^mz^4 \\
& + 9720a^4b^3c^5k^l^z^4 + 6075a^3b^5c^4j^mz^4 - 2673a^3b^5c^4 \\
& k^l^z^4 - 486a^2b^7c^3j^mz^4 + 243a^2b^7c^3k^l^z^4 - 7776a^4b^2 \\
& c^6h^k^z^4 - 7776a^4b^2c^6g^l^z^4 - 7776a^4b^2c^6f^mz^4 + 2430a^ \\
& ^3b^4c^5h^k^z^4 + 2430a^3b^4c^5g^l^z^4 + 2430a^3b^4c^5f^mz^4 - \\
& 243a^2b^6c^4h^k^z^4 - 243a^2b^6c^4g^l^z^4 - 243a^2b^6c^4f^mz^4 \\
& - 1944a^3b^3c^6f^jz^4 - 1944a^3b^3c^6e^k^z^4 - 1944a^3b^3c^6d \\
& ^l^z^4 + 243a^2b^5c^5f^jz^4 + 243a^2b^5c^5e^k^z^4 + 243a^2b^5c^ \\
& 5d^l^z^4 - 1944a^3b^3c^6g^h^z^4 + 243a^2b^5c^5g^h^z^4 + 3888a^3b \\
& ^2c^7e^g^z^4 + 3888a^3b^2c^7d^h^z^4 - 486a^2b^4c^6e^g^z^4 - 486a^ \\
& ^2b^4c^6d^h^z^4 - 1944a^2b^3c^7d^e^z^4 + 7776a^5c^7h^k^z^4 + 7776 \\
& a^5c^7g^l^z^4 + 7776a^5c^7f^mz^4 - 7776a^4c^8e^g^z^4 - 7776a^4c^ \\
& ^8d^h^z^4 - 13608a^5b^2c^5m^2z^4 + 11421a^4b^4c^4m^2z^4 - 2916a^ \\
& ^3b^6c^3m^2z^4 + 243a^2b^8c^2m^2z^4 + 13608a^4b^2c^6j^2z^4 - \\
& 3159a^3b^4c^5j^2z^4 + 243a^2b^6c^4j^2z^4 + 1944a^3b^2c^7f^2z^ \\
& ^4 - 243a^2b^4c^6f^2z^4 - 3888a^6c^6m^2z^4 - 19440a^5c^7j^2z^4 \\
& - 3888a^4c^8f^2z^4 + 3078a^4b^4c^3k^l^mz^3 - 2592a^5b^2c^4k^l \\
& ^mz^3 - 891a^3b^6c^2k^l^mz^3 - 4536a^4b^3c^4j^k^l^z^3 + 1053a^3b \\
& ^5c^3j^k^l^z^3 - 81a^2b^7c^2j^k^l^z^3 - 2592a^4b^3c^4h^k^mz^3 - \\
& 2592a^4b^3c^4g^l^mz^3 + 810a^3b^5c^3h^k^mz^3 + 810a^3b^5c^3g \\
& ^l^mz^3 - 81a^2b^7c^2h^k^mz^3 - 81a^2b^7c^2g^l^mz^3 + 7776a^4b \\
& ^2c^5f^j^mz^3 + 3888a^4b^2c^5h^j^k^z^3 + 3888a^4b^2c^5g^j^l^z^3
\end{aligned}$$

$$\begin{aligned}
& - 3888a^4b^2c^5f^2k^2l^2z^3 - 2916a^3b^4c^4f^2j^2m^2z^3 + 1458a^3b^4c^4f^2k^2l^2z^3 - 972a^3b^4c^4h^2j^2k^2z^3 - 972a^3b^4c^4g^2j^2l^2z^3 - 486a^3b^4c^4e^2k^2m^2z^3 - 486a^3b^4c^4d^2l^2m^2z^3 + 324a^2b^6c^3f^2j^2m^2z^3 - 162a^2b^6c^3f^2k^2l^2z^3 + 81a^2b^6c^3h^2j^2k^2z^3 + 81a^2b^6c^3g^2j^2l^2z^3 + 81a^2b^6c^3e^2k^2m^2z^3 + 81a^2b^6c^3d^2l^2m^2z^3 - 486a^3b^4c^4g^2h^2m^2z^3 + 81a^2b^6c^3g^2h^2m^2z^3 + 648a^3b^3c^5e^2j^2k^2z^3 + 648a^3b^3c^5d^2j^2l^2z^3 - 81a^2b^5c^4e^2j^2k^2z^3 - 81a^2b^5c^4d^2j^2l^2z^3 + 2592a^3b^3c^5e^2g^2m^2z^3 + 2592a^3b^3c^5d^2h^2m^2z^3 - 1296a^3b^3c^5f^2h^2k^2z^3 - 1296a^3b^3c^5f^2g^2l^2z^3 - 1296a^3b^3c^5e^2h^2l^2z^3 + 648a^3b^3c^5g^2h^2j^2z^3 - 324a^2b^5c^4e^2g^2m^2z^3 - 324a^2b^5c^4d^2h^2m^2z^3 + 162a^2b^5c^4f^2h^2k^2z^3 + 162a^2b^5c^4f^2g^2l^2z^3 + 162a^2b^5c^4e^2h^2l^2z^3 - 81a^2b^5c^4g^2h^2j^2z^3 + 5184a^3b^2c^6d^2e^2m^2z^3 - 2592a^3b^2c^6e^2g^2j^2z^3 - 2592a^3b^2c^6d^2h^2j^2z^3 - 2106a^2b^4c^5d^2e^2m^2z^3 + 1296a^3b^2c^6e^2f^2k^2z^3 + 1296a^3b^2c^6d^2g^2k^2z^3 + 1296a^3b^2c^6d^2f^2l^2z^3 + 324a^2b^4c^5e^2g^2j^2z^3 + 324a^2b^4c^5d^2h^2j^2z^3 - 162a^2b^4c^5e^2f^2k^2z^3 - 162a^2b^4c^5d^2g^2k^2z^3 - 162a^2b^4c^5d^2f^2l^2z^3 + 1296a^3b^2c^6f^2g^2h^2z^3 - 162a^2b^4c^5f^2g^2h^2z^3 + 1944a^2b^3c^6d^2e^2j^2z^3 - 1296a^2b^2c^7d^2e^2f^2z^3 + 81a^2b^8c^2k^2l^2m^2z^3 + 6480a^5b^2c^5j^2k^2l^2z^3 + 2592a^5b^2c^5h^2k^2m^2z^3 + 2592a^5b^2c^5g^2l^2m^2z^3 - 1296a^4b^2c^6e^2j^2k^2z^3 - 1296a^4b^2c^6d^2j^2l^2z^3 - 5184a^4b^2c^6e^2g^2m^2z^3 - 5184a^4b^2c^6d^2h^2m^2z^3 + 2592a^4b^2c^6f^2h^2k^2z^3 + 2592a^4b^2c^6f^2g^2l^2z^3 + 2592a^4b^2c^6e^2h^2l^2z^3 - 1296a^4b^2c^6g^2h^2j^2z^3 + 243a^2b^6c^4d^2e^2m^2z^3 - 3888a^3b^2c^7d^2e^2j^2z^3 - 243a^2b^5c^5d^2e^2j^2z^3 + 162a^2b^4c^6d^2e^2f^2z^3 - 2592a^6c^5k^2l^2m^2z^3 - 5184a^5c^6h^2j^2k^2z^3 - 5184a^5c^6g^2j^2l^2z^3 - 5184a^5c^6f^2j^2m^2z^3 + 2592a^5c^6f^2k^2l^2z^3 + 2592a^5c^6e^2k^2m^2z^3 + 2592a^5c^6d^2l^2m^2z^3 + 2592a^5c^6g^2h^2m^2z^3 + 5184a^4c^7e^2g^2j^2z^3 + 5184a^4c^7d^2h^2j^2z^3 - 2592a^4c^7e^2f^2k^2z^3 - 2592a^4c^7d^2g^2k^2z^3 - 2592a^4c^7d^2f^2l^2z^3 - 2592a^4c^7d^2e^2m^2z^3 - 2592a^4c^7f^2g^2h^2z^3 + 2592a^3c^8d^2e^2f^2z^3 + 6480a^5b^2c^4j^2m^2z^3 + 6480a^4b^3c^4j^2m^2z^3 - 5022a^4b^4c^3j^2m^2z^3 - 1296a^3b^5c^3j^2m^2z^3 + 1134a^3b^6c^2j^2m^2z^3 + 81a^2b^7c^2j^2m^2z^3 + 2592a^4b^3c^4h^2l^2z^3 - 1944a^4b^2c^5h^2l^2z^3 - 810a^3b^5c^3h^2l^2z^3 + 729a^3b^4c^4h^2l^2z^3 + 81a^2b^7c^2h^2l^2z^3 - 81a^2b^6c^3h^2l^2z^3 - 5184a^4b^3c^4f^2m^2z^3 + 1620a^3b^5c^3f^2m^2z^3 + 1296a^3b^3c^5f^2m^2z^3 - 162a^2b^7c^2f^2m^2z^3 - 162a^2b^5c^4f^2m^2z^3 - 1944a^4b^2c^5g^2k^2z^3 + 729a^3b^4c^4g^2k^2z^3 - 648a^3b^3c^5g^2k^2z^3 - 81a^2b^6c^3g^2k^2z^3 + 81a^2b^5c^4g^2k^2z^3 - 1944a^4b^2c^5e^2l^2z^3 + 729a^3b^4c^4e^2l^2z^3 + 648a^3b^2c^6e^2l^2z^3 - 81a^2b^6c^3e^2l^2z^3 - 81a^2b^4c^5e^2l^2z^3 + 1296a^3b^3c^5f^2j^2z^3 - 1296a^3b^2c^6f^2j^2z^3 - 162a^2b^5c^4f^2j^2z^3 + 162a^2b^4c^5f^2j^2z^3 - 648a^3b^3c^5d^2k^2z^3 + 81a^2b^5c^4d^2k^2z^3 + 648a^3b^2c^6e^2h^2z^3 - 81a^2b^4c^5e^2h^2z^3 - 648a^2b^2c^7d^2g^2z^3 - 10368a^5b^2c^5j^2m^2z^3 - 81a^2b^8c^2j^2m^2z^3 - 2592a^5b^2c^5h^2l^2z^3 + 5184a^5b^2c^5f^2m^2z^3 - 2592a^4b^2c^6f^2m^2z^3 + 1296a^4b^2c^6g^2k^2z^3 - 2592a^4b^2c^6f^2j^2z^3 + 1296a^4b^2c^6d^2k^2z^3
\end{aligned}$$

$$\begin{aligned}
& 2*z^3 + 81*a*b^4*c^6*d^2*g*z^3 + 2592*a^6*c^5*j*m^2*z^3 + 1296*a^5*c^6*h^2* \\
& 1*z^3 + 1296*a^5*c^6*g*k^2*z^3 + 1296*a^5*c^6*e*1^2*z^3 - 1296*a^4*c^7*e^2* \\
& 1*z^3 + 2592*a^4*c^7*f^2*j*z^3 - 2592*a^6*b*c^4*m^3*z^3 - 324*a^3*b^7*c*m^3 \\
& *z^3 - 27*a^2*b^8*c*1^3*z^3 - 1296*a^4*c^7*e*h^2*z^3 - 864*a^5*b*c^5*k^3*z^ \\
& 3 + 1296*a^3*c^8*d^2*g*z^3 + 432*a^4*b*c^6*h^3*z^3 + 27*a*b^4*c^6*e^3*z^3 - \\
& 432*a^2*b*c^8*d^3*z^3 + 216*a*b^3*c^7*d^3*z^3 + 1134*a^4*b^5*c^2*m^3*z^3 - \\
& 432*a^5*b^3*c^3*m^3*z^3 + 1512*a^5*b^2*c^4*1^3*z^3 - 1107*a^4*b^4*c^3*1^3* \\
& z^3 + 297*a^3*b^6*c^2*1^3*z^3 + 864*a^4*b^3*c^4*k^3*z^3 - 270*a^3*b^5*c^3*k \\
& ^3*z^3 + 27*a^2*b^7*c^2*k^3*z^3 - 2592*a^4*b^2*c^5*j^3*z^3 + 486*a^3*b^4*c^ \\
& 4*j^3*z^3 - 27*a^2*b^6*c^3*j^3*z^3 - 216*a^3*b^3*c^5*h^3*z^3 + 27*a^2*b^5*c \\
& ^4*h^3*z^3 + 216*a^3*b^2*c^6*g^3*z^3 - 27*a^2*b^4*c^5*g^3*z^3 - 216*a^2*b^2 \\
& *c^7*e^3*z^3 - 432*a^6*c^5*1^3*z^3 + 27*a^2*b^9*m^3*z^3 + 4320*a^5*c^6*j^3* \\
& z^3 - 432*a^4*c^7*g^3*z^3 + 432*a^3*c^8*e^3*z^3 - 27*b^5*c^6*d^3*z^3 + 81*a \\
& ^3*b^6*c*j*k*1*m*z^2 - 1296*a^5*b*c^4*h*j*k*m*z^2 - 1296*a^5*b*c^4*g*j*1*m* \\
& z^2 + 1296*a^5*b*c^4*f*k*1*m*z^2 - 81*a^2*b^7*c*f*k*1*m*z^2 + 2592*a^4*b*c^ \\
& 5*e*g*j*m*z^2 + 2592*a^4*b*c^5*d*h*j*m*z^2 - 1296*a^4*b*c^5*f*h*j*k*z^2 - 1 \\
& 296*a^4*b*c^5*f*g*j*1*z^2 - 1296*a^4*b*c^5*e*f*k*m*z^2 - 1296*a^4*b*c^5*d*f \\
& *1*m*z^2 - 648*a^4*b*c^5*e*h*j*1*z^2 - 648*a^4*b*c^5*e*g*k*1*z^2 - 648*a^4* \\
& b*c^5*d*h*k*1*z^2 - 648*a^4*b*c^5*d*g*k*m*z^2 - 1296*a^4*b*c^5*f*g*h*m*z^2 \\
& - 162*a*b^6*c^3*d*e*j*m*z^2 + 81*a*b^6*c^3*d*e*k*1*z^2 + 1296*a^3*b*c^6*d*e \\
& *f*m*z^2 - 648*a^3*b*c^6*d*f*g*k*z^2 - 648*a^3*b*c^6*d*e*h*k*z^2 - 648*a^3* \\
& b*c^6*d*e*g*1*z^2 - 81*a*b^5*c^4*d*e*h*k*z^2 - 81*a*b^5*c^4*d*e*g*1*z^2 + 8 \\
& 1*a*b^5*c^4*d*e*f*m*z^2 - 81*a*b^4*c^5*d*e*f*j*z^2 + 81*a*b^4*c^5*d*e*g*h*z \\
& ^2 + 648*a^5*b^2*c^3*j*k*1*m*z^2 - 567*a^4*b^4*c^2*j*k*1*m*z^2 - 1944*a^4*b \\
& ^3*c^3*f*k*1*m*z^2 + 729*a^3*b^5*c^2*f*k*1*m*z^2 + 648*a^4*b^3*c^3*h*j*k*m* \\
& z^2 + 648*a^4*b^3*c^3*g*j*1*m*z^2 - 81*a^3*b^5*c^2*h*j*k*m*z^2 - 81*a^3*b^5 \\
& *c^2*g*j*1*m*z^2 + 1944*a^4*b^2*c^4*f*j*k*1*z^2 - 729*a^3*b^4*c^3*f*j*k*1*z \\
& ^2 + 648*a^4*b^2*c^4*e*j*k*m*z^2 + 648*a^4*b^2*c^4*d*j*1*m*z^2 - 81*a^3*b^4 \\
& *c^3*e*j*k*m*z^2 - 81*a^3*b^4*c^3*d*j*1*m*z^2 + 81*a^2*b^6*c^2*f*j*k*1*z^2 \\
& + 1296*a^4*b^2*c^4*f*h*k*m*z^2 + 1296*a^4*b^2*c^4*f*g*1*m*z^2 + 648*a^4*b^2 \\
& *c^4*g*h*j*m*z^2 - 648*a^3*b^4*c^3*f*h*k*m*z^2 - 648*a^3*b^4*c^3*f*g*1*m*z^ \\
& 2 - 324*a^4*b^2*c^4*g*h*k*1*z^2 - 324*a^4*b^2*c^4*e*h*1*m*z^2 + 81*a^3*b^4* \\
& c^3*g*h*k*1*z^2 - 81*a^3*b^4*c^3*g*h*j*m*z^2 + 81*a^2*b^6*c^2*f*h*k*m*z^2 + \\
& 81*a^2*b^6*c^2*f*g*1*m*z^2 - 1296*a^3*b^3*c^4*e*g*j*m*z^2 - 1296*a^3*b^3*c \\
& ^4*d*h*j*m*z^2 + 648*a^3*b^3*c^4*f*h*j*k*z^2 + 648*a^3*b^3*c^4*f*g*j*1*z^2 \\
& + 648*a^3*b^3*c^4*e*f*k*m*z^2 + 648*a^3*b^3*c^4*d*f*1*m*z^2 + 486*a^3*b^3*c \\
& ^4*e*g*k*1*z^2 + 486*a^3*b^3*c^4*d*h*k*1*z^2 + 162*a^3*b^3*c^4*e*h*j*1*z^2 \\
& + 162*a^3*b^3*c^4*d*g*k*m*z^2 + 162*a^2*b^5*c^3*e*g*j*m*z^2 + 162*a^2*b^5*c \\
& ^3*d*h*j*m*z^2 - 81*a^2*b^5*c^3*f*h*j*k*z^2 - 81*a^2*b^5*c^3*f*g*j*1*z^2 - \\
& 81*a^2*b^5*c^3*e*g*k*1*z^2 - 81*a^2*b^5*c^3*e*f*k*m*z^2 - 81*a^2*b^5*c^3*d* \\
& h*k*1*z^2 - 81*a^2*b^5*c^3*d*f*1*m*z^2 + 648*a^3*b^3*c^4*f*g*h*m*z^2 - 81*a \\
& ^2*b^5*c^3*f*g*h*m*z^2 - 3240*a^3*b^2*c^5*d*e*j*m*z^2 + 1620*a^3*b^2*c^5*d* \\
& e*k*1*z^2 + 1377*a^2*b^4*c^4*d*e*j*m*z^2 - 648*a^3*b^2*c^5*e*f*j*k*z^2 - 64 \\
& 8*a^3*b^2*c^5*d*f*j*1*z^2 - 648*a^2*b^4*c^4*d*e*k*1*z^2 - 324*a^3*b^2*c^5*d \\
& *g*j*k*z^2 + 81*a^2*b^4*c^4*e*f*j*k*z^2 + 81*a^2*b^4*c^4*d*f*j*1*z^2 + 972*
\end{aligned}$$

$$\begin{aligned}
& a^3 b^2 c^5 e f h^1 l^1 z^2 - 648 a^3 b^2 c^5 f g h^1 j^1 z^2 - 324 a^3 b^2 c^5 e g \\
& h^1 k^1 z^2 - 324 a^3 b^2 c^5 d g h^1 l^1 z^2 - 162 a^2 b^4 c^4 e f h^1 l^1 z^2 + 81 a^2 \\
& b^4 c^4 f g h^1 j^1 z^2 + 81 a^2 b^4 c^4 e g h^1 k^1 z^2 + 81 a^2 b^4 c^4 d g h^1 \\
& l^1 z^2 - 648 a^2 b^3 c^5 d e f m^1 z^2 + 486 a^2 b^3 c^5 d e h^1 k^1 z^2 + 486 a^2 \\
& b^3 c^5 d e g^1 l^1 z^2 + 162 a^2 b^3 c^5 d f g^1 k^1 z^2 + 648 a^2 b^2 c^6 d e f \\
& j^1 z^2 - 324 a^2 b^2 c^6 d e g^1 h^1 z^2 - 1296 a^6 b^3 c^3 k^1 m^2 z^2 - 81 a^4 b \\
& ^5 c^3 k^1 m^2 z^2 - 1296 a^5 b^3 c^4 j^2 k^1 l^1 z^2 - 324 a^5 b^3 c^4 h^2 l^1 m^1 z^2 + \\
& 324 a^5 b^3 c^4 h^1 k^2 l^1 z^2 - 324 a^5 b^3 c^4 g^1 k^2 m^1 z^2 + 972 a^5 b^3 c^4 h^1 j^1 \\
& l^2 z^2 + 324 a^5 b^3 c^4 g^1 k^1 l^2 z^2 - 324 a^5 b^3 c^4 e^1 l^2 m^1 z^2 - 324 a^4 b \\
& ^3 c^5 e^2 l^1 m^1 z^2 - 1944 a^5 b^3 c^4 f^1 j^1 m^2 z^2 + 1296 a^5 b^3 c^4 e^1 k^1 m^2 z^2 \\
& + 1296 a^5 b^3 c^4 d^1 m^2 z^2 + 648 a^4 b^3 c^5 f^2 j^1 m^1 z^2 + 81 a^2 b^7 c^3 f^1 j \\
& ^1 m^2 z^2 + 1296 a^5 b^3 c^4 g^1 h^1 m^2 z^2 - 324 a^4 b^3 c^5 g^2 j^1 k^1 z^2 + 324 a^4 \\
& b^3 c^5 g^2 h^1 l^1 z^2 + 972 a^4 b^3 c^5 f^1 h^2 l^1 z^2 + 324 a^4 b^3 c^5 g^1 h^2 k^1 z^2 \\
& - 324 a^4 b^3 c^5 e^1 h^2 m^1 z^2 - 324 a^4 b^3 c^5 d^1 j^1 k^2 z^2 - 324 a^3 b^3 c^6 d^2 \\
& ^1 j^1 k^1 z^2 + 972 a^4 b^3 c^5 f^1 g^1 k^2 z^2 + 972 a^3 b^3 c^6 d^2 g^1 m^1 z^2 + 324 a^4 b \\
& ^3 c^5 e^1 h^1 k^2 z^2 + 324 a^3 b^3 c^6 d^2 h^1 l^1 z^2 + 81 a^5 b^5 c^4 d^2 g^1 m^1 z^2 + \\
& 972 a^4 b^3 c^5 e^1 f^1 l^2 z^2 + 324 a^4 b^3 c^5 d^1 g^1 l^2 z^2 - 324 a^3 b^3 c^6 e^2 h^1 \\
& ^1 j^1 z^2 + 324 a^3 b^3 c^6 e^2 g^1 k^1 z^2 - 324 a^3 b^3 c^6 e^2 f^1 l^1 z^2 - 1296 a^4 b \\
& ^3 c^5 d^1 e^1 m^2 z^2 + 81 a^5 b^7 c^2 d^1 e^1 m^2 z^2 - 324 a^3 b^3 c^6 d^1 g^2 j^1 z^2 - 8 \\
& 1 a^5 b^4 c^5 d^2 g^1 j^1 z^2 + 81 a^5 b^4 c^5 d^2 e^1 l^1 z^2 + 324 a^3 b^3 c^6 e^1 g^2 h^1 \\
& ^1 z^2 + 81 a^5 b^4 c^5 d^1 e^2 k^1 z^2 + 1296 a^3 b^3 c^6 d^1 e^1 j^2 z^2 - 324 a^3 b^3 c^6 \\
& ^1 e^1 f^1 h^2 z^2 + 324 a^3 b^3 c^6 d^1 g^1 h^2 z^2 + 81 a^5 b^5 c^4 d^1 e^1 j^2 z^2 - 324 a \\
& ^2 b^3 c^7 d^2 f^1 g^1 z^2 + 324 a^2 b^3 c^7 d^2 e^1 h^1 z^2 + 81 a^5 b^3 c^6 d^2 f^1 g^1 z^2 \\
& - 81 a^5 b^3 c^6 d^2 e^1 h^1 z^2 + 324 a^2 b^3 c^7 d^1 e^2 g^1 z^2 - 81 a^5 b^3 c^6 d^1 e^1 \\
& ^2 g^1 z^2 + 1296 a^6 c^4 j^1 k^1 l^1 m^1 z^2 - 1296 a^5 c^5 f^1 j^1 k^1 l^1 z^2 - 1296 a^5 c^5 \\
& ^1 e^1 j^1 k^1 m^1 z^2 - 1296 a^5 c^5 d^1 j^1 l^1 m^1 z^2 - 1296 a^5 c^5 g^1 h^1 j^1 m^1 z^2 + 1296 a \\
& ^5 c^5 e^1 h^1 l^1 m^1 z^2 + 1296 a^4 c^6 e^1 f^1 j^1 k^1 z^2 + 1296 a^4 c^6 d^1 g^1 j^1 k^1 z^2 + \\
& 1296 a^4 c^6 d^1 f^1 j^1 l^1 z^2 - 1296 a^4 c^6 d^1 e^1 k^1 l^1 z^2 + 1296 a^4 c^6 d^1 e^1 j^1 m^1 \\
& ^1 z^2 + 1296 a^4 c^6 f^1 g^1 h^1 j^1 z^2 - 1296 a^4 c^6 e^1 f^1 h^1 l^1 z^2 - 1296 a^3 c^7 d \\
& ^1 e^1 f^1 j^1 z^2 + 648 a^5 b^3 c^2 k^1 l^1 m^2 z^2 + 648 a^4 b^3 c^3 j^2 k^1 l^1 z^2 + 48 \\
& 6 a^5 b^2 c^3 h^1 l^2 m^1 z^2 - 81 a^4 b^4 c^2 h^1 l^2 m^1 z^2 + 81 a^4 b^3 c^3 h^2 \\
& ^1 l^1 m^1 z^2 - 81 a^3 b^5 c^2 j^2 k^1 l^1 z^2 - 162 a^4 b^2 c^4 g^2 k^1 m^1 z^2 - 81 a^4 \\
& b^3 c^3 h^1 k^2 l^1 z^2 + 81 a^4 b^3 c^3 g^1 k^2 m^1 z^2 - 567 a^4 b^3 c^3 h^1 j^1 l^2 \\
& ^2 z^2 + 486 a^4 b^2 c^4 h^2 j^1 l^1 z^2 - 81 a^4 b^3 c^3 g^1 k^1 l^2 z^2 + 81 a^4 b^3 \\
& ^3 c^3 e^1 l^2 m^1 z^2 + 81 a^3 b^5 c^2 h^1 j^1 l^2 z^2 - 81 a^3 b^4 c^3 h^2 j^1 l^1 z^2 \\
& + 81 a^3 b^3 c^4 e^2 l^1 m^1 z^2 + 2430 a^4 b^3 c^3 f^1 j^1 m^2 z^2 - 2268 a^4 b^2 \\
& ^2 c^4 f^1 j^2 m^1 z^2 - 810 a^3 b^5 c^2 f^1 j^1 m^2 z^2 + 810 a^3 b^4 c^3 f^1 j^2 m^1 z^2 \\
& - 648 a^4 b^3 c^3 e^1 k^1 m^2 z^2 - 648 a^4 b^3 c^3 d^1 l^1 m^2 z^2 - 648 a^4 b^2 \\
& ^2 c^4 h^1 j^2 k^1 z^2 - 648 a^4 b^2 c^4 g^1 j^2 l^1 z^2 - 162 a^3 b^3 c^4 f^2 j^1 m^1 z^2 \\
& + 81 a^3 b^5 c^2 e^1 k^1 m^2 z^2 + 81 a^3 b^5 c^2 d^1 l^1 m^2 z^2 + 81 a^3 b^4 c^3 h^1 j^2 \\
& ^2 k^1 z^2 + 81 a^3 b^4 c^3 g^1 j^2 l^1 z^2 - 81 a^2 b^6 c^2 f^1 j^2 m^1 z^2 - \\
& 648 a^4 b^3 c^3 g^1 h^1 m^2 z^2 + 486 a^4 b^2 c^4 g^1 j^1 k^2 z^2 - 486 a^4 b^2 c^4 \\
& ^1 e^1 k^2 l^1 z^2 + 486 a^3 b^2 c^5 d^2 k^1 m^1 z^2 - 162 a^4 b^2 c^4 d^1 k^2 m^1 z^2 + \\
& 81 a^3 b^5 c^2 g^1 h^1 m^2 z^2 - 81 a^3 b^4 c^3 g^1 j^1 k^2 z^2 + 81 a^3 b^4 c^3 e^1 \\
& ^1 k^2 l^1 z^2 + 81 a^3 b^3 c^4 g^2 j^1 k^1 z^2 - 81 a^2 b^4 c^4 d^2 k^1 m^1 z^2 + 486 a
\end{aligned}$$

$$\begin{aligned}
&^4b^2c^4e*jl^2z^2 - 486a^4b^2c^4d*k*l^2z^2 - 162a^3b^2c^5e^2* \\
&j*l^2z^2 - 81a^3b^4c^3e*j*l^2z^2 + 81a^3b^4c^3d*k*l^2z^2 - 81a^3* \\
&b^3c^4g^2*h*l^2z^2 - 1458a^4b^2c^4f*h*l^2z^2 + 648a^3b^4c^3f*h*l^ \\
&2z^2 - 567a^3b^3c^4f*h^2*l^2z^2 + 486a^3b^2c^5e^2*h*m*z^2 - 81a^3* \\
&b^3c^4g*h^2*k*z^2 + 81a^3b^3c^4e*h^2*m*z^2 - 81a^2b^6c^2f*h*l^2z \\
&^2 + 81a^2b^5c^3f*h^2*l^2z^2 - 81a^2b^4c^4e^2*h*m*z^2 - 1296a^4b^2 \\
&*c^4e*g*m^2z^2 - 1296a^4b^2c^4d*h*m^2z^2 + 648a^3b^4c^3e*g*m^2z \\
&^2 + 648a^3b^4c^3d*h*m^2z^2 + 81a^3b^3c^4d*j*k^2z^2 - 81a^2b^6* \\
&c^2e*g*m^2z^2 - 81a^2b^6c^2d*h*m^2z^2 + 81a^2b^3c^5d^2*j*k*z^2 - \\
&567a^3b^3c^4f*g*k^2z^2 - 567a^2b^3c^5d^2g*m*z^2 + 486a^3b^2c^ \\
&5f*g^2*k*z^2 - 486a^3b^2c^5e*g^2*l^2z^2 + 486a^3b^2c^5d*g^2*m*z^2 - \\
&81a^3b^3c^4e*h*k^2z^2 + 81a^2b^5c^3f*g*k^2z^2 - 81a^2b^4c^4f \\
&*g^2*k*z^2 + 81a^2b^4c^4e*g^2*l^2z^2 - 81a^2b^4c^4d*g^2*m*z^2 - 81a \\
&^2b^3c^5d^2h*l^2z^2 - 567a^3b^3c^4e*f*l^2z^2 - 486a^3b^2c^5d*h^ \\
&2*k*z^2 - 162a^3b^2c^5e*h^2*j*z^2 - 81a^3b^3c^4d*g*l^2z^2 + 81a^2 \\
&*b^5c^3e*f*l^2z^2 + 81a^2b^4c^4d*h^2*k*z^2 + 81a^2b^3c^5e^2*h*j* \\
&z^2 - 81a^2b^3c^5e^2g*k*z^2 + 81a^2b^3c^5e^2f*l^2z^2 + 1944a^3b^ \\
&3c^4d*e*m^2z^2 - 729a^2b^5c^3d*e*m^2z^2 + 648a^3b^2c^5e*g*j^2z \\
&^2 + 648a^3b^2c^5d*h*j^2z^2 - 81a^2b^4c^4e*g*j^2z^2 - 81a^2b^4* \\
&c^4d*h*j^2z^2 + 486a^3b^2c^5d*f*k^2z^2 + 486a^2b^2c^6d^2g*j*z^2 \\
&- 486a^2b^2c^6d^2e*l^2z^2 - 162a^2b^2c^6d^2f*k*z^2 - 81a^2b^4c \\
&^4d*f*k^2z^2 + 81a^2b^3c^5d*g^2*j*z^2 - 486a^2b^2c^6d^2e^2*k*z^2 - \\
&81a^2b^3c^5e*g^2*h*z^2 - 648a^2b^3c^5d*e*j^2z^2 - 162a^2b^2c^6 \\
&*e^2f*h*z^2 + 81a^2b^3c^5e*f*h^2z^2 - 81a^2b^3c^5d*g*h^2z^2 - 16 \\
&2a^2b^2c^6d*f*g^2z^2 - 189a^5b^3c^2l^3m*z^2 + 162a^5b^2c^3k^3 \\
&*m*z^2 - 27a^4b^4c^2k^3m*z^2 - 702a^4b^3c^3j^3m*z^2 - 81a^3b^6* \\
&c*j^2m^2z^2 + 81a^3b^5c^2j^3m*z^2 - 54a^5b^3c^2j*m^3z^2 - 486a \\
&^5b^2c^3j*l^3z^2 + 216a^4b^4c^2j*l^3z^2 - 189a^4b^3c^3j*k^3z^ \\
&2 - 54a^4b^2c^4h^3m*z^2 + 27a^3b^5c^2j*k^3z^2 + 27a^3b^3c^4g^ \\
&3m*z^2 - 810a^4b^4c^2f*m^3z^2 + 540a^5b^2c^3f*m^3z^2 - 324a^3b \\
&^2c^5f^3m*z^2 + 54a^2b^4c^4f^3m*z^2 + 675a^4b^3c^3f*l^3z^2 - 2 \\
&43a^3b^5c^2f*l^3z^2 - 189a^2b^3c^5e^3m*z^2 + 27a^3b^3c^4h^3j \\
&*z^2 - 486a^4b^2c^4f*k^3z^2 - 486a^2b^2c^6d^3m*z^2 + 216a^3b^4* \\
&c^3f*k^3z^2 - 54a^3b^2c^5g^3j*z^2 - 27a^2b^6c^2f*k^3z^2 - 270a \\
&^3b^3c^4f*j^3z^2 - 54a^2b^3c^5f^3j*z^2 + 27a^2b^5c^3f*j^3z^2 \\
&+ 162a^2b^2c^6e^3j*z^2 + 162a^3b^2c^5f*h^3z^2 - 27a^2b^4c^4f* \\
&h^3z^2 + 27a^2b^3c^5f*g^3z^2 + 81a^2b^2c^7d^2e^2z^2 - 648a^6c^4 \\
&*h*l^2m*z^2 + 648a^5c^5g^2k*m*z^2 - 648a^5c^5h^2j*l^2z^2 + 1296a^5 \\
&*c^5h*j^2k*z^2 + 1296a^5c^5g*j^2*l^2z^2 + 1296a^5c^5f*j^2m*z^2 - 64 \\
&8a^5c^5g*j*k^2z^2 + 648a^5c^5e*k^2*l^2z^2 + 648a^5c^5d*k^2m*z^2 - \\
&648a^4c^6d^2k*m*z^2 - 648a^5c^5e*j*l^2z^2 + 648a^5c^5d*k*l^2z^ \\
&2 + 648a^4c^6e^2j*l^2z^2 + 324a^6b*c^3l^3m*z^2 + 27a^4b^5c*l^3m* \\
&z^2 + 648a^5c^5f*h*l^2z^2 - 648a^4c^6e^2h*m*z^2 + 1512a^5b*c^4j^ \\
&3m*z^2 + 1080a^6b*c^3j*m^3z^2 - 162a^4b^5c*j*m^3z^2 - 648a^4c^6* \\
&f*g^2k*z^2 + 648a^4c^6e*g^2*l^2z^2 - 648a^4c^6d*g^2m*z^2 - 27a^3b^
\end{aligned}$$

$$\begin{aligned}
& 6*c*j^1^3*z^2 + 648*a^4*c^6*e*h^2*j*z^2 + 648*a^4*c^6*d*h^2*k*z^2 + 324*a^5 \\
& *b*c^4*j*k^3*z^2 - 1296*a^4*c^6*e*g*j^2*z^2 - 1296*a^4*c^6*d*h*j^2*z^2 - 10 \\
& 8*a^4*b*c^5*g^3*m*z^2 - 648*a^4*c^6*d*f*k^2*z^2 - 648*a^3*c^7*d^2*g*j*z^2 + \\
& 648*a^3*c^7*d^2*f*k*z^2 + 648*a^3*c^7*d^2*e*l*z^2 + 270*a^3*b^6*c*f*m^3*z^ \\
& 2 + 648*a^3*c^7*d*e^2*k*z^2 - 540*a^5*b*c^4*f*l^3*z^2 + 324*a^3*b*c^6*e^3*m \\
& *z^2 - 108*a^4*b*c^5*h^3*j*z^2 + 27*a^2*b^7*c*f*l^3*z^2 + 27*a*b^5*c^4*e^3* \\
& m*z^2 + 648*a^3*c^7*e^2*f*h*z^2 + 216*a*b^4*c^5*d^3*m*z^2 + 648*a^4*b*c^5*f \\
& *j^3*z^2 + 216*a^3*b*c^6*f^3*j*z^2 + 648*a^3*c^7*d*f*g^2*z^2 - 27*a*b^4*c^5 \\
& *e^3*j*z^2 + 324*a^2*b*c^7*d^3*j*z^2 - 189*a*b^3*c^6*d^3*j*z^2 - 108*a^3*b* \\
& c^6*f*g^3*z^2 - 108*a^2*b*c^7*e^3*f*z^2 + 27*a*b^3*c^6*e^3*f*z^2 + 162*a*b^ \\
& 2*c^7*d^3*f*z^2 - 1134*a^5*b^2*c^3*j^2*m^2*z^2 + 648*a^4*b^4*c^2*j^2*m^2*z^ \\
& 2 + 81*a^5*b^2*c^3*k^2*l^2*z^2 + 162*a^4*b^2*c^4*f^2*m^2*z^2 + 81*a^4*b^2*c \\
& ^4*h^2*k^2*z^2 + 81*a^4*b^2*c^4*g^2*l^2*z^2 + 162*a^3*b^2*c^5*f^2*j^2*z^2 + \\
& 81*a^3*b^2*c^5*e^2*k^2*z^2 + 81*a^3*b^2*c^5*d^2*l^2*z^2 + 81*a^3*b^2*c^5*g \\
& ^2*h^2*z^2 + 81*a^2*b^2*c^6*e^2*g^2*z^2 + 81*a^2*b^2*c^6*d^2*h^2*z^2 - 216* \\
& a^6*c^4*k^3*m*z^2 + 216*a^6*c^4*j^1^3*z^2 + 27*a^3*b^7*j*m^3*z^2 + 216*a^5* \\
& c^5*h^3*m*z^2 + 432*a^6*c^4*f*m^3*z^2 + 432*a^4*c^6*f^3*m*z^2 - 27*b^6*c^4* \\
& d^3*m*z^2 - 27*a^2*b^8*f*m^3*z^2 + 216*a^5*c^5*f*k^3*z^2 + 216*a^4*c^6*g^3* \\
& j*z^2 + 216*a^3*c^7*d^3*m*z^2 + 216*a^5*b^4*c*m^4*z^2 - 216*a^3*c^7*e^3*j*z \\
& ^2 + 27*b^5*c^5*d^3*j*z^2 - 216*a^4*c^6*f*h^3*z^2 - 27*b^4*c^6*d^3*f*z^2 - \\
& 216*a^2*c^8*d^3*f*z^2 - 648*a^6*c^4*j^2*m^2*z^2 - 324*a^6*c^4*k^2*l^2*z^2 - \\
& 648*a^5*c^5*f^2*m^2*z^2 - 324*a^5*c^5*h^2*k^2*z^2 - 324*a^5*c^5*g^2*l^2*z^ \\
& 2 - 648*a^4*c^6*f^2*j^2*z^2 - 324*a^4*c^6*e^2*k^2*z^2 - 324*a^4*c^6*d^2*l^2 \\
& *z^2 - 405*a^6*b^2*c^2*m^4*z^2 - 324*a^4*c^6*g^2*h^2*z^2 - 324*a^3*c^7*e^2* \\
& g^2*z^2 - 324*a^3*c^7*d^2*h^2*z^2 + 243*a^4*b^2*c^4*j^4*z^2 - 27*a^3*b^4*c^ \\
& 3*j^4*z^2 - 324*a^2*c^8*d^2*e^2*z^2 + 27*a^2*b^2*c^6*f^4*z^2 - 108*a^7*c^3* \\
& m^4*z^2 - 27*a^4*b^6*m^4*z^2 - 540*a^5*c^5*j^4*z^2 - 108*a^3*c^7*f^4*z^2 - \\
& 216*a^5*b*c^3*f*j*k^1*m*z - 54*a^3*b^5*c*f*j*k^1*m*z + 27*a^3*b^5*c*g*h*k^1 \\
& *m*z - 27*a^2*b^6*c*e*g*k^1*m*z - 27*a^2*b^6*c*d*h*k^1*m*z + 432*a^4*b*c^4* \\
& d*g*j*k^1*m*z - 432*a^4*b*c^4*d*e*k^1*m*z + 216*a^4*b*c^4*e*g*j*k^1*z + 216*a \\
& ^4*b*c^4*e*f*j*k^1*m*z + 216*a^4*b*c^4*d*h*j*k^1*z + 216*a^4*b*c^4*d*f*j^1*m* \\
& z + 216*a^4*b*c^4*f*g*h*j^1*m*z - 27*a*b^6*c^2*d*e*j*k^1*z - 27*a*b^6*c^2*d*e \\
& *h*k^1*m*z - 27*a*b^6*c^2*d*e*g^1*m*z + 216*a^3*b*c^5*d*e*h*j*k^1*z + 216*a^3*b \\
& *c^5*d*e*g^1*m*z - 216*a^3*b*c^5*d*e*f^1*m*z + 27*a*b^5*c^3*d*e*h*j*k^1*z + 2 \\
& 7*a*b^5*c^3*d*e*g^1*m*z + 27*a*b^5*c^3*d*e*g^1*m*z - 27*a*b^4*c^4*d*e*g^1*m* \\
& *z + 27*a*b^7*c^3*d*e*k^1*m*z + 270*a^4*b^3*c^2*f*j*k^1*m*z - 108*a^4*b^3*c^2 \\
& *g*h*k^1*m*z - 216*a^4*b^2*c^3*f*h*j*k^1*m*z - 216*a^4*b^2*c^3*f*g^1*m*z - \\
& 216*a^4*b^2*c^3*e*g*k^1*m*z - 216*a^4*b^2*c^3*d*h*k^1*m*z + 162*a^3*b^4*c^2 \\
& *e*g*k^1*m*z + 162*a^3*b^4*c^2*d*h*k^1*m*z + 108*a^4*b^2*c^3*g*h*j*k^1*z + \\
& 108*a^4*b^2*c^3*e*h*j^1*m*z + 54*a^3*b^4*c^2*f*h*j*k^1*m*z + 54*a^3*b^4*c^2*f \\
& *g^1*m*z - 27*a^3*b^4*c^2*g^1*m*z + 540*a^3*b^3*c^3*d*e*k^1*m*z - 216 \\
& *a^2*b^5*c^2*d*e*k^1*m*z - 162*a^3*b^3*c^3*e*g^1*m*z - 162*a^3*b^3*c^3*d* \\
& h*j*k^1*z - 108*a^3*b^3*c^3*d*g^1*m*z - 54*a^3*b^3*c^3*e*f^1*m*z - 54*a \\
& ^3*b^3*c^3*d*f^1*m*z + 27*a^2*b^5*c^2*e*g^1*m*z + 27*a^2*b^5*c^2*d*h*j* \\
& k^1*z - 108*a^3*b^3*c^3*e*g^1*m*z - 108*a^3*b^3*c^3*d*g^1*m*z - 54*a^3*
\end{aligned}$$



$$\begin{aligned}
& b^3c^3f*g*h*j*m*z + 27a^2b^5c^2e*g*h*k*m*z + 27a^2b^5c^2d*g*h*l*m \\
& *z - 540a^3b^2c^4d*e*j*k*l*z + 216a^2b^4c^3d*e*j*k*l*z - 216a^3b^2 \\
& c^4d*e*h*k*m*z - 216a^3b^2c^4d*e*g*l*m*z + 162a^2b^4c^3d*e*h*k*m \\
& *z + 162a^2b^4c^3d*e*g*l*m*z + 108a^3b^2c^4e*g*h*j*k*z - 108a^3b^2 \\
& c^4e*f*h*j*l*z + 108a^3b^2c^4d*g*h*j*l*z + 108a^3b^2c^4d*f*g*k*m \\
& *z - 27a^2b^4c^3e*g*h*j*k*z - 27a^2b^4c^3d*g*h*j*l*z - 162a^2b^3c^4 \\
& d*e*h*j*k*z - 162a^2b^3c^4d*e*g*j*l*z + 54a^2b^3c^4d*e*f*j*m*z \\
& - 108a^2b^3c^4d*e*g*h*m*z + 108a^2b^2c^5d*e*g*h*j*z + 324a^6b*c^2 \\
& *j*k*l*m^2*z - 81a^5b^3c*j*k*l*m^2*z + 27a^4b^4c*j^2*k*l*m*z - 27a^4 \\
& *b^4c*h*k^2*l*m*z - 27a^4b^4c*g*k*l^2*m*z + 216a^5b*c^3h*j^2*k*m*z + \\
& 216a^5b*c^3g*j^2*l*m*z + 54a^4b^4c*f*k*l*m^2*z + 27a^4b^4c*h*j*k \\
& m^2*z + 27a^4b^4c*g*j*l*m^2*z + 27a^2b^6c*f^2*k*l*m*z + 216a^5b*c^3 \\
& *e*k^2*l*m*z - 108a^5b*c^3h*j*k^2*l*z + 27a^3b^5c*e*k^2*l*m*z + 216a \\
& ^5b*c^3d*k*l^2*m*z + 216a^4b*c^4e^2*j*l*m*z - 108a^5b*c^3g*j*k*l^2* \\
& z + 27a^3b^5c*d*k*l^2*m*z - 324a^5b*c^3e*j*k*m^2*z - 324a^5b*c^3d* \\
& j*l*m^2*z - 216a^5b*c^3f*h*l^2*m*z - 108a^4b*c^4f^2*j*k*l*z - 27a^3b^5 \\
& c^3e*j*k*m^2*z - 27a^3b^5c*d*j*l*m^2*z - 324a^5b*c^3g*h*j*m^2*z + \\
& 216a^5b*c^3f*h*k*m^2*z + 216a^5b*c^3f*g*l*m^2*z + 216a^5b*c^3e*h*l \\
& m^2*z - 216a^4b*c^4f^2*h*k*m*z - 216a^4b*c^4f^2*g*l*m*z - 27a^3b^5 \\
& *c*g*h*j*m^2*z + 216a^4b*c^4e*g^2*l*m*z - 108a^4b*c^4g^2*h*j*l*z - 21 \\
& 6a^4b*c^4f*h^2*j*l*z + 216a^4b*c^4e*h^2*j*m*z + 216a^4b*c^4d*h^2*k \\
& *m*z - 108a^4b*c^4g*h^2*j*k*z - 432a^4b*c^4e*g*j^2*m*z - 432a^4b*c^4 \\
& d*h*j^2*m*z + 216a^4b*c^4f*h*j^2*k*z + 216a^4b*c^4f*g*j^2*l*z + 27* \\
& a^2b^6c*e*g*j*m^2*z + 27a^2b^6c*d*h*j*m^2*z - 432a^3b*c^5d^2g*j*m \\
& z - 216a^4b*c^4f*g*j*k^2*z + 216a^3b*c^5d^2f*k*m*z + 216a^3b*c^5d \\
& ^2e*l*m*z - 108a^4b*c^4e*h*j*k^2*z - 108a^4b*c^4d*g*k^2*l*z - 108a^ \\
& 3b*c^5d^2h*j*l*z + 108a^3b*c^5d^2g*k*l*z - 54a*b^5c^3d^2g*j*m*z \\
& + 27a*b^5c^3d^2g*k*l*z + 27a*b^5c^3d^2e*l*m*z - 216a^4b*c^4e*f*j \\
& *l^2*z + 216a^3b*c^5d^2e^2*k*m*z - 108a^4b*c^4d*g*j*l^2*z - 108a^3b* \\
& c^5e^2g*j*k*z + 27a*b^5c^3d^2e^2*k*m*z + 324a^4b*c^4d*e*j*m^2*z + 21 \\
& 6a^3b*c^5e^2f*h*m*z - 108a^4b*c^4e*g*h*l^2*z + 108a^3b*c^5e^2g*h \\
& *l*z + 108a^3b*c^5e*f^2*j*k*z + 108a^3b*c^5d*f^2*j*l*z + 27a*b^6c^2 \\
& *d*e*j^2*m*z - 216a^3b*c^5e*f^2*h*l*z + 108a^3b*c^5f^2g*h*j*z - 27a \\
& *b^4c^4d^2e*j*l*z + 216a^3b*c^5d*f*g^2*m*z - 108a^3b*c^5e*g^2h*j* \\
& z + 54a*b^4c^4d^2f*g*m*z - 27a*b^4c^4d^2g*h*k*z - 27a*b^4c^4d^2* \\
& e*h*m*z - 27a*b^4c^4d^2e^2*j*k*z - 108a^3b*c^5d*g*h^2*j*z + 54a*b^4c^ \\
& ^4d^2e^2h*l*z + 27a*b^6c^2d*e*h*l^2*z - 27a*b^5c^3d^2e*h^2l*z - 27a \\
& *b^4c^4d^2e^2g*m*z - 27a*b^4c^4d^2e*f^2m*z + 216a^2b*c^6d^2f*g*j*z \\
& - 108a^3b*c^5d^2e*g*k^2*z - 108a^2b*c^6d^2e*h*j*z + 108a^2b*c^6d^ \\
& 2e*g*k*z - 54a*b^3c^5d^2f*g*j*z - 27a*b^5c^3d^2e*g*k^2*z + 27a*b^4* \\
& c^4d^2e*g^2k*z + 27a*b^3c^5d^2e*h*j*z - 27a*b^3c^5d^2e*g*k*z - 108 \\
& *a^2b*c^6d^2e^2g*j*z + 27a*b^3c^5d^2e^2g*j*z - 108a^2b*c^6d^2e*f^2j \\
& *z + 27a*b^3c^5d^2e*f^2j*z - 432a^5c^4e*h*j*l*m*z + 432a^4c^5d^2e*j \\
& *k*l*z + 432a^4c^5e*f*h*j*l*z - 432a^4c^5d^2f*g*k*m*z - 27a*b^7c^2d^2e \\
& *j*m^2*z - 54a^5b^2c^2j^2*k*l*m*z + 108a^5b^2c^2h*k^2l*m*z + 108a
\end{aligned}$$

$$\begin{aligned}
& ^5b^2c^2g^*k^*l^2m^*z - 54a^5b^2c^2h^*j^*l^2m^*z + 378a^4b^2c^3f^2k^*l^*m^*z - 270a^5b^2c^2f^*k^*l^*m^2z - 189a^3b^4c^2f^2k^*l^*m^*z - 108a^5b^2c^2h^*j^*k^*m^2z - 108a^5b^2c^2g^*j^*l^*m^2z - 54a^4b^3c^2h^*j^2k^*m^*z - 54a^4b^3c^2g^*j^2l^*m^*z - 162a^4b^3c^2e^*k^2l^*m^*z + 54a^4b^2c^3g^2j^*k^*m^*z + 27a^4b^3c^2h^*j^*k^2l^*z - 162a^4b^3c^2d^*k^*l^2m^*z + 108a^4b^2c^3g^2h^*l^*m^*z - 54a^3b^3c^3e^2j^*l^*m^*z + 27a^4b^3c^2g^*j^*k^*l^2z - 27a^3b^4c^2g^2h^*l^*m^*z - 270a^4b^2c^3f^*j^2k^*l^*z + 189a^4b^3c^2e^*j^*k^*m^2z + 189a^4b^3c^2d^*j^*l^*m^2z - 162a^4b^2c^3e^*j^2k^*m^*z - 162a^4b^2c^3d^*j^2l^*m^*z + 135a^3b^3c^3f^2j^*k^*l^*z + 108a^4b^2c^3g^*h^2k^*m^*z + 54a^4b^3c^2f^*h^*l^2m^*z - 54a^4b^2c^3f^*h^2l^*m^*z + 54a^3b^4c^2f^*j^2k^*l^*z - 27a^3b^4c^2g^*h^2k^*m^*z + 27a^3b^4c^2e^*j^2k^*m^*z + 27a^3b^4c^2d^*j^2l^*m^*z - 27a^2b^5c^2f^2j^*k^*l^*z - 270a^3b^2c^4d^2j^*k^*m^*z + 189a^4b^3c^2g^*h^*j^*m^2z - 162a^4b^2c^3g^*h^*j^2m^*z + 162a^4b^2c^3e^*j^*k^2l^*z + 162a^3b^3c^3f^2h^*k^*m^*z + 162a^3b^3c^3f^2g^*l^*m^*z - 54a^4b^3c^2f^*h^*k^*m^2z - 54a^4b^3c^2f^*g^*l^*m^2z - 54a^4b^3c^2e^*h^*l^*m^2z + 54a^4b^2c^3d^*j^*k^2m^*z + 54a^2b^4c^3d^2j^*k^*m^*z + 27a^3b^4c^2g^*h^*j^2m^*z - 27a^3b^4c^2e^*j^*k^2l^*z - 27a^2b^5c^2f^2h^*k^*m^*z - 27a^2b^5c^2f^2g^*l^*m^*z + 162a^4b^2c^3d^*j^*k^*l^2z - 162a^3b^3c^3e^*g^2l^*m^*z + 108a^4b^2c^3e^*h^*k^2m^*z + 108a^3b^2c^4d^2h^*l^*m^*z - 54a^4b^2c^3f^*g^*k^2m^*z - 27a^3b^4c^2e^*h^*k^2m^*z - 27a^3b^4c^2d^*j^*k^*l^2z + 27a^3b^3c^3g^2h^*j^*l^*z + 27a^2b^5c^2e^*g^2l^*m^*z - 27a^2b^4c^3d^2h^*l^*m^*z + 270a^4b^2c^3f^*h^*j^*l^2z - 270a^3b^2c^4e^2h^*j^*m^*z - 162a^4b^2c^3e^*h^*k^*l^2z - 162a^3b^3c^3d^*h^2k^*m^*z + 162a^3b^2c^4e^2h^*k^*l^*z + 108a^4b^2c^3d^*g^*l^2m^*z + 108a^3b^2c^4e^2g^*k^*m^*z - 54a^4b^2c^3e^*f^*l^2m^*z - 54a^3b^4c^2f^*h^*j^*l^2z + 54a^3b^3c^3f^*h^2j^*l^*z - 54a^3b^3c^3e^*h^2j^*m^*z + 54a^3b^2c^4e^2f^*l^*m^*z + 54a^2b^4c^3e^2h^*j^*m^*z + 27a^3b^4c^2e^*h^*k^*l^2z - 27a^3b^4c^2d^*g^*l^2m^*z + 27a^3b^3c^3g^*h^2j^*k^*z + 27a^2b^5c^2d^*h^2k^*m^*z - 27a^2b^4c^3e^2h^*k^*l^*z - 27a^2b^4c^3e^2g^*k^*m^*z + 432a^4b^2c^3e^*g^*j^*m^2z + 432a^4b^2c^3d^*h^*j^*m^2z - 270a^4b^2c^3d^*g^*k^*m^2z - 216a^3b^4c^2e^*g^*j^*m^2z - 216a^3b^4c^2d^*h^*j^*m^2z + 216a^3b^3c^3e^*g^*j^2m^*z + 216a^3b^3c^3d^*h^*j^2m^*z - 162a^3b^2c^4e^*f^2k^*m^*z - 162a^3b^2c^4d^*f^2l^*m^*z - 108a^3b^2c^4f^2h^*j^*k^*z - 108a^3b^2c^4f^2g^*j^*l^*z + 54a^4b^2c^3e^*f^*k^*m^2z + 54a^4b^2c^3d^*f^*l^*m^2z + 54a^3b^4c^2d^*g^*k^*m^2z - 54a^3b^3c^3f^*h^*j^2k^*z - 54a^3b^3c^3f^*g^*j^2l^*z - 27a^2b^5c^2e^*g^*j^2m^*z - 27a^2b^5c^2d^*h^*j^2m^*z + 27a^2b^4c^3f^2h^*j^*k^*z + 27a^2b^4c^3f^2g^*j^*l^*z + 27a^2b^4c^3e^*f^2k^*m^*z + 27a^2b^4c^3d^*f^2l^*m^*z + 324a^2b^3c^4d^2g^*j^*m^*z - 270a^3b^2c^4d^*g^2j^*m^*z - 162a^3b^2c^4f^2g^*h^*m^*z + 162a^3b^2c^4e^*g^2j^*l^*z - 162a^2b^3c^4d^2e^*l^*m^*z - 135a^2b^3c^4d^2g^*k^*l^*z + 108a^3b^2c^4d^*g^2k^*l^*z + 54a^4b^2c^3f^*g^*h^*m^2z + 54a^3b^3c^3f^*g^*j^*k^2z - 54a^3b^2c^4f^*g^2j^*k^*z + 54a^2b^4c^3d^*g^2j^*m^*z - 54a^2b^3c^4d^2f^*k^*m^*z + 27a^3b^3c^3e^*h^*j^*k^2z + 27a^3b^3c^3d^*g^*k^2l^*z + 27a^2b^4c^3f^2g^*h^*m^*z - 27a^2b^4c^3e^*g^2j^*l^*z - 27a^2b^4c^3d^*g^2k^*l^*z + 27a^2b^3c^4d^2h^*j^*
\end{aligned}$$

$$\begin{aligned}
& 1*z + 162*a^3*b^2*c^4*d*h^2*j*k*z - 162*a^2*b^3*c^4*d*e^2*k*m*z + 108*a^3*b^2*c^4*e*g^2*h*m*z + 54*a^3*b^3*c^3*e*f*j^1^2*z + 27*a^3*b^3*c^3*d*g*j^1^2*z - 27*a^2*b^4*c^3*e*g^2*h*m*z - 27*a^2*b^4*c^3*d*h^2*j*k*z + 27*a^2*b^3*c^4*e^2*g*j*k*z - 621*a^3*b^3*c^3*d*e*j^m^2*z + 594*a^3*b^2*c^4*d*e*j^2*m*z + 243*a^2*b^5*c^2*d*e*j^m^2*z - 243*a^2*b^4*c^3*d*e*j^2*m*z + 135*a^3*b^3*c^3*e*g*h^1^2*z - 108*a^3*b^2*c^4*e*g*h^2^1*z + 108*a^3*b^2*c^4*d*g*h^2*m*z + 54*a^3*b^2*c^4*e*f*j^2*k*z + 54*a^3*b^2*c^4*e*f*h^2*m*z + 54*a^3*b^2*c^4*d*g*j^2*k*z + 54*a^3*b^2*c^4*d*f*j^2^1*z - 54*a^2*b^3*c^4*e^2*f*h*m*z - 27*a^2*b^5*c^2*e*g*h^1^2*z + 27*a^2*b^4*c^3*e*g*h^2^1*z - 27*a^2*b^4*c^3*d*g*h^2*m*z - 27*a^2*b^3*c^4*e^2*g*h^1*z - 27*a^2*b^3*c^4*e*f^2*j*k*z - 27*a^2*b^3*c^4*d*f^2*j^1*z + 162*a^2*b^2*c^5*d^2*e*j^1*z + 54*a^3*b^2*c^4*f*g*h^j^2*z - 54*a^3*b^2*c^4*d*f*j^k^2*z + 54*a^2*b^3*c^4*e*f^2*h^1*z + 54*a^2*b^2*c^5*d^2*f*j^k*z - 27*a^2*b^3*c^4*f^2*g*h^j*z - 270*a^2*b^2*c^5*d^2*f*g*m*z - 162*a^3*b^2*c^4*d*g*h^k^2*z + 162*a^2*b^2*c^5*d^2*g*h^k*z + 162*a^2*b^2*c^5*d*e^2*j*k*z + 108*a^2*b^2*c^5*d^2*e*h*m*z - 54*a^2*b^3*c^4*d*f*g^2*m*z + 27*a^2*b^4*c^3*d*g*h^k^2*z + 27*a^2*b^3*c^4*e*g^2*h^j*z + 270*a^3*b^2*c^4*d*e*h^1^2*z - 270*a^2*b^2*c^5*d*e^2*h^1*z - 162*a^2*b^4*c^3*d*e*h^1^2*z + 108*a^2*b^3*c^4*d*e*h^2^1*z + 108*a^2*b^2*c^5*d*e^2*g*m*z + 54*a^2*b^2*c^5*e^2*f*h^j*z + 27*a^2*b^3*c^4*d*g*h^2^j*z + 162*a^2*b^2*c^5*d*e*f^2*m*z - 54*a^3*b^2*c^4*d*e*f^m^2*z - 54*a^2*b^2*c^5*d*f^2*g*k*z + 135*a^2*b^3*c^4*d*e*g*k^2*z - 108*a^2*b^2*c^5*d*e*g^2*k*z + 54*a^2*b^2*c^5*d*f*g^2*j*z - 54*a^2*b^2*c^5*d*e*f^j^2*z - 9*a*b^7*c*d*e^1^3*z - 36*a*b*c^7*d^3*e*g*z - 108*a^6*b*c^2*k^2^1^2*m*z + 27*a^5*b^3*c*k^2^1^2*m*z - 18*a^5*b^2*c^2*j*k^3*m*z - 27*a^4*b^3*c^2*j^3*k^1*z - 108*a^5*b*c^3*h^2*k^2*m*z - 108*a^5*b*c^3*g^2^1^2*m*z + 108*a^5*b*c^3*h^2*k^1^2*z + 108*a^5*b*c^3*g^2*k^m^2*z + 90*a^5*b^2*c^2*f^1^3*m*z - 18*a^5*b^2*c^2*h*k^1^3*z + 18*a^4*b^2*c^3*h^3*k^1*z + 18*a^4*b^2*c^3*h^3*j^m*z - 108*a^5*b*c^3*h^j^2^1^2*z + 18*a^4*b^3*c^2*f*k^3*m*z - 18*a^3*b^3*c^3*g^3*j^m*z - 9*a^4*b^3*c^2*g*k^3^1*z + 9*a^3*b^3*c^3*g^3*k^1*z + 252*a^4*b^2*c^3*f*j^3*m*z + 216*a^5*b*c^3*f*j^2^m^2*z + 180*a^3*b^2*c^4*f^3*j^m*z - 108*a^4*b*c^4*e^2*k^2*m*z - 108*a^4*b*c^4*d^2^1^2*m*z + 90*a^5*b^2*c^2*e*k^m^3*z + 90*a^5*b^2*c^2*d^1^m^3*z - 90*a^3*b^2*c^4*f^3*k^1*z + 54*a^3*b^5*c*f^j^2^m^2*z - 54*a^3*b^4*c^2*f^j^3^m*z + 36*a^5*b^2*c^2*f^j^m^3*z + 36*a^4*b^2*c^3*h^j^3*k*z + 36*a^4*b^2*c^3*g*j^3^1*z - 36*a^2*b^4*c^3*f^3*j^m*z - 27*a^2*b^6*c*f^2^j^m^2*z + 18*a^2*b^4*c^3*f^3*k^1*z - 216*a^4*b*c^4*d^2*k^m^2*z + 108*a^5*b*c^3*d*k^2^m^2*z - 108*a^4*b^3*c^2*f^j^1^3*z - 108*a^4*b*c^4*g^2^h^2*m*z + 108*a^2*b^3*c^4*e^3*j^m*z + 90*a^5*b^2*c^2*g*h^m^3*z + 54*a^4*b^3*c^2*e*k^1^3*z - 54*a^2*b^3*c^4*e^3*k^1*z + 234*a^2*b^2*c^5*d^3*j^m*z - 144*a^2*b^2*c^5*d^3*k^1*z + 90*a^4*b^2*c^3*f^j^k^3*z - 72*a^4*b^2*c^3*d*k^3^1*z + 27*a^4*b^3*c^2*g*h^1^3*z - 27*a^3*b^3*c^3*g*h^3^1*z - 18*a^3*b^4*c^2*f^j^k^3*z + 9*a^3*b^4*c^2*d*k^3^1*z + 216*a^4*b*c^4*f^2^h^1^2*z - 216*a^4*b*c^4*e^2^h^m^2*z + 108*a^4*b*c^4*g^2^h^k^2*z - 18*a^4*b^2*c^3*g^h^k^3*z + 18*a^3*b^2*c^4*g^3^h^k^k*z + 18*a^3*b^2*c^4*f^g^3^m*z + 9*a^3*b^4*c^2*g^h^k^3*z - 9*a^3*b^3*c^3*e^j^3^k*z - 9*a^3*b^3*c^3*d^j^3^1*z - 144*a^4*b^3*c^2*e^g^m^3*z - 144*a^4*b^3*c^2*d^h^m^3*z - 108*a^3*b*c^5*e^2^g^2^m*z + 108*a^3*b*c^5*d^2^j^2^k*z - 108*a^3*b*c^5*d^2^h^2^m*z - 18*a^2*b^3*c^
\end{aligned}$$

$$\begin{aligned}
& 4f^3hk^2z - 18a^2b^3c^4f^3g^1z - 9a^3b^3c^3g^2h^1j^3z - 216a^4b^3c^4d^2g^2m^2z + 144a^4b^2c^3e^2g^1z - 126a^3b^2c^4d^2h^3l^1z - \\
& 108a^4b^3c^4d^2h^2l^2z - 108a^3b^3c^5f^2g^2k^2z - 108a^3b^3c^5e^2h^2k^2z - 90a^2b^2c^5e^3f^2m^2z + 72a^2b^2c^5e^3g^1z - 63a^3b^4c^2e^2g^1z - \\
& 36a^3b^4c^2d^2h^1z + 27a^2b^4c^3d^2h^3l^1z + 27a^2b^6c^2d^2g^2m^2z - 18a^4b^2c^3d^2h^1z - 18a^3b^2c^4f^2h^3j^2z - \\
& 18a^3b^2c^4e^2h^3k^2z + 18a^2b^2c^5e^3h^2k^2z + 108a^3b^3c^5e^2h^2j^2z + 54a^3b^3c^3d^2h^2k^3z + 27a^3b^3c^3e^2g^2k^3z - 27a^2b^3c^4e^2g^3k^2z + \\
& 27a^2b^3c^4d^2g^3l^1z - 27a^2b^4c^4d^2g^2l^1z - 9a^2b^5c^2e^2g^2k^3z - 9a^2b^5c^2d^2h^2k^3z + 207a^3b^4c^2d^2e^2m^3z - 108a^2b^3c^6d^2e^2m^2z - \\
& 90a^4b^2c^3d^2e^2m^3z - 72a^3b^2c^4e^2g^2j^3z - 72a^3b^2c^4d^2h^2j^3z + 27a^2b^3c^5d^2e^2m^2z + 18a^2b^2c^5e^2f^3k^2z + 18a^2b^2c^5d^2f^3l^1z + \\
& 9a^2b^4c^3e^2g^2j^3z + 9a^2b^4c^3d^2h^2j^3z - 216a^3b^3c^5d^2e^2l^2z - 198a^3b^3c^3d^2e^2l^3z + 108a^3b^3c^5d^2g^2j^2z - 108a^3b^3c^5d^2f^2k^2z + \\
& 72a^2b^5c^2d^2e^2l^3z - 27a^2b^5c^3d^2e^2l^2z + 27a^2b^4c^4d^2g^2j^2z + 18a^2b^2c^5f^3g^2h^2z + 144a^3b^2c^4d^2e^2k^3z - 63a^2b^4c^3d^2e^2k^3z + 27a^2b^4c^4d^2e^2k^2z - \\
& 9a^2b^3c^4e^2g^2h^3z - 108a^2b^3c^6d^2g^2h^2z + 81a^2b^3c^4d^2e^2j^3z + 27a^2b^3c^5d^2g^2h^2z - 27a^2b^2c^6d^2e^2j^2z - 18a^2b^2c^5d^2g^3h^2z + 108a^2b^2c^6d^2e^2h^2z - \\
& 27a^2b^3c^5d^2e^2h^2z + 27a^2b^2c^6d^2f^2g^2z - 18a^2b^2c^5d^2e^2h^3z - 216a^6c^3j^2k^1m^2z + 216a^6c^3h^2j^1l^2m^2z + 216a^6c^3f^2k^1m^2z - 216a^5c^4f^2k^1m^2z - \\
& 216a^5c^4g^2j^2k^1m^2z + 216a^5c^4f^2j^2k^1m^2z + 216a^5c^4f^2h^2l^1m^2z + 216a^5c^4e^2j^2k^1m^2z + 216a^5c^4d^2j^2l^1m^2z + 216a^5c^4g^2h^2j^2m^2z - \\
& 216a^5c^4e^2j^2k^2l^1z - 216a^5c^4d^2j^2k^2m^2z + 216a^4c^5d^2j^2k^1m^2z - 18a^6b^2c^2k^1m^3z + 216a^5c^4f^2g^2k^2m^2z - 216a^5c^4d^2j^2k^1l^2z - \\
& 72a^6b^2c^2j^1l^3m^2z + 18a^5b^3c^2j^1l^3m^2z - 216a^5c^4f^2h^2j^1l^2z + 216a^5c^4e^2h^2k^1l^2z + 216a^5c^4e^2f^1l^2m^2z - 216a^4c^5e^2h^2k^1l^2z + 216a^4c^5e^2h^2j^1m^2z - \\
& 216a^4c^5e^2f^1l^2m^2z - 216a^5c^4e^2f^2k^1m^2z + 216a^5c^4d^2g^2k^1m^2z - 216a^5c^4d^2f^1l^2m^2z + 216a^4c^5e^2f^2k^1m^2z + 216a^4c^5d^2f^2l^1m^2z + 108a^5b^3c^3j^3k^1l^2z - \\
& 216a^5c^4f^2g^2h^2m^2z + 216a^4c^5f^2g^2h^2m^2z + 216a^4c^5f^2g^2h^2m^2z - 216a^4c^5f^2g^2j^2k^1z - 216a^4c^5e^2g^2j^1l^1z + 216a^4c^5d^2g^2j^1m^2z - 72a^6b^3c^2h^2k^1m^3z - \\
& 72a^6b^3c^2g^1l^3m^3z + 54a^5b^3c^2h^2k^1m^3z + 54a^5b^3c^2g^1l^3m^3z - 216a^4c^5d^2h^2j^2k^1z - 18a^4b^4c^2f^1l^3m^2z + 9a^4b^4c^2h^2k^1l^3z - 216a^4c^5e^2f^2j^2k^1z - 216a^4c^5e^2f^2h^2m^2z - \\
& 216a^4c^5d^2g^2j^2k^1z - 216a^4c^5d^2f^2j^2l^1z - 216a^4c^5d^2e^2j^2m^2z - 72a^5b^3c^3f^2k^1z + 72a^4b^3c^4g^3j^1m^2z + 36a^5b^3c^3g^2k^3l^1z - 36a^4b^3c^4g^3k^1l^1z - \\
& 216a^4c^5f^2g^2h^2j^2z + 216a^4c^5d^2f^2j^2k^2z - 216a^3c^6d^2f^2j^2k^2z - 216a^3c^6d^2e^2j^2l^1z + 72a^4b^4c^2f^2j^2m^3z - 63a^4b^4c^2e^2k^1m^3z - 63a^4b^4c^2d^1l^3m^3z + 216a^4c^5d^2g^2h^2k^2z - \\
& 216a^3c^6d^2g^2h^2k^2z + 216a^3c^6d^2f^2g^2m^2z - 216a^3c^6d^2e^2j^2k^2z + 144a^5b^3c^3f^2j^1l^3z - 144a^3b^3c^5e^3j^1m^2z - 72a^5b^3c^3e^2k^1l^3z + 72a^3b^3c^5e^3k^1l^3z - 63a^4b^4c^2g^2h^2m^3z + 18a^3b^5c^2f^2j^1l^3z - 18a^2b^5c^3e^3j^1m^2z - 9a^3b^5c^2e^2k^1l^3z + 9a^2b^5c^3e^3j^1l^3z
\end{aligned}$$

$$\begin{aligned}
& k*1*z - 216*a^4*c^5*d*e*h*1^2*z - 216*a^3*c^6*e^2*f*h*j*z + 216*a^3*c^6*d*e \\
& ^2*h*1*z - 126*a*b^4*c^4*d^3*j*m*z + 108*a^4*b*c^4*g*h^3*1*z + 63*a*b^4*c^4 \\
& *d^3*k*1*z + 36*a^5*b*c^3*g*h*1^3*z - 9*a^3*b^5*c*g*h*1^3*z + 216*a^4*c^5*d \\
& *e*f*m^2*z + 216*a^3*c^6*d*f^2*g*k*z - 216*a^3*c^6*d*e*f^2*m*z + 36*a^4*b*c \\
& ^4*e*j^3*k*z + 36*a^4*b*c^4*d*j^3*1*z - 216*a^3*c^6*d*f*g^2*j*z + 72*a^3*b^ \\
& 5*c*e*g*m^3*z + 72*a^3*b^5*c*d*h*m^3*z + 72*a^3*b*c^5*f^3*h*k*z + 72*a^3*b*c \\
& ^5*f^3*g*1*z + 36*a^4*b*c^4*g*h*j^3*z + 18*a*b^4*c^4*e^3*f*m*z + 9*a^2*b^6 \\
& *c*e*g*1^3*z + 9*a^2*b^6*c*d*h*1^3*z - 9*a*b^4*c^4*e^3*h*k*z - 9*a*b^4*c^4 \\
& e^3*g*1*z + 216*a^3*c^6*d*e*f*j^2*z - 144*a^2*b*c^6*d^3*f*m*z + 108*a^3*b*c \\
& ^5*e*g^3*k*z - 108*a^3*b*c^5*d*g^3*1*z + 108*a*b^3*c^5*d^3*f*m*z - 72*a^4*b \\
& *c^4*d*h*k^3*z + 72*a^2*b*c^6*d^3*h*k*z - 54*a*b^3*c^5*d^3*h*k*z + 36*a^4*b \\
& *c^4*e*g*k^3*z - 36*a^2*b*c^6*d^3*g*1*z - 27*a*b^3*c^5*d^3*g*1*z - 81*a^2*b \\
& ^6*c*d*e*m^3*z + 216*a^4*b*c^4*d*e*1^3*z + 72*a^2*b*c^6*e^3*f*j*z + 72*a^2* \\
& b*c^6*d*e^3*1*z - 18*a*b^3*c^5*e^3*f*j*z - 18*a*b^3*c^5*d*e^3*1*z - 90*a*b^ \\
& 2*c^6*d^3*f*j*z + 72*a*b^2*c^6*d^3*e*k*z + 36*a^3*b*c^5*e*g*h^3*z - 36*a^2* \\
& b*c^6*e^3*g*h*z + 9*a*b^6*c^2*d*e*k^3*z + 9*a*b^3*c^5*e^3*g*h*z - 180*a^3*b \\
& *c^5*d*e*j^3*z + 18*a*b^2*c^6*d^3*g*h*z - 9*a*b^5*c^3*d*e*j^3*z + 18*a*b^2* \\
& c^6*d*e^3*h*z + 9*a*b^4*c^4*d*e*h^3*z + 36*a^2*b*c^6*d*e*g^3*z - 9*a*b^3*c^ \\
& 5*d*e*g^3*z - 18*a*b^2*c^6*d*e*f^3*z + 27*a^5*b^2*c^2*h^2*1*m^2*z - 27*a^5* \\
& b^2*c^2*j*k^2*1^2*z + 27*a^4*b^3*c^2*h^2*k^2*m*z + 27*a^4*b^3*c^2*g^2*1^2*m \\
& *z + 27*a^5*b^2*c^2*g*k^2*m^2*z - 27*a^4*b^3*c^2*h^2*k*1^2*z - 27*a^4*b^3*c \\
& ^2*g^2*k*m^2*z - 135*a^4*b^2*c^3*e^2*1*m^2*z + 27*a^5*b^2*c^2*e*1^2*m^2*z + \\
& 27*a^4*b^3*c^2*h*j^2*1^2*z - 27*a^4*b^2*c^3*h^2*j^2*1*z + 27*a^3*b^4*c^2*e \\
& ^2*1*m^2*z - 270*a^4*b^3*c^2*f*j^2*m^2*z - 270*a^4*b^2*c^3*f^2*j*m^2*z + 16 \\
& 2*a^3*b^4*c^2*f^2*j*m^2*z - 108*a^3*b^3*c^3*f^2*j^2*m*z - 27*a^4*b^2*c^3*h^ \\
& 2*j*k^2*z - 27*a^4*b^2*c^3*g^2*j*1^2*z + 27*a^3*b^3*c^3*e^2*k^2*m*z + 27*a^ \\
& 3*b^3*c^3*d^2*1^2*m*z + 27*a^2*b^5*c^2*f^2*j^2*m*z + 162*a^3*b^3*c^3*d^2*k* \\
& m^2*z - 27*a^4*b^3*c^2*d*k^2*m^2*z - 27*a^4*b^2*c^3*g*j^2*k^2*z + 27*a^3*b^ \\
& 3*c^3*g^2*h^2*m*z - 27*a^2*b^5*c^2*d^2*k*m^2*z + 162*a^3*b^2*c^4*d^2*k^2*1* \\
& z - 108*a^4*b^2*c^3*g*h^2*1^2*z - 27*a^4*b^2*c^3*e*j^2*1^2*z + 27*a^3*b^4*c \\
& ^2*g*h^2*1^2*z + 27*a^3*b^2*c^4*e^2*j^2*1*z - 27*a^2*b^4*c^3*d^2*k^2*1*z - \\
& 162*a^3*b^3*c^3*f^2*h*1^2*z + 162*a^3*b^3*c^3*e^2*h*m^2*z - 135*a^4*b^2*c^3 \\
& *e*h^2*m^2*z + 135*a^3*b^2*c^4*f^2*h^2*1*z + 27*a^3*b^4*c^2*e*h^2*m^2*z - 2 \\
& 7*a^3*b^3*c^3*g^2*h*k^2*z - 27*a^3*b^2*c^4*e^2*j*k^2*z - 27*a^3*b^2*c^4*d^2 \\
& *j*1^2*z + 27*a^2*b^5*c^2*f^2*h*1^2*z - 27*a^2*b^5*c^2*e^2*h*m^2*z - 27*a^2 \\
& *b^4*c^3*f^2*h^2*1*z - 27*a^3*b^2*c^4*g^2*h^2*j*z + 27*a^2*b^3*c^4*e^2*g^2* \\
& m*z - 27*a^2*b^3*c^4*d^2*j^2*k*z + 27*a^2*b^3*c^4*d^2*h^2*m*z + 351*a^3*b^2 \\
& *c^4*d^2*g*m^2*z - 189*a^2*b^4*c^3*d^2*g*m^2*z + 162*a^3*b^3*c^3*d*g^2*m^2* \\
& z - 162*a^3*b^2*c^4*e^2*g*1^2*z + 135*a^3*b^3*c^3*d*h^2*1^2*z + 135*a^3*b^2 \\
& *c^4*f^2*g*k^2*z - 27*a^2*b^5*c^2*d*h^2*1^2*z - 27*a^2*b^5*c^2*d*g^2*m^2*z \\
& - 27*a^2*b^4*c^3*f^2*g*k^2*z + 27*a^2*b^4*c^3*e^2*g*1^2*z + 27*a^2*b^3*c^4*f \\
& ^2*g^2*k*z + 27*a^2*b^3*c^4*e^2*h^2*k*z + 135*a^3*b^2*c^4*e*f^2*1^2*z - 10 \\
& 8*a^3*b^2*c^4*e*g^2*k^2*z + 108*a^2*b^2*c^5*d^2*g^2*1*z + 27*a^3*b^2*c^4*e* \\
& h^2*j^2*z + 27*a^2*b^4*c^3*e*g^2*k^2*z - 27*a^2*b^4*c^3*e*f^2*1^2*z - 27*a^ \\
& 2*b^3*c^4*e^2*h*j^2*z - 27*a^2*b^2*c^5*e^2*f^2*1*z - 27*a^2*b^2*c^5*e^2*g^2
\end{aligned}$$

$$\begin{aligned}
& *j*z - 27*a^2*b^2*c^5*d^2*h^2*j*z + 162*a^2*b^3*c^4*d*e^2*l^2*z - 135*a^2*b^2*c^5*d^2*g*j^2*z - 27*a^2*b^3*c^4*d*g^2*j^2*z + 27*a^2*b^3*c^4*d*f^2*k^2*z \\
& - 162*a^2*b^2*c^5*d^2*e*k^2*z - 27*a^2*b^2*c^5*e*f^2*h^2*z - 72*a^7*c^2*k^1*m^3*z + 9*a^5*b^4*k^1*m^3*z + 72*a^6*c^3*j*k^3*m*z - 72*a^6*c^3*h*k^1^3*z \\
& - 72*a^6*c^3*f^1^3*m*z - 72*a^5*c^4*h^3*k^1*z - 72*a^5*c^4*h^3*j*m*z - 9*a^4*b^5*h*k^m^3*z - 9*a^4*b^5*g^1*m^3*z - 144*a^6*c^3*f*j*m^3*z - 144*a^5*c^4*h*j^3*k^z \\
& - 144*a^5*c^4*g*j^3*l^z - 144*a^5*c^4*f*j^3*m^z - 144*a^4*c^5*f^3*j*m^z + 72*a^6*c^3*e*k^m^3*z + 72*a^6*c^3*d^1*m^3*z + 72*a^4*c^5*f^3*k^1*z \\
& + 72*a^6*c^3*g*h^m^3*z + 18*b^6*c^3*d^3*j*m^z - 18*a^3*b^6*f*j*m^3*z - 9*b^6*c^3*d^3*k^1*z + 9*a^3*b^6*e*k^m^3*z + 9*a^3*b^6*d^1*m^3*z + 144*a^5*c^4*d*k^3^1*z \\
& + 144*a^3*c^6*d^3*k^1*z - 72*a^5*c^4*f*j*k^3^z - 72*a^3*c^6*d^3*j*m^z + 9*a^3*b^6*g*h^m^3*z - 72*a^5*c^4*g*h^k^3^z - 72*a^4*c^5*g^3*h^k^z \\
& - 72*a^4*c^5*f*g^3^m^z - 108*a^5*b*c^3*j^4^m^z + 63*a^6*b^2*c*j^m^4^z + 36*a^6*b*c^2*k^1^4^z - 9*a^5*b^3*c*k^1^4^z - 144*a^5*c^4*e*g^1^3^z - 144*a^3*c^6*e^3*g^1^z \\
& + 72*a^5*c^4*d*h^1^3^z + 72*a^4*c^5*f*h^3^j^z + 72*a^4*c^5*e*h^3^k^z + 72*a^4*c^5*d*h^3^1^z + 72*a^3*c^6*e^3*h^k^z + 72*a^3*c^6*e^3*f^m^z \\
& z - 18*b^5*c^4*d^3*f^m^z + 9*b^5*c^4*d^3*h^k^z + 9*b^5*c^4*d^3*g^1^z - 9*a^2*b^7*e*g^m^3^z - 9*a^2*b^7*d*h^m^3^z + 144*a^4*c^5*e*g*j^3^z + 144*a^4*c^5*d*h^j^3^z \\
& - 72*a^5*c^4*d*e^m^3^z - 72*a^3*c^6*e^f^3^k^z - 72*a^3*c^6*d^f^3^1^z + 144*a^6*b*c^2*f^m^4^z - 108*a^5*b^3*c*f^m^4^z - 72*a^3*c^6*f^3*g^h^z \\
& + 36*a^5*b*c^3*h^k^4^z - 36*a^3*b*c^5*f^4^m^z + 18*b^4*c^5*d^3*f^j^z - 9*b^4*c^5*d^3*e*k^z + 9*a^4*b^4*c*g^1^4^z - 144*a^4*c^5*d*e*k^3^z - 144*a^2*c^7*d^3*e*k^z \\
& + 72*a^2*c^7*d^3*f^j^z - 9*b^4*c^5*d^3*g^h^z + 72*a^3*c^6*d^g^3^h^z + 72*a^2*c^7*d^3*g^h^z - 72*a^5*b*c^3*d^1^4^z - 72*a^4*b*c^4*f^j^4^z + 45*a*b^2*c^6*d^4^1^z \\
& - 36*a^2*b*c^6*e^4^k^z - 9*a^3*b^5*c*d^1^4^z + 9*a*b^3*c^5*e^4^k^z - 72*a^3*c^6*d*e^h^3^z - 72*a^2*c^7*d^e^3^h^z + 9*b^3*c^6*d^3*e*g^z + 72*a^2*c^7*d^e^f^3^z + 36*a^3*b*c^5*d^h^4^z - 9*a*b^2*c^6*e^4^g^z \\
& + 36*a*b*c^7*d^3*f^2^z + 90*a^5*b^2*c^2*j^3^m^2^z + 45*a^5*b^2*c^2*j^2^1^3^z + 9*a^4*b^3*c^2*j^2^k^3^z - 9*a^4*b^3*c^2*h^3^m^2^z - 45*a^4*b^2*c^3*g^3^m^2^z \\
& + 9*a^3*b^4*c^2*g^3^m^2^z + 198*a^4*b^3*c^2*f^2^m^3^z - 108*a^3*b^3*c^3*f^3^m^2^z + 18*a^2*b^5*c^2*f^3^m^2^z - 117*a^4*b^2*c^3*f^2^1^3^z + 117*a^3*b^2*c^4*e^3^m^2^z \\
& + 63*a^3*b^4*c^2*f^2^1^3^z - 63*a^2*b^4*c^3*e^3^m^2^z - 171*a^2*b^3*c^4*d^3^m^2^z - 54*a^3*b^3*c^3*f^2^k^3^z + 9*a^3*b^2*c^4*g^3^j^2^z \\
& + 9*a^2*b^5*c^2*f^2^k^3^z + 18*a^3*b^2*c^4*f^2^j^3^z + 18*a^2*b^3*c^4*f^3^j^2^z - 9*a^2*b^4*c^3*f^2^j^3^z - 45*a^2*b^2*c^5*e^3^j^2^z + 9*a^2*b^3*c^4*f^2^h^3^z \\
& - 9*a^2*b^2*c^5*f^2^g^3^z + 9*a*b^8*d^e^m^3^z - 36*a*b*c^7*d^4^h^z - 108*a^6*c^3*h^2^1^m^2^z + 108*a^6*c^3*j*k^2^1^2^z - 108*a^6*c^3*g^k^2^m^2^z \\
& - 108*a^6*c^3*e^1^2^m^2^z + 108*a^5*c^4*h^2^j^2^1^z + 108*a^5*c^4*e^2^1^m^2^z + 216*a^5*c^4*f^2^j^m^2^z + 108*a^5*c^4*h^2^j*k^2^z + 108*a^5*c^4*g^2^j^1^2^z \\
& + 108*a^5*c^4*g^j^2^k^2^z - 216*a^4*c^5*d^2^k^2^1^z + 108*a^5*c^4*e^j^2^1^2^z - 108*a^4*c^5*e^2^j^2^1^z - 9*a^6*b^2*c^1^3^m^2^z + 108*a^5*c^4*e^h^2^m^2^z \\
& - 108*a^4*c^5*f^2^h^2^1^z + 108*a^4*c^5*e^2^j*k^2^z + 108*a^4*c^5*d^2^j^1^2^z - 144*a^6*b*c^2^j^2^m^3^z + 108*a^4*c^5*g^2^h^2^j^z - 27*a^4*b^4*c^j^3^m^2^z \\
& + 27*a^4*b^3*c^2^j^4^m^z + 9*a^5*b^2*c^2^k^4^1^z + 216*a^4*c^5*e^2^g^1^2^z - 108*a^4*c^5*f^2^g^k^2^z - 108*a^4*c^5*d^2^g^m^2^z
\end{aligned}$$

$$\begin{aligned}
& z - 9a^4b^4c^*j^2*l^3*z - 108a^4c^5*e*h^2*j^2*z - 108a^4c^5*e*f^2*l^2 \\
& *z + 108a^3c^6*e^2*f^2*l*z - 36a^5*b*c^3*j^2*k^3*z + 36a^5*b*c^3*h^3*m^ \\
& 2*z + 108a^3c^6*e^2*g^2*j*z + 108a^3c^6*d^2*h^2*j*z - 216a^5*b*c^3*f^2 \\
& *m^3*z + 144a^4*b*c^4*f^3*m^2*z + 108a^3c^6*d^2*g*j^2*z - 72a^3*b^5*c*f \\
& ^2*m^3*z - 45a^5*b^2*c^2*g*l^4*z - 9a^4*b^3*c^2*h*k^4*z - 9a^3*b^2*c^4*g \\
& ^4*l*z + 9a^2*b^3*c^4*f^4*m*z + 216a^3c^6*d^2*e*k^2*z - 9a^2*b^6*c*f^2* \\
& l^3*z + 9a*b^6*c^2*e^3*m^2*z + 108a^3c^6*e*f^2*h^2*z + 108a^3*b*c^5*d^3 \\
& *m^2*z + 108a^2*c^7*d^2*e^2*j*z + 72a^4*b*c^4*f^2*k^3*z + 72a*b^5*c^3*d^ \\
& 3*m^2*z - 72a^3*b*c^5*f^3*j^2*z + 54a^4*b^3*c^2*d*l^4*z - 45a^4*b^2*c^3* \\
& e*k^4*z + 18a^3*b^3*c^3*f*j^4*z + 9a^3*b^4*c^2*e*k^4*z - 9a^2*b^2*c^5*f^ \\
& 4*j*z - 108a^2*c^7*d^2*f^2*g*z + 9a^3*b^2*c^4*g*h^4*z + 9a*b^4*c^4*e^3*j \\
& ^2*z - 72a^2*b*c^6*d^3*j^2*z + 54a*b^3*c^5*d^3*j^2*z - 36a^3*b*c^5*f^2*h \\
& ^3*z - 9a^2*b^3*c^4*d*h^4*z + 9a^2*b^2*c^5*e*g^4*z + 9a*b^2*c^6*e^3*f^2* \\
& z + 36a^7*c^2*l^3*m^2*z + 72a^6*c^3*j^3*m^2*z - 36a^6*c^3*j^2*l^3*z + 9* \\
& a^4*b^5*j^2*m^3*z + 36a^5*c^4*g^3*m^2*z + 36a^5*c^4*f^2*l^3*z - 36a^4*c^ \\
& 5*e^3*m^2*z - 9b^7*c^2*d^3*m^2*z + 9a^2*b^7*f^2*m^3*z - 36a^4*c^5*g^3*j^ \\
& 2*z + 72a^4*c^5*f^2*j^3*z + 36a^3c^6*e^3*j^2*z - 9b^5*c^4*d^3*j^2*z + 3 \\
& 6a^3c^6*f^2*g^3*z - 9a^4*b^2*c^3*j^5*z - 36a^2*c^7*e^3*f^2*z - 9b^3*c^ \\
& 6*d^3*f^2*z + 36a^7*c^2*j*m^4*z - 36a^6*c^3*k^4*l*z - 18a^5*b^4*j*m^4*z \\
& + 36a^6*c^3*g*l^4*z + 36a^4*c^5*g^4*l*z + 18a^4*b^5*f*m^4*z - 9b^4*c^5* \\
& d^4*l*z + 36a^5*c^4*e*k^4*z + 36a^3c^6*f^4*j*z - 36a^2*c^7*d^4*l*z - 36 \\
& *a^4*c^5*g*h^4*z + 9b^3*c^6*d^4*h*z - 36a^3c^6*e*g^4*z + 36a^2*c^7*e^4* \\
& g*z - 9b^2*c^7*d^4*e*z - 36a^7*b*c*m^5*z + 36a*c^8*d^4*e*z + 9a^6*b^3*m \\
& ^5*z + 36a^5*c^4*j^5*z + 9a^4*b^3*c*g*h*j*k*l*m - 9a^3*b^4*c*e*g*j*k*l*m \\
& - 9a^3*b^4*c*d*h*j*k*l*m - 9a^3*b^4*c*f*g*h*k*l*m + 36a^4*b*c^3*d*e*j*k \\
& *l*m + 9a^2*b^5*c*d*e*j*k*l*m + 36a^4*b*c^3*e*f*h*j*k*l*m + 36a^4*b*c^3*e* \\
& f*g*k*l*m + 36a^4*b*c^3*d*f*h*k*l*m + 9a^2*b^5*c*e*f*g*k*l*m + 9a^2*b^5* \\
& c*d*f*h*k*l*m + 36a^3*b*c^4*d*e*f*j*k*l + 9a*b^5*c^2*d*e*f*j*k*l + 36a^3 \\
& *b*c^4*d*e*g*h*k*l + 36a^3*b*c^4*d*e*f*h*k*m + 36a^3*b*c^4*d*e*f*g*l*m + \\
& 9a*b^5*c^2*d*e*f*h*k*m + 9a*b^5*c^2*d*e*f*g*l*m - 9a*b^4*c^3*d*e*f*h*j*k \\
& - 9a*b^4*c^3*d*e*f*g*j*l - 9a*b^4*c^3*d*e*f*g*h*m + 9a*b^3*c^4*d*e*f*g* \\
& h*j - 9a*b^6*c*d*e*f*k*l*m + 18a^4*b^2*c^2*e*g*j*k*l*m + 18a^4*b^2*c^2*d \\
& *h*j*k*l*m + 18a^4*b^2*c^2*f*g*h*k*l*m - 36a^3*b^3*c^2*d*e*j*k*l*m - 36a \\
& ^3*b^3*c^2*e*f*g*k*l*m - 36a^3*b^3*c^2*d*f*h*k*l*m + 9a^3*b^3*c^2*f*g*h*j \\
& *k*l + 9a^3*b^3*c^2*e*g*h*j*k*m + 9a^3*b^3*c^2*d*g*h*j*l*m - 108a^3*b^2* \\
& c^3*d*e*f*k*l*m + 54a^2*b^4*c^2*d*e*f*k*l*m - 36a^3*b^2*c^3*d*f*g*j*k*m + \\
& 18a^3*b^2*c^3*e*f*g*j*k*l + 18a^3*b^2*c^3*d*f*h*j*k*l + 18a^3*b^2*c^3*d \\
& *e*h*j*k*m + 18a^3*b^2*c^3*d*e*g*j*l*m - 9a^2*b^4*c^2*e*f*g*j*k*l - 9a^2 \\
& *b^4*c^2*d*f*h*j*k*l - 9a^2*b^4*c^2*d*e*h*j*k*m - 9a^2*b^4*c^2*d*e*g*j*l* \\
& m + 18a^3*b^2*c^3*e*f*g*h*k*m + 18a^3*b^2*c^3*d*f*g*h*l*m - 9a^2*b^4*c^2 \\
& *e*f*g*h*k*m - 9a^2*b^4*c^2*d*f*g*h*l*m - 36a^2*b^3*c^3*d*e*f*j*k*l - 36* \\
& a^2*b^3*c^3*d*e*f*h*k*m - 36a^2*b^3*c^3*d*e*f*g*l*m + 9a^2*b^3*c^3*e*f*g* \\
& h*j*k + 9a^2*b^3*c^3*d*f*g*h*j*l + 9a^2*b^3*c^3*d*e*g*h*j*m + 18a^2*b^2* \\
& c^4*d*e*f*h*j*k + 18a^2*b^2*c^4*d*e*f*g*j*l + 18a^2*b^2*c^4*d*e*f*g*h*m - \\
& 9a^5*b^2*c*h*j*k^2*l*m - 9a^5*b^2*c*g*j*k*l^2*m + 27a^5*b^2*c*f*j*k*l*m
\end{aligned}$$





$$\begin{aligned}
& 2*k*1*m - 9*a^4*b^2*c^2*g*h^2*j*k*m + 18*a^4*b^2*c^2*f*h*j^2*k*m + 18*a^4*b^2*c^2*f*g*j^2*1*m - 18*a^4*b^2*c^2*e*h*j^2*1*m - 9*a^4*b^2*c^2*g*h*j^2*k*1 \\
& - 9*a^3*b^3*c^2*f^2*h*j*k*m - 9*a^3*b^3*c^2*f^2*g*j*1*m - 63*a^4*b^2*c^2*d*g*k^2*1*m + 63*a^3*b^2*c^3*d^2*g*k*1*m - 45*a^2*b^4*c^2*d^2*g*k*1*m + 36*a^4*b^2*c^2*e*f*k^2*1*m \\
& + 27*a^3*b^3*c^2*d*g^2*k*1*m - 9*a^4*b^2*c^2*f*h*j*k^2*1 - 9*a^4*b^2*c^2*e*h*j*k^2*m + 9*a^3*b^3*c^2*e*g^2*j*1*m - 9*a^3*b^2*c^3*d^2*h*j*1*m + 36*a^4*b^2*c^2*d*f*k*1^2*m \\
& + 27*a^4*b^2*c^2*e*h*j*k*1^2 - 27*a^3*b^2*c^3*e^2*h*j*k*1 - 18*a^3*b^2*c^3*e^2*f*j*1*m - 9*a^4*b^2*c^2*f*g*j*k*1^2 - 9*a^4*b^2*c^2*d*g*j*1^2*m + 9*a^3*b^3*c^2*f*g^2*h*1*m \\
& - 9*a^3*b^3*c^2*e*h^2*j*k*1 + 9*a^3*b^3*c^2*d*h^2*j*k*m - 9*a^3*b^2*c^3*e^2*g*j*k*m + 9*a^2*b^4*c^2*e^2*h*j*k*1 + 72*a^4*b^2*c^2*d*g*j*k*m^2 + 36*a^4*b^2*c^2*d*e*k*1*m^2 \\
& + 27*a^4*b^2*c^2*e*g*h*1^2*m - 27*a^4*b^2*c^2*e*f*j*k*m^2 - 27*a^4*b^2*c^2*d*f*j*1*m^2 - 27*a^3*b^2*c^3*e^2*g*h*1*m + 27*a^3*b^2*c^3*e*f^2*j*k*m + 27*a^3*b^2*c^3*d*f^2*j*1*m \\
& + 18*a^3*b^3*c^2*d*g*j^2*k*m + 9*a^3*b^3*c^2*f*g*h^2*k*m + 9*a^3*b^3*c^2*e*g*j^2*k*1 - 9*a^3*b^3*c^2*e*g*h^2*1*m - 9*a^3*b^3*c^2*e*f*j^2*k*m + 9*a^3*b^3*c^2*d*h*j^2*k*1 \\
& - 9*a^3*b^3*c^2*d*f*j^2*1*m + 9*a^2*b^4*c^2*e^2*g*h*1*m + 36*a^2*b^3*c^3*d^2*g*j*k*1 - 27*a^4*b^2*c^2*f*g*h*j*m^2 + 27*a^3*b^2*c^3*f^2*g*h*j*m - 18*a^4*b^2*c^2*e*f*h*1*m^2 - \\
& 18*a^3*b^3*c^2*d*g*j*k^2*1 - 18*a^3*b^2*c^3*d*g^2*j*k*1 + 18*a^2*b^3*c^3*d^2*f*j*k*m - 9*a^4*b^2*c^2*e*g*h*k*m^2 - 9*a^4*b^2*c^2*d*g*h*1*m^2 - 9*a^3*b^3*c^2*f*g*h*j^2*m \\
& + 9*a^3*b^3*c^2*e*f*j*k^2*1 - 9*a^3*b^2*c^3*f^2*g*h*k*1 + 9*a^2*b^4*c^2*d*g^2*j*k*1 + 9*a^2*b^3*c^3*d^2*e*j*1*m + 36*a^3*b^2*c^3*e*f*g^2*1*m + 36*a^2*b^3*c^3*d^2*g*h*k*m \\
& - 18*a^3*b^3*c^2*d*g*h*k^2*m - 18*a^3*b^2*c^3*d*g^2*h*k*m + 9*a^3*b^3*c^2*e*f*h*k^2*m + 9*a^3*b^3*c^2*d*f*j*k*1^2 - 9*a^3*b^2*c^3*f*g^2*h*j*1 - 9*a^3*b^2*c^3*e*g^2*h*j*m \\
& - 9*a^2*b^4*c^2*e*f*g^2*1*m + 9*a^2*b^4*c^2*d*g^2*h*k*m + 9*a^2*b^3*c^3*d^2*f*h*1*m + 9*a^2*b^3*c^3*d*e^2*j*k*m + 36*a^3*b^2*c^3*d*f*h^2*k*m + 36*a^3*b^2*c^3*d*e*j^2*k*1 \\
& + 18*a^3*b^3*c^2*d*g*h*k*1^2 + 18*a^3*b^2*c^3*e*g*h^2*j*1 + 18*a^3*b^2*c^3*e*f*h^2*k*1 - 18*a^3*b^2*c^3*e*f*h^2*j*m - 18*a^3*b^2*c^3*d*g*h^2*k*1 + 18*a^3*b^2*c^3*d*e*h^2*1*m \\
& + 18*a^2*b^3*c^3*e^2*f*h*j*m - 9*a^3*b^3*c^2*e*g*h*j*1^2 - 9*a^3*b^3*c^2*e*f*h*k*1^2 + 9*a^3*b^3*c^2*d*f*g*1^2*m - 9*a^3*b^3*c^2*d*e*h*1^2*m - 9*a^3*b^2*c^3*f*g*h^2*j*k \\
& - 9*a^3*b^2*c^3*d*g*h^2*j*m - 9*a^2*b^4*c^2*d*f*h^2*k*m - 9*a^2*b^4*c^2*d*e*j^2*k*1 - 9*a^2*b^3*c^3*e^2*g*h*j*1 - 9*a^2*b^3*c^3*e^2*f*h*k*1 + 9*a^2*b^3*c^3*e^2*f*g*k*m \\
& - 9*a^2*b^3*c^3*d*e^2*h*1*m + 36*a^3*b^3*c^2*e*f*g*j*m^2 + 36*a^3*b^3*c^2*d*f*h*j*m^2 + 18*a^3*b^3*c^2*d*f*g*k*m^2 - 18*a^3*b^2*c^3*e*f*g*j^2*m - 18*a^3*b^2*c^3*d*f*h*j^2*m \\
& - 18*a^2*b^3*c^3*e*f^2*g*j*m - 18*a^2*b^3*c^3*d*f^2*h*j*m + 9*a^3*b^3*c^2*d*e*h*k*m^2 + 9*a^3*b^3*c^2*d*e*g*1*m^2 - 9*a^3*b^2*c^3*e*g*h*j^2*k - 9*a^3*b^2*c^3*d*g*h*j^2*1 \\
& + 9*a^2*b^4*c^2*e*f*g*j^2*m + 9*a^2*b^4*c^2*d*f*h*j^2*m + 9*a^2*b^3*c^3*e*f^2*g*k*1 + 9*a^2*b^3*c^3*d*f^2*h*k*1 + 72*a^2*b^2*c^4*d^2*f*g*j*m + 36*a^2*b^2*c^4*d^2*e*f*1*m \\
& + 27*a^3*b^2*c^3*d*g*h*j*k^2 + 27*a^3*b^2*c^3*d*f*g*k^2*1 + 27*a^3*b^2*c^3*d*e*g*k^2*m - 27*a^2*b^2*c^4*d^2*g*h*j*k - 27*a^2*b^2*c^4*d^2*f*g*k*1 - 27*a^2*b^2*c^4*d^2*e*g*k*m \\
& + 18*a^2*b^3*c^3*d*f*g^2*j*m - 18*a^2*b^2*c^4*d^2*e*h*k*1 - 9*a^3*b^2*c^3*e*f*h*j*k^2 + 9*a^2*b^3*c^3*e*f*g^2*j*1 - 9*a^2*b^3*c^3*d*g^2*h*j*k - 9*a
\end{aligned}$$

$$\begin{aligned}
& ^2b^3c^3d^2fg^2k^*1 - 9a^2b^3c^3d^2e^*g^2k^*m - 9a^2b^2c^4d^2f^*h^* \\
& j^*1 - 9a^2b^2c^4d^2e^*h^*j^*m + 36a^2b^2c^4d^2e^2f^*k^*m - 27a^3b^2c^3 \\
& ^3d^2e^*h^*j^*1^2 + 27a^2b^2c^4d^2e^2h^*j^*1 - 18a^3b^2c^3d^2e^*g^*k^*1^2 - \\
& 9a^3b^2c^3d^2f^*g^*j^*1^2 + 9a^2b^4c^2d^2e^*h^*j^*1^2 + 9a^2b^3c^3e^*f^*g^ \\
& ^2h^*m + 9a^2b^3c^3d^2f^*h^2j^*k - 9a^2b^3c^3d^2e^*h^2j^*1 - 9a^2b^2c^4 \\
& e^2f^*g^*j^*k - 9a^2b^2c^4d^2e^2g^*j^*m + 63a^3b^2c^3d^2e^*f^*j^*m^2 - \\
& 63a^2b^2c^4d^2e^*f^2j^*m - 45a^2b^4c^2d^2e^*f^*j^*m^2 + 36a^2b^2c^4d^2 \\
& e^*f^2k^*1 - 27a^3b^2c^3e^*f^*g^*h^*1^2 + 27a^2b^3c^3d^2e^*f^*j^2m + 27a^2 \\
& ^2b^2c^4e^2f^*g^*h^*1 + 9a^2b^4c^2e^*f^*g^*h^*1^2 - 9a^2b^3c^3e^*f^*g^*h^2 \\
& ^*1 + 9a^2b^3c^3d^2f^*g^*h^2m + 9a^2b^3c^3d^2e^*h^*j^2k + 9a^2b^3c^3d^2 \\
& e^*g^*j^2*1 + 18a^2b^2c^4d^2e^*g^2j^*k - 9a^3b^2c^3d^2e^*g^*h^*m^2 - 9a^2 \\
& ^2b^3c^3d^2e^*g^*j^*k^2 - 9a^2b^2c^4e^*f^2g^*h^*k - 9a^2b^2c^4d^2f^2g^*h^ \\
& ^*1 + 18a^2b^2c^4d^2f^*g^2h^*k - 18a^2b^2c^4d^2e^*g^2h^*1 - 9a^2b^3c^3 \\
& ^3d^2f^*g^*h^*k^2 - 9a^2b^2c^4e^*f^*g^2h^*j + 36a^2b^3c^3d^2e^*f^*h^*1^2 - 18 \\
& ^2b^2c^4d^2e^*f^*h^2*1 - 9a^2b^2c^4d^2f^*g^*h^2j - 9a^2b^2c^4d^2e^*g^* \\
& h^*j^2 - 27a^2b^2c^4d^2e^*f^*g^*k^2 + 18a^2b^2c^4d^2f^*h^*k^2 - 9a^2b^3 \\
& ^3c^3e^*f^*g^2k^2 - 9a^2b^2c^4e^2f^*h^*j^2 - 9a^2b^2c^4d^2f^2h^2k + \\
& 45a^2b^3c^3d^2e^*f^2m^2 + 36a^2b^2c^4d^2e^*g^*1^2 + 9a^2b^3c^3d^2e^ \\
& ^*g^2*1^2 + 9a^2b^2c^4e^*f^2g^*j^2 + 9a^2b^2c^4d^2f^2h^*j^2 - 9a^2b^2 \\
& ^2c^4d^2e^2h^*k^2 - 36a^2b^2c^4d^2e^2f^*1^2 - 9a^2b^2c^4d^2f^*g^2j^2 \\
& - 12a^6b^*c^*h^*k^*1^3m + 3a^*b^6*c^*e^3k^*1^*m + 3a^*b^6*c^*d^*e^*f^*1^3 - 12a^*b \\
& ^*c^6*d^*e^3*f^*h + 9a^5*b^2*c^*h^2*k^*1^2m + 18a^5*b^*c^2*g^2k^2*1^*m - 9a^5 \\
& ^*b^2*c^*h^2*j^*1^*m^2 + 9a^5*b^*c^2*h^2*j^2*1^*m - 9a^4*b^3*c^*g^2k^2*1^*m - 3 \\
& ^*a^4*b^2*c^2*g^3k^*1^*m + 18a^5*b^*c^2*f^2k^*1^*m^2 + 15a^3*b^3*c^2*f^3k^*1^*m \\
& + 9a^5*b^2*c^*h^*j^2*k^*m^2 + 9a^5*b^2*c^*g^*j^2*1^*m^2 - 9a^5*b^2*c^*f^*k^2*1^ \\
& ^2m + 9a^5*b^*c^2*h^2*j^*k^2m + 9a^5*b^*c^2*g^2j^*1^2m - 9a^4*b^3*c^*f^2k^ \\
& ^*1^*m^2 + 36a^3*b^2*c^3e^3k^*1^*m - 27a^5*b^*c^2g^2j^*k^*m^2 - 18a^5*b^*c^2 \\
& ^*h^2*j^*k^*1^2 - 18a^2b^4c^2e^3k^*1^*m - 9a^5*b^2*c^*g^*j^*k^2m^2 - 9a^5*b \\
& ^2*c^*e^*k^2*1^*m^2 + 9a^5*b^*c^2*h^*j^2k^2*1 + 9a^5*b^*c^2g^*j^2k^2m + 9a^ \\
& ^4*b^3*c^*g^2j^*k^*m^2 + 9a^3*b^4c^2e^2k^*1^2m + 3a^4*b^2c^2h^3j^*k^*1 - 5 \\
& ^4a^4*b^*c^3d^2k^2*1^*m - 51a^2b^3c^3d^3k^*1^*m - 27a^4*b^*c^3e^2j^2*1 \\
& ^*m - 18a^5*b^*c^2g^*h^2*1^2m - 9a^5*b^2*c^*e^*j^*1^2m^2 - 9a^5*b^2*c^*d^*k^*1 \\
& ^2m^2 + 9a^5*b^*c^2g^2h^*1^*m^2 + 9a^5*b^*c^2g^*j^2k^*1^2 + 9a^5*b^*c^2e^* \\
& j^2*1^2m - 9a^3b^4c^2e^2j^*1^*m^2 - 9a^2b^5c^d^2k^2*1^*m + 3a^4b^2c^ \\
& ^2g^*h^3*1^*m - 3a^3b^3c^2g^3j^*k^*1 + 18a^5*b^*c^2e^*j^2k^*m^2 + 18a^5* \\
& ^*b^*c^2d^*j^2*1^*m^2 + 18a^4*b^*c^3f^2j^2k^*1 + 9a^5*b^*c^2g^*h^2k^*m^2 + 9 \\
& ^5*b^*c^2f^*h^2*1^*m^2 + 9a^5*b^*c^2f^*j^*k^2*1^2 - 9a^4*b^3c^*e^*j^2k^*m^2 - \\
& 9a^4*b^3c^*d^*j^2*1^*m^2 + 9a^4*b^2c^2f^*j^3k^*1 + 9a^4*b^2c^2e^*j^3k^* \\
& ^*m + 9a^4*b^2c^2d^*j^3*1^*m + 9a^4*b^*c^3f^2h^2*1^*m + 9a^4*b^*c^3e^2j^*k \\
& ^2m + 9a^4*b^*c^3d^2j^*1^2m - 3a^3b^3c^2g^3h^*k^*m - 3a^3b^2c^3f^ \\
& ^3j^*k^*1 + 3a^2b^4c^2f^3j^*k^*1 + 45a^4*b^*c^3d^2j^*k^*m^2 - 27a^5*b^*c^2 \\
& ^*d^*j^*k^2m^2 + 18a^5*b^*c^2g^*h^*j^2m^2 + 18a^4*b^*c^3e^2j^*k^*1^2 + 15a^2 \\
& ^*b^3c^3e^3j^*k^*1 - 12a^3b^2c^3f^3h^*k^*m - 12a^3b^2c^3f^3g^*1^*m + \\
& 9a^5*b^*c^2g^*h^*k^2*1^2 - 9a^4*b^3c^*g^*h^*j^2m^2 + 9a^4*b^3c^*d^*j^*k^2m^2 \\
& + 9a^4*b^2c^2g^*h^*j^3m + 9a^4*b^*c^3g^2h^2k^*1 + 9a^4*b^*c^3g^2h^2*
\end{aligned}$$

$$\begin{aligned}
& j^m + 9a^2b^5c^d^2j^k^m + 3a^2b^4c^2f^3h^k^m + 3a^2b^4c^2f^3 \\
& *g^1^m + 36a^2b^2c^4d^3j^k^1 + 18a^4b^3c^3e^2g^1^2^m + 15a^2b^3c^3 \\
& e^3g^1^m + 12a^4b^2c^2d^2j^k^3^1 + 9a^5b^3c^2f^2g^k^2^m + 9a^5b^3 \\
& c^2e^h^k^2^m + 9a^4b^3c^3g^2h^j^2^1 + 9a^4b^3c^3f^2h^k^2^1 + 9a^4 \\
& b^3c^3f^2g^k^2^m + 9a^4b^3c^3d^2h^1^m - 9a^3b^3c^2e^h^3k^m + 6 \\
& a^2b^3c^3e^3h^k^m + 45a^4b^3c^3e^2h^j^m + 36a^2b^2c^4d^3h^k^m \\
& m - 33a^3b^2c^3d^2g^3^1^m - 27a^4b^3c^3f^2h^j^1^2 - 27a^4b^3c^3e^2 \\
& f^1^m - 27a^4b^3c^3e^h^2j^2^m - 18a^4b^3c^3g^2h^j^k^2 - 18a^4b^3c^3 \\
& f^2g^k^2^1 - 18a^4b^3c^3e^g^2k^2^m - 18a^3b^3c^4d^2g^2^1^m + 12a^4 \\
& b^2c^2d^2h^k^3^m + 9a^5b^3c^2e^f^1^2^m + 9a^5b^3c^2d^2g^1^2^m + 9 \\
& a^4b^3c^3f^2g^k^1^2 + 9a^4b^3c^3e^2g^k^m + 9a^4b^3c^3g^h^2j^2^k \\
& + 9a^4b^3c^3f^h^2j^2^1 + 9a^4b^3c^3e^f^2^1^2^m - 9a^3b^4c^3e^h^2j^m \\
& ^2 + 9a^3b^3c^4e^2f^2^1^m + 9a^2b^5c^3e^2h^j^m + 9a^2b^4c^2d^2g^3 \\
& ^1^m - 9a^2b^2c^4d^3g^1^m - 9a^2b^5c^2d^2g^2^1^m - 6a^4b^2c^2e \\
& h^k^3^1 - 6a^3b^2c^3f^2g^3j^m + 3a^4b^2c^2g^h^j^k^3 + 3a^4b^2c^2 \\
& f^2g^k^3^1 + 3a^4b^2c^2e^g^k^3^m + 3a^3b^2c^3g^3h^j^k + 3a^3b^2 \\
& c^3f^2g^3k^1 + 3a^3b^2c^3e^g^3k^m - 27a^3b^3c^4d^2h^2k^1 + 18a^4 \\
& b^3c^3e^f^2k^m + 18a^4b^3c^3d^2f^2^1^m + 9a^4b^3c^3f^h^2j^k^2 + \\
& 9a^4b^3c^3f^2g^2j^1^2 + 9a^4b^3c^3e^g^2k^1^2 + 9a^4b^3c^3d^2h^2k^2^1 \\
& + 9a^3b^4c^3e^g^j^2^m + 9a^3b^4c^3d^2h^j^2^m - 9a^3b^3c^2e^g^j^3 \\
& ^m - 9a^3b^3c^2d^2h^j^3^m + 9a^3b^3c^4e^2g^2k^1 + 9a^3b^3c^4e^2g^2 \\
& j^m + 9a^3b^3c^4d^2h^2j^m - 3a^2b^3c^3f^3h^j^k - 3a^2b^3c^3f^3 \\
& g^j^1 - 3a^2b^3c^3e^f^3k^m - 3a^2b^3c^3d^2f^3^1^m + 45a^4b^3c^3 \\
& d^2g^2j^m + 45a^3b^3c^4d^2g^j^2^m + 24a^4b^2c^2d^2g^k^1^3 + 24a^2 \\
& b^2c^4e^3f^j^m + 18a^4b^3c^3f^2g^h^m + 18a^4b^3c^3d^2h^2j^1^2 + \\
& 18a^3b^3c^4e^2h^2j^k - 12a^4b^2c^2e^g^j^1^3 - 12a^4b^2c^2e^f^k^1 \\
& ^3 - 12a^4b^2c^2d^2e^1^3^m - 12a^2b^2c^4e^3g^j^1 - 12a^2b^2c^4 \\
& e^3f^k^1 - 12a^2b^2c^4d^2e^3^1^m + 9a^4b^3c^3f^2g^j^2k^2 + 9a^4b^3c^3 \\
& e^h^j^2k^2 + 9a^3b^2c^3e^h^3j^k + 9a^3b^2c^3d^2h^3j^1 + 9a^3b^3 \\
& c^4f^2g^2j^k + 9a^3b^3c^4d^2h^j^2^1 + 9a^2b^5c^3d^2g^2j^m + 9a^2 \\
& b^5c^2d^2g^j^2^m - 3a^4b^2c^2d^2h^j^1^3 - 3a^2b^3c^3f^3g^h^m - \\
& 3a^2b^2c^4e^3h^j^k + 18a^4b^3c^3f^2g^h^2^1^2 + 18a^3b^3c^4e^2g^h^2 \\
& ^m + 18a^3b^3c^4d^2h^j^k^2 + 18a^3b^3c^4d^2f^k^2^1 + 18a^3b^3c^4d^2 \\
& e^k^2^m + 9a^4b^3c^3e^g^2h^m + 9a^4b^3c^3e^f^j^2^1^2 + 9a^4b^3c^3 \\
& d^2g^j^2^1^2 + 9a^3b^2c^3f^2g^h^3^1 + 9a^3b^2c^3e^g^h^3^m + 9a^3b^3c^4 \\
& f^2g^2h^1 + 9a^3b^3c^4e^2g^j^2k^2 + 9a^3b^3c^4e^2f^j^2^1 - 9a^2b^3 \\
& c^3d^2g^3j^1 + 9a^2b^4c^3d^2g^2j^1 - 3a^4b^2c^2f^2g^h^1^3 - 3a^3 \\
& b^3c^2e^g^j^k^3 - 3a^3b^3c^2d^2h^j^k^3 - 3a^3b^3c^2d^2f^k^3^1 - \\
& 3a^3b^3c^2d^2e^k^3^m - 3a^2b^2c^4e^3g^h^m - 33a^3b^2c^3d^2e^j^3^m \\
& - 27a^4b^3c^3e^f^h^2^m - 27a^3b^3c^4d^2e^k^1^2 - 18a^4b^3c^3d^2e^j^2 \\
& ^m - 18a^3b^3c^4e^f^2j^2k^2 - 18a^3b^3c^4d^2f^2j^2^1 - 9a^4b^2c^2 \\
& d^2e^j^m + 9a^4b^3c^3d^2g^h^2^m + 9a^4b^3c^3d^2e^k^2^1^2 + 9a^3b^3 \\
& c^4f^2g^h^2k^2 + 9a^3b^3c^4e^2f^j^k^2 + 9a^3b^3c^4d^2f^j^1^2 + 9a^3 \\
& b^3c^4e^f^2h^2^m + 9a^3b^3c^4d^2e^2k^2^1 - 9a^2b^5c^3d^2e^j^2^m + 9 \\
& a^2b^4c^2d^2e^j^3^m - 9a^2b^3c^3d^2g^3h^m + 9a^2b^3c^5d^2e^2k^1 +
\end{aligned}$$

$$\begin{aligned}
& 9a^2b^3c^5d^2e^2j^m + 9a^2b^4c^3d^2g^2h^m - 6a^3b^2c^3d^2g^2j^3k \\
& - 3a^3b^3c^2f^2g^2h^k^3 + 3a^3b^2c^3e^2f^2j^3k + 3a^3b^2c^3d^2f^2j^3 \\
& + 3a^2b^2c^4e^2f^3j^k + 3a^2b^2c^4d^2f^3j^k + 45a^3b^3c^4d^2 \\
& *g^2h^1^2 + 36a^4b^2c^2e^2f^2g^2m^3 + 36a^4b^2c^2d^2f^2h^m^3 - 27a^3b^3c^4 \\
& e^2g^2h^k^2 - 27a^3b^3c^4d^2g^2h^2^1 - 18a^3b^3c^4f^2g^2h^j^2 + 18a^3 \\
& b^3c^4d^2e^2j^1^2 + 15a^3b^3c^2d^2e^2j^1^3 + 12a^2b^2c^4e^2f^3g^2m \\
& + 12a^2b^2c^4d^2f^3h^m + 9a^3b^3c^4f^2g^2h^2^j + 9a^3b^3c^4e^2g^2h^2 \\
& k + 9a^3b^3c^4d^2f^2j^k^2 + 9a^2b^3c^5d^2f^2j^k + 9a^2b^5c^2d^2g^2 \\
& h^1^2 - 9a^2b^4c^3d^2g^2h^2^1 - 6a^2b^2c^4e^2f^3h^1 + 3a^3b^2c^3f^2 \\
& g^2h^j^3 + 3a^2b^2c^4f^3g^2h^j + 45a^3b^3c^4d^2f^2g^2m^2 - 27a^2b^3c^5 \\
& d^2f^2g^2m + 18a^3b^3c^4e^2f^2g^2l^2 + 15a^3b^3c^2e^2f^2g^2l^3 - 12a^3 \\
& b^2c^3d^2e^2j^k^3 + 9a^3b^3c^4d^2e^2h^m^2 + 9a^3b^3c^4e^2g^2h^j^2 + \\
& 9a^3b^3c^4e^2f^2h^k^2 - 9a^2b^3c^3d^2f^2h^3^1 + 9a^2b^3c^5d^2f^2h^1 \\
& + 9a^2b^5c^2d^2f^2g^2m^2 + 9a^2b^3c^4d^2f^2g^2m + 6a^3b^3c^2d^2f^2h^1 \\
& l^3 + 3a^2b^4c^2d^2e^2j^k^3 + 18a^3b^3c^4e^2f^2g^2k^2 + 18a^2b^3c^5d^2 \\
& g^2h^j + 18a^2b^3c^5d^2f^2g^2l^1 + 18a^2b^3c^5d^2e^2g^2m - 12a^3b^2 \\
& c^3d^2f^2h^k^3 + 9a^3b^3c^4e^2f^2h^2^j + 9a^3b^3c^4d^2f^2g^2l^2 + 9a^3 \\
& b^3c^4d^2e^2g^2m^2 + 9a^3b^3c^4d^2g^2h^2^j + 9a^2b^2c^4e^2f^2g^3k + 9a^2 \\
& b^2c^4d^2g^3h^j + 9a^2b^2c^4d^2f^2g^3l^1 + 9a^2b^2c^4d^2e^2g^3m + \\
& 9a^2b^3c^5e^2f^2h^j + 9a^2b^3c^5e^2f^2g^2k - 9a^2b^3c^4d^2g^2h^j \\
& - 9a^2b^3c^4d^2f^2g^2l^1 - 9a^2b^3c^4d^2e^2g^2m - 3a^3b^2c^3e^2f^2g^2 \\
& k^3 + 3a^2b^4c^2e^2f^2g^2k^3 + 3a^2b^4c^2d^2f^2h^k^3 - 54a^3b^3c^4d^2e^2 \\
& f^2m^2 - 51a^3b^3c^2d^2e^2f^2m^3 - 27a^3b^3c^4d^2e^2g^2l^2 + 9a^3b^3c^4 \\
& d^2e^2h^2k^2 + 9a^2b^3c^5e^2f^2g^2j + 9a^2b^3c^5d^2f^2h^2^j + 9a^2b^3 \\
& c^5d^2e^2h^2k + 9a^2b^3c^5d^2e^2g^2l^1 - 9a^2b^5c^2d^2e^2f^2m^2 - 9a^2 \\
& b^4c^3d^2e^2g^2l^2 - 9a^2b^2c^5d^2e^2g^2l^1 - 9a^2b^2c^5d^2e^2f^2m - 3a^2 \\
& b^3c^3e^2f^2g^2j^3 - 3a^2b^3c^3d^2f^2h^j^3 + 36a^3b^2c^3d^2e^2f^2l^3 - \\
& 27a^2b^3c^5d^2f^2g^2j^2 - 18a^2b^4c^2d^2e^2f^2l^3 - 18a^2b^3c^5d^2e^2 \\
& h^2^j + 9a^2b^3c^5d^2e^2h^j^2 + 9a^2b^3c^5d^2f^2g^2^j + 9a^2b^4c^3d^2e^2 \\
& f^2l^2 + 9a^2b^3c^4d^2f^2g^2j^2 - 9a^2b^2c^5d^2f^2g^2j - 9a^2b^2c^5d^2 \\
& e^2f^2l^1 + 3a^2b^2c^4d^2e^2h^3^j - 18a^2b^3c^5e^2f^2g^2h^2 + 18a^2b^3 \\
& c^5d^2e^2f^2k^2 + 15a^2b^3c^3d^2e^2f^2k^3 + 9a^2b^3c^5e^2f^2g^2h^2 + 9a^2 \\
& b^3c^5d^2e^2g^2j^2 - 9a^2b^3c^4d^2e^2f^2k^2 + 9a^2b^2c^5d^2e^2g^2j - \\
& 9a^2b^2c^5d^2e^2f^2k + 3a^2b^2c^4e^2f^2g^2h^3 + 18a^2b^3c^5d^2e^2f^2j^2 \\
& + 9a^2b^3c^5d^2f^2g^2h^2 - 9a^2b^3c^4d^2e^2f^2j^2 + 9a^2b^2c^5d^2f^2g^2 \\
& h^2 - 3a^2b^2c^4d^2e^2f^2j^3 + 9a^2b^3c^5d^2e^2g^2h^2 - 9a^2b^2c^5d^2e^2 \\
& e^2g^2h^2 + 9a^2b^2c^5d^2e^2f^2h^2 - 36a^6c^2f^2j^2k^2l^2m^2 + 36a^5c^3f^2 \\
& j^2k^2l^2m - 36a^5c^3f^2h^2j^2l^2m + 36a^5c^3e^2h^2j^2l^2m - 18a^6b^3c^j^2 \\
& k^2l^2m^2 + 9a^6b^3c^j^2k^2l^2m + 3a^5b^2c^j^3k^2l^2m - 36a^5c^3f^2g^2j^2 \\
& k^2l^2m - 36a^5c^3e^2f^2k^2l^2m + 36a^5c^3d^2g^2k^2l^2m - 36a^4c^4d^2g^2 \\
& k^2l^2m - 36a^5c^3e^2h^2j^2k^2l^2 - 36a^5c^3e^2f^2j^2l^2m - 36a^5c^3d^2f^2k^2 \\
& l^2m + 36a^4c^4e^2h^2j^2k^2l^2 + 36a^4c^4e^2f^2j^2l^2m + 9a^6b^3c^h^2k^2 \\
& l^2m^2 - 3a^4b^3c^h^3k^2l^2m - 36a^5c^3e^2g^2h^2l^2m + 36a^5c^3e^2f^2j^2k^2 \\
& m^2 - 36a^5c^3d^2g^2j^2k^2m^2 + 36a^5c^3d^2f^2j^2l^2m^2 - 36a^5c^3d^2e^2k^2 \\
& m^2 + 36a^4c^4e^2g^2h^2l^2m - 36a^4c^4e^2f^2j^2k^2m - 36a^4c^4d^2f^2j^2
\end{aligned}$$

$$\begin{aligned}
& *1*m + 9*a^6*b*c*h*j*1^2*m^2 + 9*a^6*b*c*g*k*1^2*m^2 + 9*a^5*b^2*c*g*k^3*1* \\
& m + 3*a^3*b^4*c*g^3*k*1*m + 36*a^5*c^3*f*g*h*j*m^2 + 36*a^5*c^3*e*f*h*1*m^2 \\
& - 36*a^4*c^4*f^2*g*h*j*m - 36*a^4*c^4*e*f^2*h*1*m - 24*a^4*b*c^3*f^3*k*1*m \\
& - 12*a^5*b*c^2*h*j^3*k*m - 12*a^5*b*c^2*g*j^3*1*m - 3*a^2*b^5*c*f^3*k*1*m \\
& - 36*a^4*c^4*e*g^2*h*k*1 - 36*a^4*c^4*e*f*g^2*1*m + 12*a^5*b^2*c*e*k*1^3*m \\
& - 6*a^5*b^2*c*f*j*1^3*m + 3*a^5*b^2*c*h*j*k*1^3 + 48*a^3*b*c^4*d^3*k*1*m + \\
& 36*a^4*c^4*e*f*h^2*j*m + 36*a^4*c^4*d*g*h^2*k*1 - 36*a^4*c^4*d*f*h^2*k*m - \\
& 36*a^4*c^4*d*e*j^2*k*1 + 24*a^5*b*c^2*d*k^3*1*m + 21*a*b^5*c^2*d^3*k*1*m - \\
& 12*a^5*b*c^2*g*j*k^3*1 - 9*a^4*b^3*c*d*k^3*1*m + 6*a^5*b*c^2*f*j*k^3*m + 3* \\
& a^5*b^2*c*g*h*1^3*m - 36*a^4*c^4*e*f*h*j^2*1 - 12*a^5*b*c^2*g*h*k^3*m - 3*a^ \\
& ^5*b^2*c*e*j*k*m^3 - 3*a^5*b^2*c*d*j*1*m^3 - 36*a^4*c^4*d*g*h*j*k^2 - 36*a^ \\
& 4*c^4*d*f*g*k^2*1 - 36*a^4*c^4*d*e*h*k^2*1 - 36*a^4*c^4*d*e*g*k^2*m + 36*a^ \\
& 3*c^5*d^2*g*h*j*k + 36*a^3*c^5*d^2*f*g*k*1 - 36*a^3*c^5*d^2*f*g*j*m + 36*a^ \\
& 3*c^5*d^2*e*h*k*1 + 36*a^3*c^5*d^2*e*g*k*m - 36*a^3*c^5*d^2*e*f*1*m + 24*a^ \\
& 5*b^2*c*e*h*1*m^3 - 24*a^3*b*c^4*e^3*j*k*1 - 12*a^5*b^2*c*f*h*k*m^3 - 12*a^ \\
& 5*b^2*c*f*g*1*m^3 - 3*a^5*b^2*c*g*h*j*m^3 - 3*a^4*b^3*c*e*j*k*1^3 - 3*a*b^5 \\
& *c^2*e^3*j*k*1 + 36*a^4*c^4*d*e*h*j*1^2 + 36*a^4*c^4*d*e*g*k*1^2 - 36*a^3*c^ \\
& ^5*d*e^2*h*j*1 - 36*a^3*c^5*d*e^2*g*k*1 - 36*a^3*c^5*d*e^2*f*k*m + 24*a^4*b \\
& *c^3*e*h^3*k*m - 24*a^3*b*c^4*e^3*g*1*m - 18*a*b^4*c^3*d^3*j*k*1 - 12*a^4*b \\
& *c^3*g*h^3*j*1 - 12*a^4*b*c^3*f*h^3*k*1 - 12*a^4*b*c^3*d*h^3*1*m + 12*a^3*b \\
& *c^4*e^3*h*k*m + 6*a^4*b*c^3*f*h^3*j*m - 3*a^4*b^3*c*g*h*j*1^3 - 3*a^4*b^3* \\
& c*f*h*k*1^3 - 3*a^4*b^3*c*e*g*1^3*m - 3*a^4*b^3*c*d*h*1^3*m - 3*a*b^5*c^2*e \\
& ^3*h*k*m - 3*a*b^5*c^2*e^3*g*1*m + 36*a^4*c^4*e*f*g*h*1^2 - 36*a^4*c^4*d*e* \\
& f*j*m^2 - 36*a^3*c^5*e^2*f*g*h*1 - 36*a^3*c^5*d*f^2*g*j*k - 36*a^3*c^5*d*e* \\
& f^2*k*1 + 36*a^3*c^5*d*e*f^2*j*m - 18*a*b^4*c^3*d^3*h*k*m - 9*a*b^4*c^3*d^3 \\
& *g*1*m + 30*a^5*b*c^2*d*g*k*m^3 - 30*a^4*b^3*c*d*g*k*m^3 - 24*a^5*b*c^2*e*f \\
& *k*m^3 - 24*a^5*b*c^2*d*f*1*m^3 + 24*a^4*b*c^3*e*g*j^3*m + 24*a^4*b*c^3*d*h \\
& *j^3*m + 15*a^4*b^3*c*e*f*k*m^3 + 15*a^4*b^3*c*d*f*1*m^3 + 12*a^5*b*c^2*e*g \\
& *j*m^3 + 12*a^5*b*c^2*d*h*j*m^3 - 12*a^4*b*c^3*f*h*j^3*k - 12*a^4*b*c^3*f*g \\
& *j^3*1 + 6*a^4*b^3*c*e*g*j*m^3 + 6*a^4*b^3*c*d*h*j*m^3 + 6*a^4*b*c^3*e*h*j^ \\
& 3*1 + 36*a^3*c^5*d*e*g^2*h*1 - 24*a^5*b*c^2*f*g*h*m^3 + 15*a^4*b^3*c*f*g*h* \\
& m^3 - 9*a*b^6*c*d^2*g*j*m^2 - 6*a^3*b^4*c*d*g*k*1^3 - 6*a*b^4*c^3*e^3*f*j*m \\
& + 3*a^3*b^4*c*e*g*j*1^3 + 3*a^3*b^4*c*e*f*k*1^3 + 3*a^3*b^4*c*d*h*j*1^3 + \\
& 3*a^3*b^4*c*d*e*1^3*m + 3*a*b^4*c^3*e^3*h*j*k + 3*a*b^4*c^3*e^3*g*j*1 + 3*a \\
& *b^4*c^3*e^3*f*k*1 + 3*a*b^4*c^3*d*e^3*1*m - 36*a^3*c^5*d*e*g*h^2*k + 30*a^ \\
& 2*b*c^5*d^3*f*j*m - 30*a*b^3*c^4*d^3*f*j*m + 24*a^3*b*c^4*d*g^3*j*1 - 24*a^ \\
& 2*b*c^5*d^3*h*j*k - 24*a^2*b*c^5*d^3*f*k*1 - 24*a^2*b*c^5*d^3*e*k*m + 15*a* \\
& b^3*c^4*d^3*h*j*k + 15*a*b^3*c^4*d^3*f*k*1 + 15*a*b^3*c^4*d^3*e*k*m - 12*a^ \\
& 3*b*c^4*e*g^3*j*k + 12*a^2*b*c^5*d^3*g*j*1 + 6*a*b^3*c^4*d^3*g*j*1 + 3*a^3* \\
& b^4*c*f*g*h*1^3 + 3*a*b^4*c^3*e^3*g*h*m + 24*a^3*b*c^4*d*g^3*h*m - 12*a^3*b \\
& *c^4*f*g^3*h*k + 12*a^2*b*c^5*d^3*g*h*m - 9*a^3*b^4*c*d*e*j*m^3 + 6*a^3*b*c^ \\
& ^4*e*g^3*h*1 + 6*a*b^3*c^4*d^3*g*h*m + 36*a^3*c^5*d*e*f*g*k^2 - 36*a^2*c^6* \\
& d^2*e*f*g*k - 24*a^4*b*c^3*d*e*j*1^3 - 18*a^3*b^4*c*e*f*g*m^3 - 18*a^3*b^4* \\
& c*d*f*h*m^3 - 3*a^2*b^5*c*d*e*j*1^3 - 3*a*b^3*c^4*d*e^3*j*1 - 24*a^4*b*c^3* \\
& e*f*g*1^3 + 24*a^3*b*c^4*d*f*h^3*1 + 12*a^4*b*c^3*d*f*h*1^3 - 12*a^3*b*c^4*
\end{aligned}$$

$$\begin{aligned}
& e*g^h^3*j - 12*a^3*b*c^4*e*f*h^3*k - 12*a^3*b*c^4*d*e*h^3*m - 12*a*b^2*c^5*d^3*e*j*k + 6*a^3*b*c^4*d*g*h^3*k - 3*a^2*b^5*c*e*f*g^1^3 - 3*a^2*b^5*c*d*f*h^1^3 - 3*a*b^3*c^4*e^3*g*h*j - 3*a*b^3*c^4*e^3*f*h*k - 3*a*b^3*c^4*e^3*f*g^1 - 3*a*b^3*c^4*d*e^3*h*m + 24*a*b^2*c^5*d^3*e*h^1 - 12*a*b^2*c^5*d^3*f*h*k - 3*a*b^2*c^5*d^3*g*h*j - 3*a*b^2*c^5*d^3*f*g^1 - 3*a*b^2*c^5*d^3*e*g*m + 48*a^4*b*c^3*d*e*f*m^3 + 24*a^2*b*c^5*d*e*f^3*m + 21*a^2*b^5*c*d*e*f*m^3 - 12*a^2*b*c^5*e*f^3*g*j - 12*a^2*b*c^5*d*f^3*h*j - 9*a*b^3*c^4*d*e*f^3*m + 6*a^2*b*c^5*d*f^3*g*k + 12*a*b^2*c^5*d*e^3*f^1 - 6*a*b^2*c^5*d*e^3*g*k + 3*a*b^2*c^5*d*e^3*h*j - 24*a^3*b*c^4*d*e*f*k^3 - 12*a^2*b*c^5*d*e*g^3*j - 3*a*b^5*c^2*d*e*f*k^3 + 3*a*b^2*c^5*e^3*f*g*h - 12*a^2*b*c^5*d*f*g^3*h + 9*a*b^2*c^5*d*e*f^3*j + 9*a*b*c^6*d^2*e^2*f^j + 3*a*b^4*c^3*d*e*f^j^3 + 9*a*b*c^6*d^2*e^2*g^h + 9*a*b*c^6*d^2*e^2*f^2*h - 3*a*b^3*c^4*d*e*f^h^3 - 18*a*b*c^6*d^2*e^2*f*g^2 + 9*a*b*c^6*d^2*e^2*f^2*g + 3*a*b^2*c^5*d*e*f*g^3 - 36*a^4*b^2*c^2*e^2*k^1^2*m - 9*a^4*b^2*c^2*g^2*j^2*k^m + 45*a^3*b^3*c^2*d^2*k^2*1^m + 36*a^4*b^2*c^2*e^2*j^1*m^2 + 9*a^4*b^2*c^2*g^2*j^k^2*1 + 9*a^3*b^3*c^2*e^2*j^2*1^m + 9*a^4*b^2*c^2*g^2*h^k^2*m - 9*a^4*b^2*c^2*f^2*h^1^2*m - 9*a^3*b^3*c^2*f^2*j^2*k^1 - 45*a^3*b^3*c^2*d^2*j^k^m^2 + 36*a^3*b^2*c^3*d^2*j^2*k^m + 18*a^4*b^2*c^2*f^2*h^k^m^2 + 18*a^4*b^2*c^2*f^2*g^1^m^2 - 9*a^4*b^2*c^2*g^2*h^k^1^2 - 9*a^4*b^2*c^2*f^2*h^2*k^2*m - 9*a^4*b^2*c^2*f^2*g^2*1^2*m - 9*a^4*b^2*c^2*e^2*j^2*k^2*1 - 9*a^4*b^2*c^2*d^2*j^2*k^m - 36*a^3*b^2*c^3*d^2*j^k^2*1 - 27*a^3*b^2*c^3*e^2*h^2*k^m + 9*a^4*b^2*c^2*g^h^2*j^1^2 + 9*a^4*b^2*c^2*f^h^2*k^1^2 - 9*a^4*b^2*c^2*f^g^2*k^m^2 - 9*a^4*b^2*c^2*e^g^2*1^m^2 - 9*a^4*b^2*c^2*d^j^2*k^1^2 + 9*a^4*b^2*c^2*d^h^2*1^2*m - 9*a^3*b^3*c^2*e^2*g^1^2*m + 9*a^2*b^4*c^2*e^2*h^2*k^m + 9*a^2*b^4*c^2*d^2*j^k^2*1 - 45*a^3*b^3*c^2*e^2*h^j^m^2 + 36*a^4*b^2*c^2*e^h^2*j^m^2 + 36*a^3*b^2*c^3*e^2*h^j^2*m - 36*a^3*b^2*c^3*d^2*h^k^2*m + 36*a^2*b^3*c^3*d^2*g^2*1^m - 9*a^4*b^2*c^2*f^h^j^2*1^2 - 9*a^4*b^2*c^2*d^h^2*k^m^2 + 9*a^3*b^3*c^2*f^2*h^j^1^2 + 9*a^3*b^3*c^2*e^2*f^1^m^2 + 9*a^3*b^3*c^2*e^h^2*j^2*m - 9*a^3*b^2*c^3*f^2*h^2*j^1 - 9*a^2*b^4*c^2*e^2*h^j^2*m + 9*a^2*b^4*c^2*d^2*h^k^2*m + 36*a^3*b^2*c^3*d^2*h^k^1^2 - 27*a^4*b^2*c^2*e^g^j^2*m^2 - 27*a^4*b^2*c^2*d^h^j^2*m^2 - 9*a^4*b^2*c^2*d^h^k^2*1^2 - 9*a^3*b^3*c^2*e^f^2*k^m^2 - 9*a^3*b^3*c^2*d^f^2*1^m^2 + 9*a^3*b^2*c^3*f^2*h^j^2*k + 9*a^3*b^2*c^3*f^2*g^j^2*1 - 9*a^3*b^2*c^3*e^2*g^k^2*1 - 9*a^3*b^2*c^3*e^2*f^k^2*m - 9*a^3*b^2*c^3*d^2*f^1^2*m - 9*a^2*b^4*c^2*d^2*h^k^1^2 + 9*a^2*b^3*c^3*d^2*h^2*k^1 - 81*a^3*b^2*c^3*d^2*g^j^m^2 + 54*a^2*b^4*c^2*d^2*g^j^m^2 - 45*a^3*b^3*c^2*d^2*g^2*j^m^2 - 45*a^2*b^3*c^3*d^2*g^j^2*m + 36*a^3*b^2*c^3*d^2*f^k^m^2 + 36*a^3*b^2*c^3*d^2*g^2*j^2*m + 18*a^3*b^2*c^3*e^2*g^j^1^2 + 18*a^3*b^2*c^3*e^2*f^k^1^2 + 18*a^3*b^2*c^3*d^2*e^2*1^2*m - 9*a^4*b^2*c^2*d^2*f^k^2*m^2 - 9*a^3*b^3*c^2*f^2*g^h^m^2 - 9*a^3*b^3*c^2*d^h^2*j^1^2 - 9*a^3*b^2*c^3*f^2*g^j^k^2 - 9*a^3*b^2*c^3*d^2*e^1^m^2 - 9*a^3*b^2*c^3*f^g^2*h^2*m - 9*a^3*b^2*c^3*e^g^2*j^2*1 - 9*a^3*b^2*c^3*e^f^2*k^2*1 - 9*a^2*b^4*c^2*d^2*f^k^m^2 - 9*a^2*b^4*c^2*d^2*g^2*j^2*m - 9*a^2*b^3*c^3*e^2*h^2*j^k - 9*a^2*b^2*c^4*d^2*f^2*k^m - 27*a^2*b^2*c^4*d^2*g^2*j^1 - 9*a^3*b^3*c^2*f^g^h^2*1^2 + 9*a^3*b^2*c^3*e^g^2*j^k^2 - 9*a^3*b^2*c^3*e^f^2*j^1^2 - 9*a^3*b^2*c^3*d^h^2*j^2*k - 9*a^3*b^2*c^3*d^f^2*k^1^2 - 9*a^3*b^2*c^3*d^e^2*k^m^2 - 9*a^2
\end{aligned}$$

$$\begin{aligned}
& *b^3c^3e^2*g^h^2*m - 9a^2*b^3c^3*d^2*h*j*k^2 - 9a^2*b^3c^3*d^2*f*k^2* \\
& 1 - 9a^2*b^3c^3*d^2*e*k^2*m + 36a^3*b^3c^2*d*e*j^2*m^2 + 36a^3*b^2*c^3 \\
& *e^2*f*h*m^2 - 27a^2*b^2*c^4*d^2*g^2*h*m + 9a^3*b^3c^2*e*f*h^2*m^2 + 9a \\
& ^3*b^2*c^3*f*g^2*h*k^2 - 9a^2*b^4*c^2*e^2*f*h*m^2 + 9a^2*b^3c^3*d^2*e*k \\
& 1^2 - 9a^2*b^2*c^4*e^2*f^2*h*m - 45a^2*b^3c^3*d^2*g^h*1^2 - 36a^3*b^2*c \\
& ^3*e*f^2*g*m^2 + 36a^3*b^2*c^3*d*g^2*h*1^2 - 36a^3*b^2*c^3*d*f^2*h*m^2 + \\
& 36a^2*b^2*c^4*d^2*g^h^2*1 - 9a^3*b^2*c^3*e*g^h^2*k^2 + 9a^2*b^4*c^2*e*f^ \\
& 2*g*m^2 - 9a^2*b^4*c^2*d*g^2*h*1^2 + 9a^2*b^4*c^2*d*f^2*h*m^2 + 9a^2*b^3 \\
& *c^3*e^2*g^h*k^2 + 9a^2*b^3c^3*d*g^2*h^2*1 - 9a^2*b^3c^3*d*e^2*j*1^2 - \\
& 9a^2*b^2*c^4*e^2*g^2*h*k - 9a^2*b^2*c^4*e^2*f*g^2*m - 9a^2*b^2*c^4*d^2*f \\
& *j^2*k - 9a^2*b^2*c^4*d^2*f*h^2*m - 9a^2*b^2*c^4*d^2*e*j^2*1 - 45a^2*b^3 \\
& *c^3*d^2*f*g*m^2 + 36a^3*b^2*c^3*d*f*g^2*m^2 - 27a^3*b^2*c^3*d*f*h^2*1^2 \\
& + 18a^2*b^2*c^4*d^2*e*j*k^2 + 9a^2*b^4*c^2*d*f*h^2*1^2 - 9a^2*b^4*c^2*d* \\
& f*g^2*m^2 - 9a^2*b^3c^3*e^2*f*g*1^2 + 9a^2*b^2*c^4*e^2*g^h^2*j + 9a^2*b \\
& ^2*c^4*e^2*f*h^2*k - 9a^2*b^2*c^4*e*f^2*g^2*1 - 9a^2*b^2*c^4*d*f^2*g^2*m \\
& - 9a^2*b^2*c^4*d*e^2*j^2*k + 9a^2*b^2*c^4*d*e^2*h^2*m + 18a^4*b^2*c^2*f^ \\
& 2*j^2*m^2 + 18a^3*b^2*c^3*e^2*h^2*1^2 - 9a^2*b^4*c^2*e^2*h^2*1^2 + 18a^2 \\
& *b^2*c^4*d^2*g^2*k^2 + 12a^6*c^2*j^3*k*1*m + 3a^6*b^2*j*k*1*m^3 - 12a^6* \\
& c^2*g*k^3*1*m - 12a^5*c^3*g^3*k*1*m - 24a^6*c^2*e*k*1^3*m - 24a^4*c^4*e^ \\
& 3*k*1*m + 12a^6*c^2*h*j*k*1^3 + 12a^6*c^2*f*j*1^3*m + 12a^5*c^3*h^3*j*k \\
& 1 - 3a^5*b^3*h*j*k*m^3 - 3a^5*b^3*g*j*1*m^3 - 3a^5*b^3*f*k*1*m^3 + 12a^ \\
& 6*c^2*g^h*1^3*m + 12a^5*c^3*g^h^3*1*m - 12a^6*c^2*e*j*k*m^3 - 12a^6*c^2* \\
& d*j*1*m^3 - 12a^5*c^3*f*j^3*k*1 - 12a^5*c^3*e*j^3*k*m - 12a^5*c^3*d*j^3* \\
& 1*m - 12a^4*c^4*f^3*j*k*1 + 24a^6*c^2*f*h*k*m^3 + 24a^6*c^2*f*g*1*m^3 + \\
& 24a^4*c^4*f^3*h*k*m + 24a^4*c^4*f^3*g*1*m - 12a^6*c^2*g^h*j*m^3 - 12a^6 \\
& *c^2*e*h*1*m^3 - 12a^5*c^3*g^h*j^3*m + 3b^6*c^2*d^3*j*k*1 + 3a^4*b^4*e*j \\
& *k*m^3 + 3a^4*b^4*d*j*1*m^3 - 24a^5*c^3*d*j*k^3*1 - 24a^3*c^5*d^3*j*k*1 \\
& - 6a^4*b^4*e*h*1*m^3 + 3b^6*c^2*d^3*h*k*m + 3b^6*c^2*d^3*g*1*m + 3a^6*b \\
& *c*j^2*1^3*m + 3a^4*b^4*g^h*j*m^3 + 3a^4*b^4*f*h*k*m^3 + 3a^4*b^4*f*g*1* \\
& m^3 - 24a^5*c^3*d*h*k^3*m - 24a^3*c^5*d^3*h*k*m + 12a^5*c^3*g^h*j*k^3 + \\
& 12a^5*c^3*f*g*k^3*1 + 12a^5*c^3*e*h*k^3*1 + 12a^5*c^3*e*g*k^3*m + 12a^4 \\
& *c^4*g^3*h*j*k + 12a^4*c^4*f*g^3*k*1 + 12a^4*c^4*f*g^3*j*m + 12a^4*c^4*e \\
& *g^3*k*m + 12a^4*c^4*d*g^3*1*m + 12a^3*c^5*d^3*g*1*m + 3a^6*b*c*j*k^3*m^ \\
& 2 - 9a^6*b*c*h^2*1*m^3 - 3a^5*b*c^2*j^4*k*1 + 24a^5*c^3*e*g*j*1^3 + 24a \\
& ^5*c^3*e*f*k*1^3 + 24a^5*c^3*d*e*1^3*m + 24a^3*c^5*e^3*g*j*1 + 24a^3*c^5 \\
& *e^3*f*k*1 + 24a^3*c^5*d*e^3*1*m - 12a^5*c^3*d*h*j*1^3 - 12a^5*c^3*d*g*k \\
& *1^3 - 12a^4*c^4*e*h^3*j*k - 12a^4*c^4*d*h^3*j*1 - 12a^3*c^5*e^3*h*j*k - \\
& 12a^3*c^5*e^3*f*j*m + 9a^4*b*c^3*g^4*1*m + 6b^5*c^3*d^3*f*j*m + 6a^3*b \\
& ^5*d*g*k*m^3 - 3b^5*c^3*d^3*h*j*k - 3b^5*c^3*d^3*g*j*1 - 3b^5*c^3*d^3*f* \\
& k*1 - 3b^5*c^3*d^3*e*k*m - 3a^3*b^5*e*g*j*m^3 - 3a^3*b^5*e*f*k*m^3 - 3a \\
& ^3*b^5*d*h*j*m^3 - 3a^3*b^5*d*f*1*m^3 - 12a^5*c^3*f*g^h*1^3 - 12a^4*c^4* \\
& f*g^h^3*1 - 12a^4*c^4*e*g^h^3*m - 12a^3*c^5*e^3*g^h*m - 9a^6*b*c*g*k^2*m \\
& ^3 - 3b^5*c^3*d^3*g^h*m + 3a^6*b*c*f*1^3*m^2 - 3a^3*b^5*f*g^h*m^3 + 12a \\
& ^5*c^3*d*e*j*m^3 + 12a^4*c^4*e*f*j^3*k + 12a^4*c^4*d*g*j^3*k + 12a^4*c^4 \\
& *d*f*j^3*1 + 12a^4*c^4*d*e*j^3*m + 12a^3*c^5*e*f^3*j*k + 12a^3*c^5*d*f^3
\end{aligned}$$

$$\begin{aligned}
& *j*1 - 9*a^6*b*c*e*1^2*m^3 - 24*a^5*c^3*e*f*g*m^3 - 24*a^5*c^3*d*f*h*m^3 - \\
& 24*a^3*c^5*e*f^3*g*m - 24*a^3*c^5*d*f^3*h*m - 15*a^2*b*c^5*d^4*1*m + 15*a*b^3*c^4*d^4*1*m + 12*a^4*c^4*f*g*h*j^3 + 12*a^3*c^5*f^3*g*h*j + 12*a^3*c^5*e \\
& *f^3*h*1 + 9*a^3*b*c^4*f^4*k*1 - 9*a^3*b*c^4*f^4*j*m + 3*b^4*c^4*d^3*e*j*k \\
& + 3*a^5*b^2*c*g*j*1^4 + 3*a^5*b^2*c*f*k*1^4 + 3*a^5*b^2*c*d*1^4*m - 3*a^5*b \\
& *c^2*h*j*k^4 - 3*a^5*b*c^2*f*k^4*1 - 3*a^5*b*c^2*e*k^4*m - 3*a^4*b*c^3*h^4* \\
& j*k + 3*a^2*b^6*d*e*j*m^3 + 3*a*b^4*c^3*e^4*k*m + 24*a^4*c^4*d*e*j*k^3 + 24 \\
& *a^2*c^6*d^3*e*j*k - 6*b^4*c^4*d^3*e*h*1 + 3*b^4*c^4*d^3*g*h*j + 3*b^4*c^4* \\
& d^3*f*h*k + 3*b^4*c^4*d^3*f*g*1 + 3*b^4*c^4*d^3*e*g*m - 3*a^4*b*c^3*g*h^4*m \\
& + 3*a^2*b^6*e*f*g*m^3 + 3*a^2*b^6*d*f*h*m^3 - 3*a*b^6*c*e^3*j*m^2 + 24*a^4 \\
& *c^4*d*f*h*k^3 + 24*a^2*c^6*d^3*f*h*k - 12*a^4*c^4*e*f*g*k^3 - 12*a^3*c^5*e \\
& *f*g^3*k - 12*a^3*c^5*d*g^3*h*j - 12*a^3*c^5*d*f*g^3*1 - 12*a^3*c^5*d*e*g^3 \\
& *m - 12*a^2*c^6*d^3*g*h*j - 12*a^2*c^6*d^3*f*g*1 - 12*a^2*c^6*d^3*e*h*1 - 1 \\
& 2*a^2*c^6*d^3*e*g*m - 12*a*b^2*c^5*d^4*j*1 + 9*a^5*b*c^2*d*j*1^4 + 9*a^2*b* \\
& c^5*e^4*j*k - 3*a^4*b^3*c*d*j*1^4 - 3*a^4*b*c^3*e*j^4*k - 3*a^4*b*c^3*d*j^4 \\
& *1 - 3*a*b^3*c^4*e^4*j*k - 24*a^4*c^4*d*e*f*1^3 - 24*a^2*c^6*d*e^3*f*1 - 12 \\
& *a^5*b^2*c*e*g*m^4 - 12*a^5*b^2*c*d*h*m^4 + 12*a^3*c^5*d*e*h^3*j + 12*a^2*c \\
& ^6*d*e^3*h*j + 12*a^2*c^6*d*e^3*g*k - 12*a*b^2*c^5*d^4*h*m + 9*a^5*b*c^2*f* \\
& g*1^4 - 9*a^5*b*c^2*e*h*1^4 - 9*a^2*b*c^5*e^4*h*1 + 9*a^2*b*c^5*e^4*g*m + 6 \\
& *a^4*b^3*c*e*h*1^4 + 6*a*b^3*c^4*e^4*h*1 - 3*b^3*c^5*d^3*e*g*j - 3*b^3*c^5* \\
& d^3*e*f*k - 3*a^4*b^3*c*f*g*1^4 - 3*a^4*b*c^3*g*h*j^4 - 3*a^3*b*c^4*g^4*h*j \\
& - 3*a^3*b*c^4*f*g^4*1 - 3*a^3*b*c^4*e*g^4*m - 3*a*b^3*c^4*e^4*g*m + 12*a^3 \\
& *c^5*e*f*g*h^3 + 12*a^2*c^6*e^3*f*g*h - 3*b^3*c^5*d^3*f*g*h - 12*a^3*c^5*d* \\
& e*f*j^3 - 12*a^2*c^6*d*e*f^3*j - 3*a*b^6*c*d^2*g*1^3 - 15*a^5*b*c^2*d*e*m^4 \\
& + 15*a^4*b^3*c*d*e*m^4 + 9*a^4*b*c^3*e*f*k^4 - 9*a^4*b*c^3*d*g*k^4 + 3*a^3 \\
& *b^4*c*d*f*1^4 - 3*a^3*b*c^4*d*h^4*j - 3*a^2*b*c^5*e*f^4*k - 3*a^2*b*c^5*d* \\
& f^4*1 + 3*a*b^2*c^5*e^4*g*j + 3*a*b^2*c^5*e^4*f*k + 3*a*b^2*c^5*d*e^4*m - 9 \\
& *a*b*c^6*d^3*e^2*1 + 3*b^2*c^6*d^3*e*f*g - 3*a^3*b*c^4*f*g*h^4 - 3*a^2*b*c^ \\
& 5*f^4*g*h + 12*a^2*c^6*d*e*f*g^3 - 9*a*b*c^6*d^3*f^2*j + 3*a*b*c^6*d^2*e^3* \\
& k + 9*a^3*b*c^4*d*e*j^4 - 3*a^2*b*c^5*e*f*g^4 - 9*a*b*c^6*d^3*e*h^2 + 3*a*b \\
& *c^6*d^2*f^3*g + 3*a*b*c^6*d*e^3*g^2 - 3*a^4*b^2*c^2*h^3*j^2*m + 12*a^4*b^2 \\
& *c^2*g^3*j*m^2 - 3*a^4*b^2*c^2*f^2*k^3*m + 3*a^3*b^3*c^2*g^3*j^2*m - 9*a^3* \\
& b^4*c*f^2*j^2*m^2 + 9*a^3*b^3*c^2*f^2*j^3*m - 6*a^3*b^3*c^2*f^3*j*m^2 - 6*a \\
& ^3*b^2*c^3*f^3*j^2*m - 3*a^2*b^4*c^2*f^3*j^2*m - 27*a^4*b^2*c^2*d^2*k*m^3 - \\
& 27*a^3*b^2*c^3*e^3*j*m^2 + 18*a^2*b^4*c^2*e^3*j*m^2 - 15*a^2*b^3*c^3*e^3*j \\
& ^2*m + 12*a^4*b^2*c^2*f^2*j*1^3 + 3*a^3*b^3*c^2*e^2*k^3*1 + 42*a^2*b^3*c^3* \\
& d^3*j*m^2 - 27*a^2*b^2*c^4*d^3*j^2*m - 15*a^3*b^3*c^2*d^2*k*1^3 - 3*a^4*b^2 \\
& *c^2*f*j^2*k^3 - 3*a^4*b^2*c^2*f*h^3*m^2 + 3*a^3*b^3*c^2*g^3*h*1^2 + 3*a^3* \\
& b^3*c^2*f^2*j*k^3 - 3*a^3*b^2*c^3*g^3*h^2*1 - 3*a^3*b^2*c^3*e^2*j^3*1 - 27* \\
& a^4*b^2*c^2*e^2*h*m^3 + 12*a^3*b^2*c^3*f^3*h*1^2 + 3*a^3*b^3*c^2*f*g^3*m^2 \\
& - 3*a^2*b^4*c^2*f^3*h*1^2 + 3*a^2*b^3*c^3*f^3*h^2*1 + 9*a^3*b^3*c^2*e*h^3*1 \\
& ^2 + 9*a^2*b^3*c^3*e^2*h^3*1 - 6*a^4*b^2*c^2*e*h^2*1^3 - 6*a^3*b^3*c^2*e^2* \\
& h*1^3 - 6*a^2*b^3*c^3*e^3*h*1^2 - 6*a^2*b^2*c^4*e^3*h^2*1 + 3*a^2*b^3*c^3*d \\
& ^2*j^3*k + 42*a^3*b^3*c^2*d^2*g*m^3 - 27*a^4*b^2*c^2*d*g^2*m^3 - 27*a^2*b^2 \\
& *c^4*d^3*h*1^2 - 15*a^2*b^3*c^3*e^3*f*m^2 + 12*a^3*b^2*c^3*e^2*h*k^3 + 3*a^
\end{aligned}$$



$$\begin{aligned}
& 3*b^3*c^2*e*h^2*k^3 - 3*a^3*b^2*c^3*e*g^3*l^2 - 3*a^2*b^4*c^2*e^2*h*k^3 + 3 \\
& *a^2*b^3*c^3*f^3*g*k^2 - 3*a^2*b^2*c^4*f^3*g^2*k - 27*a^3*b^2*c^3*d^2*g*l^3 \\
& - 27*a^2*b^2*c^4*d^3*f*m^2 + 18*a^2*b^4*c^2*d^2*g*l^3 - 15*a^3*b^3*c^2*d*g \\
& ^2*l^3 + 12*a^2*b^2*c^4*e^3*g*k^2 - 3*a^3*b^2*c^3*e*h^2*j^3 + 3*a^2*b^3*c^3 \\
& *e^2*h*j^3 + 3*a^2*b^3*c^3*e*f^3*l^2 - 3*a^2*b^2*c^4*d^2*h^3*k + 9*a^2*b^3* \\
& c^3*d*g^3*k^2 - 9*a*b^4*c^3*d^2*g^2*k^2 - 6*a^3*b^2*c^3*d*g^2*k^3 - 6*a^2*b \\
& ^3*c^3*d^2*g*k^3 - 3*a^2*b^4*c^2*d*g^2*k^3 + 12*a^2*b^2*c^4*d^2*g*j^3 + 3*a \\
& ^2*b^3*c^3*d*g^2*j^3 - 3*a^2*b^2*c^4*d*f^3*k^2 - 3*a^2*b^2*c^4*d*g^2*h^3 + \\
& 12*a^7*c*j*k*l*m^3 - 3*b^7*c*d^3*k*l*m - 3*a^6*b*c*k^4*l*m - 3*a^6*b*c*j*k \\
& l^4 - 3*a^6*b*c*g*l^4*m - 9*a^6*b*c*f*j*m^4 + 9*a^6*b*c*e*k*m^4 + 9*a^6*b*c \\
& *d*l*m^4 + 9*a^6*b*c*g*h*m^4 - 3*a*b^7*d*e*f*m^3 + 9*a*b*c^6*d^4*h*j - 9*a* \\
& b*c^6*d^4*g*k + 9*a*b*c^6*d^4*f*l + 9*a*b*c^6*d^4*e*m + 12*a*c^7*d^3*e*f*g \\
& - 3*a*b*c^6*d*e^4*j - 3*a*b*c^6*e^4*f*g - 3*a*b*c^6*d*e*f^4 + 18*a^6*c^2*h^ \\
& 2*j*l*m^2 - 18*a^6*c^2*h*j^2*l^2*m + 18*a^6*c^2*f*k^2*l^2*m + 36*a^5*c^3*e^ \\
& 2*k*l^2*m + 18*a^6*c^2*g*j*k^2*m^2 + 18*a^6*c^2*e*k^2*l*m^2 + 18*a^5*c^3*g^ \\
& 2*j^2*k*m + 18*a^6*c^2*e*j*l^2*m^2 + 18*a^6*c^2*d*k*l^2*m^2 - 18*a^5*c^3*e^ \\
& 2*j*l*m^2 - 18*a^6*c^2*f*h*l^2*m^2 + 18*a^5*c^3*f^2*h*l^2*m - 36*a^5*c^3*f^ \\
& 2*h*k*m^2 - 36*a^5*c^3*f^2*g*l*m^2 + 18*a^5*c^3*g^2*h*k*l^2 - 18*a^5*c^3*g* \\
& h^2*k^2*l + 18*a^5*c^3*f*h^2*k^2*m + 18*a^5*c^3*f*g^2*l^2*m + 18*a^5*c^3*e* \\
& j^2*k^2*l + 18*a^5*c^3*d*j^2*k^2*m - 18*a^4*c^4*d^2*j^2*k*m + 36*a^4*c^4*d^ \\
& 2*j*k^2*l + 18*a^5*c^3*f*g^2*k*m^2 + 18*a^5*c^3*e*g^2*l*m^2 + 18*a^5*c^3*d* \\
& j^2*k*l^2 - 18*a^4*c^4*f^2*g^2*k*m + 36*a^4*c^4*d^2*h*k^2*m + 18*a^5*c^3*f* \\
& h*j^2*l^2 - 18*a^5*c^3*e*h^2*j*m^2 + 18*a^5*c^3*d*h^2*k*m^2 + 18*a^4*c^4*f^ \\
& 2*h^2*j*l - 18*a^4*c^4*e^2*h*j^2*m - 18*a^5*c^3*e*g*k^2*l^2 + 18*a^5*c^3*d* \\
& h*k^2*l^2 + 18*a^4*c^4*e^2*g*k^2*l + 18*a^4*c^4*e^2*f*k^2*m - 18*a^4*c^4*d^ \\
& 2*h*k*l^2 + 18*a^4*c^4*d^2*f*l^2*m - 36*a^4*c^4*e^2*g*j*l^2 - 36*a^4*c^4*e^ \\
& 2*f*k*l^2 - 36*a^4*c^4*d*e^2*l^2*m + 18*a^5*c^3*d*f*k^2*m^2 + 18*a^4*c^4*f^ \\
& 2*g*j*k^2 + 18*a^4*c^4*d^2*g*j*m^2 - 18*a^4*c^4*d^2*f*k*m^2 + 18*a^4*c^4*d^ \\
& 2*e*l*m^2 - 18*a^4*c^4*f*g^2*j^2*k + 18*a^4*c^4*f*g^2*h^2*m + 18*a^4*c^4*e* \\
& g^2*j^2*l + 18*a^4*c^4*e*f^2*k^2*l - 18*a^4*c^4*d*g^2*j^2*m - 18*a^4*c^4*d* \\
& f^2*k^2*m + 18*a^3*c^5*d^2*f^2*k*m + 3*a^4*b^2*c^2*h^4*k*m - 3*a^3*b^3*c^2* \\
& g^4*l*m + 18*a^4*c^4*e*f^2*j*l^2 + 18*a^4*c^4*d*h^2*j^2*k + 18*a^4*c^4*d*f^ \\
& 2*k*l^2 + 18*a^4*c^4*d*e^2*k*m^2 - 18*a^3*c^5*e^2*f^2*j*l + 12*a^5*b^2*c*g^ \\
& 2*k*m^3 - 9*a^5*b*c^2*h^3*j*m^2 - 9*a^5*b*c^2*f^2*l^3*m + 3*a^5*b*c^2*h^2*k \\
& ^3*l + 3*a^4*b^3*c*h^3*j*m^2 + 3*a^4*b^3*c*f^2*l^3*m - 18*a^4*c^4*e^2*f*h*m \\
& ^2 + 18*a^3*c^5*e^2*f^2*h*m + 15*a^5*b*c^2*e^2*l*m^3 - 15*a^4*b^3*c*e^2*l*m \\
& ^3 - 9*a^5*b*c^2*g^2*k*l^3 - 9*a^4*b*c^3*g^3*j^2*m - 3*a^5*b^2*c*g*k^2*l^3 \\
& + 3*a^5*b*c^2*h*j^3*l^2 + 3*a^4*b^3*c*g^2*k*l^3 - 3*a^3*b^4*c*g^3*j*m^2 + 3 \\
& 6*a^4*c^4*e*f^2*g*m^2 + 36*a^4*c^4*d*f^2*h*m^2 + 18*a^4*c^4*e*g*h^2*k^2 - 1 \\
& 8*a^4*c^4*d*g^2*h*l^2 - 18*a^4*c^4*d*f*j^2*k^2 + 18*a^3*c^5*e^2*g^2*h*k + 1 \\
& 8*a^3*c^5*e^2*f*g^2*m - 18*a^3*c^5*d^2*g*h^2*l + 18*a^3*c^5*d^2*f*j^2*k + 1 \\
& 8*a^3*c^5*d^2*f*h^2*m + 18*a^3*c^5*d^2*e*j^2*l - 12*a^2*b^2*c^4*e^4*k*m + 9 \\
& *a^4*b^3*c*f*j^3*m^2 - 9*a^4*b^2*c^2*f*j^4*m - 6*a^5*b^2*c*f*j^2*m^3 + 6*a^ \\
& 5*b*c^2*f^2*j*m^3 - 6*a^5*b*c^2*f*j^3*m^2 - 6*a^4*b^3*c*f^2*j*m^3 + 6*a^4*b \\
& *c^3*f^3*j*m^2 - 6*a^4*b*c^3*f^2*j^3*m + 6*a^2*b^3*c^3*f^4*j*m + 3*a^3*b^2*
\end{aligned}$$

$$\begin{aligned}
& c^3 g^4 j^m + 3 a^2 b^5 c^m f^3 j^m - 3 a^2 b^3 c^3 f^4 k^m - 36 a^3 c^5 d^2 e^j k^2 - 18 a^4 c^4 d^2 f^2 g^2 m^2 + 18 a^3 c^5 e^2 f^2 g^2 m + 18 a^3 c^5 d^2 f^2 g^2 m + 18 a^3 c^5 d^2 e^2 j^2 k + 18 a^3 b^4 c^2 d^2 k^2 m^3 + 15 a^3 b^4 c^2 e^3 j^2 m + 12 a^5 b^2 c^2 d^2 k^2 m^3 - 9 a^5 b^3 c^2 f^2 j^2 m^3 - 9 a^4 b^3 c^3 e^2 k^3 m + 3 a^5 b^3 c^2 e^2 k^3 m^2 + 3 a^4 b^3 c^2 f^2 j^2 m^3 + 3 a^4 b^3 c^3 g^2 j^3 k - 3 a^3 b^4 c^2 f^2 j^3 m + 3 a^3 b^2 c^3 g^4 h^m + 3 a^2 b^5 c^2 e^3 j^2 m - 36 a^3 c^5 d^2 f^2 h^2 k^2 - 21 a^3 b^3 c^4 d^3 j^2 m^2 - 21 a^2 b^5 c^2 d^3 j^2 m^2 + 18 a^3 c^5 e^2 f^2 h^2 j^2 - 18 a^3 c^5 e^2 f^2 h^2 j^2 + 18 a^3 c^5 d^2 f^2 h^2 k + 18 a^2 b^4 c^3 d^3 j^2 m + 15 a^4 b^3 c^3 d^2 k^2 m^3 - 9 a^5 b^3 c^2 d^2 k^2 m^3 - 9 a^4 b^3 c^3 g^3 h^2 m^2 - 9 a^4 b^3 c^3 f^2 j^2 k^3 + 3 a^4 b^3 c^2 d^2 k^2 m^3 + 3 a^2 b^5 c^2 d^2 k^2 m^3 - 18 a^3 c^5 d^2 e^2 g^2 m^2 + 18 a^3 c^5 d^2 e^2 h^2 k^2 + 18 a^3 b^4 c^2 e^2 h^2 m^3 - 18 a^2 c^6 d^2 e^2 h^2 k + 18 a^2 c^6 d^2 e^2 g^2 m + 18 a^2 c^6 d^2 e^2 f^2 m + 15 a^5 b^3 c^2 e^2 h^2 m^3 - 15 a^4 b^3 c^2 e^2 h^2 m^3 - 9 a^4 b^3 c^3 f^2 g^3 m^2 - 9 a^3 b^3 c^4 f^3 h^2 m + 3 a^4 b^2 c^2 e^2 j^2 k^4 + 3 a^4 b^3 c^3 g^2 h^3 k^2 + 3 a^3 b^3 c^4 f^2 g^3 m + 36 a^3 c^5 d^2 e^2 f^2 m^2 + 18 a^3 c^5 d^2 f^2 g^2 j^2 + 18 a^2 c^6 d^2 f^2 g^2 j + 18 a^2 c^6 d^2 e^2 f^2 m - 9 a^3 b^2 c^3 e^2 h^4 m - 9 a^3 b^3 c^4 d^2 j^3 k + 6 a^4 b^3 c^3 e^2 h^2 m^3 - 6 a^4 b^3 c^3 e^2 h^3 m^2 + 6 a^3 b^3 c^4 e^3 h^2 m^2 - 6 a^3 b^3 c^4 e^2 h^3 m + 3 a^4 b^2 c^2 e^2 f^2 h^2 k^4 + 3 a^4 b^3 c^3 d^2 j^3 k^2 - 3 a^3 b^4 c^2 e^2 h^2 m^3 + 3 a^2 b^5 c^2 e^2 h^2 m^3 + 3 a^2 b^2 c^4 f^4 h^2 k + 3 a^2 b^2 c^4 f^4 g^2 m + 3 a^2 b^5 c^2 e^3 h^2 m^2 - 3 a^2 b^4 c^3 e^3 h^2 m - 21 a^4 b^3 c^3 d^2 g^2 m^3 - 21 a^2 b^5 c^2 d^2 g^2 m^3 + 18 a^3 b^4 c^2 d^2 g^2 m^3 + 18 a^2 c^6 d^2 e^2 f^2 k + 18 a^2 b^4 c^3 d^3 h^2 m^2 + 15 a^3 b^3 c^4 e^3 f^2 m^2 + 15 a^2 b^3 c^5 d^3 h^2 m - 15 a^2 b^3 c^4 d^3 h^2 m - 9 a^4 b^3 c^3 e^2 h^2 k^3 - 9 a^3 b^3 c^4 f^3 g^2 k^2 - 9 a^2 b^3 c^5 e^3 f^2 m + 3 a^3 b^3 c^4 f^2 h^3 j + 3 a^2 b^5 c^2 e^3 f^2 m^2 + 3 a^2 b^3 c^4 e^3 f^2 m + 18 a^2 b^4 c^3 d^3 f^2 m^2 + 15 a^4 b^3 c^3 d^2 g^2 m^3 + 12 a^2 b^2 c^5 d^3 f^2 m - 9 a^3 b^3 c^4 e^2 h^2 j^3 - 9 a^3 b^3 c^4 e^2 f^3 m^2 - 9 a^2 b^3 c^5 e^3 g^2 k + 3 a^3 b^3 c^4 f^2 g^3 j^2 + 3 a^2 b^5 c^2 d^2 g^2 m^3 + 3 a^2 b^3 c^5 e^2 f^3 m - 3 a^2 b^4 c^3 e^3 g^2 k^2 + 3 a^2 b^3 c^4 e^3 g^2 k + 18 a^2 c^6 d^2 e^2 g^2 h^2 - 18 a^2 c^6 d^2 e^2 g^2 h - 12 a^4 b^2 c^2 d^2 f^2 m^4 - 9 a^2 b^2 c^4 d^2 g^4 k + 9 a^2 b^3 c^4 d^2 g^3 k + 6 a^3 b^3 c^2 d^2 g^2 k^4 + 6 a^3 b^3 c^4 d^2 g^2 k^3 - 6 a^3 b^3 c^4 d^2 g^3 k^2 + 6 a^2 b^3 c^5 d^3 g^2 k^2 - 6 a^2 b^3 c^5 d^2 g^3 k - 6 a^2 b^3 c^4 d^3 g^2 k^2 - 6 a^2 b^2 c^5 d^3 g^2 k - 3 a^3 b^3 c^2 e^2 f^2 k^4 + 3 a^3 b^2 c^3 e^2 g^2 j^4 + 3 a^3 b^2 c^3 d^2 h^2 j^4 + 3 a^2 b^5 c^2 d^2 g^2 k^3 + 15 a^2 b^3 c^5 d^3 e^2 m^2 - 15 a^2 b^3 c^4 d^3 e^2 m^2 - 9 a^3 b^3 c^4 d^2 g^2 j^3 - 9 a^2 b^3 c^5 e^3 f^2 j^2 - 3 a^2 b^4 c^3 d^2 g^2 j^3 + 3 a^2 b^3 c^4 e^3 f^2 j^2 - 3 a^2 b^2 c^5 e^3 f^2 j + 12 a^2 b^2 c^5 d^3 f^2 j^2 - 9 a^2 b^3 c^5 d^2 e^3 k^2 + 3 a^2 b^3 c^5 e^2 g^3 h + 3 a^2 b^3 c^4 d^2 e^3 k^2 - 9 a^2 b^3 c^5 d^2 g^2 h^3 - 3 a^2 b^3 c^3 d^2 e^2 j^4 + 3 a^2 b^3 c^5 e^2 f^3 h^2 + 3 a^2 b^3 c^4 d^2 g^2 h^3 + 3 a^2 b^2 c^4 d^2 f^2 h^4 - 9 a^7 c^2 k^2 m^2 - 6 a^6 c^2 j^2 k^3 m - 3 a^6 b^2 h^2 m^3 + 3 a^5 b^3 h^2 m^3 - 6 a^6 c^2 g^2 k^2 m^3 - 6 a^6 c^2 h^2 k^3 m^2 + 6 a^5 c^3 h^3 j^2 m + 6 a^6 c^2 g^2 k^2 m^3 - 6 a^6 c^2 f^2 k^3 m^2 - 6 a^5 c^3 h^2 j^3 m - 6 a^5 c^3 g^3 j^2 m^2 + 6 a^5 c^3 f^2 k^3 m + 3 a^5 b^3 g^2 k^2 m^3 - 3 a^4 b^4 g^2 k^2 m^3 + 12 a^6 c^2 f^2 j^2 m^3 + 12 a^4 c^4 f^3 j^2 m + 3 a^5 b^3 e^2 m^3 + 3 a^3 b^5 e^2 m^3 - 6 a^6 c^2 d^2 k^2 m^3 - 6 a^5 c^3 f^2 j^2 m^3 + 6 a^5 c^3 d^2 k^2 m^3
\end{aligned}$$

$$\begin{aligned}
& 3 - 6a^5c^3g^3j^3k^2 + 6a^4c^4e^3jm^2 - 3b^6c^2d^3j^2m - 3a^4 \\
& *b^4f^j^2m^3 + 3a^3b^5f^2jm^3 + 6a^5c^3f^j^2k^3 + 6a^5c^3f^h^ \\
& 3m^2 - 6a^5c^3e^j^3l^2 + 6a^4c^4g^3h^2*1 - 6a^4c^4f^2h^3m + 6 \\
& *a^4c^4e^2j^3*1 + 6a^3c^5d^3j^2m - 3a^4b^4d^k^2m^3 - 3a^2b^6d^ \\
& d^2*k^m^3 + 6a^5c^3e^2h^m^3 - 6a^4c^4g^2h^3k - 6a^4c^4f^3h^*1^2 \\
& + 12a^5c^3e^h^2*1^3 + 12a^3c^5e^3h^2*1 - 3b^6c^2d^3h^*1^2 + 3b^ \\
& 5c^3d^3h^2*1 - 3a^5b^2c^*j^4m^2 + 3a^3b^5e^h^2m^3 - 3a^2b^6e^2 \\
& *h^m^3 + 6a^5c^3d^*g^2m^3 - 6a^4c^4e^2h^k^3 - 6a^4c^4f^*h^3j^2 + \\
& 6a^4c^4e^*g^3*1^2 + 6a^3c^5f^3g^2*k - 6a^3c^5e^2g^3*1 + 6a^3c^5 \\
& *d^3h^*1^2 - 3b^6c^2d^3f^m^2 - 3b^4c^4d^3f^2m + 6a^4c^4d^2g^*1^ \\
& 3 + 6a^4c^4e^*h^2j^3 - 6a^4c^4d^*h^3k^2 - 6a^3c^5f^2g^3j - 6a^3 \\
& *c^5e^3g^k^2 + 6a^3c^5d^3f^m^2 + 6a^3c^5d^2h^3k - 6a^2c^6d^3f^ \\
& f^2m + 4a^5b^2c^*h^3m^3 + 3b^5c^3d^3g^k^2 - 3b^4c^4d^3g^2k - 3 \\
& *a^2b^6d^*g^2m^3 + a^5b^c^2j^3k^3 + 12a^4c^4d^*g^2k^3 + 12a^2c^6d^ \\
& d^3g^2k + 6a^5b^c^2h^3*1^3 + 5a^5b^c^2g^3m^3 - 5a^4b^3c^*g^3m^3 \\
& + 3b^5c^3d^3e^*1^2 + 3b^3c^5d^3e^2*1 - 3a^5b^2c^*h^2*1^4 + a^4b^ \\
& 3c^*h^3*1^3 + 12a^5b^2c^*f^2m^4 - 6a^3c^5d^2g^*j^3 + 6a^3c^5d^*f^3k \\
& k^2 + 6a^3b^4c^*f^3m^3 + 6a^2c^6e^3f^2*j - 6a^2c^6d^2f^3k - 3b \\
& ^4c^4d^3f^*j^2 + 3b^3c^5d^3f^2*j - 3a^2b^2c^4f^5m - 7a^4b^c^3e \\
& e^3m^3 - 7a^2b^5c^*e^3m^3 + 6a^4b^c^3g^3k^3 - 6a^3c^5e^*g^3h^2 - \\
& 6a^2c^6d^3f^*j^2 + 5a^4b^c^3f^3*1^3 + a^4b^c^3h^3j^3 + a^2b^5c^* \\
& f^3*1^3 + 6a^3c^5d^*g^2h^3 - 6a^2c^6e^2f^3h - 3a^3b^4c^*e^2*1^4 - \\
& 3a^b^4c^3e^4*1^2 - 7a^3b^c^4d^3*1^3 - 7a^b^5c^2d^3*1^3 + 6a^3b^c \\
& c^4f^3j^3 + 5a^3b^c^4e^3k^3 + 3b^3c^5d^3e^*h^2 - 3b^2c^6d^3e^2 \\
& *h + a^b^5c^2e^3k^3 + 12a^b^2c^5d^4k^2 - 6a^2c^6d^*f^3g^2 + 6a^b \\
& ^4c^3d^3k^3 - 3a^4b^2c^2d^*k^5 + a^3b^c^4g^3h^3 + 5a^2b^c^5d^3j \\
& j^3 - 5a^b^3c^4d^3j^3 - 9a^c^7d^2e^2f^2 + 6a^2b^c^5e^3h^3 - 3a \\
& *b^2c^5e^4h^2 + a^2b^c^5f^3g^3 + a^b^3c^4e^3h^3 + 4a^b^2c^5d^3h \\
& h^3 - 3a^b^2c^5d^2g^4 - 6a^7c^*j^1^3m^2 + 6a^7c^*h^1^2m^3 + 6a^6c \\
& ^2j^k^4*1 + 6a^6c^2h^k^4m - 6a^5c^3h^4k^m + 3a^6b^2h^k^m^4 + 3a \\
& ^6b^2g^*1^m^4 - 3b^5c^3d^4*1^m - 6a^6c^2g^*j^1^4 - 6a^6c^2f^k^1^4 \\
& - 6a^6c^2d^*1^4m + 6a^5c^3h^*j^4k + 6a^5c^3g^*j^4*1 + 6a^5c^3f^ \\
& j^4m - 6a^4c^4g^4j^*1 + 6a^3c^5e^4k^m + 6a^5b^3f^*j^m^4 - 6a^4c \\
& ^4g^4h^m + 3b^7c^*d^3j^m^2 - 3a^5b^3e^*k^m^4 - 3a^5b^3d^*1^m^4 + 3b \\
& ^4c^4d^4j^*1 - 3a^5b^3g^*h^m^4 - 6a^5c^3e^*j^k^4 + 6a^2c^6d^4j^*1 \\
& + 3b^4c^4d^4h^m + 6a^6c^2e^*g^m^4 + 6a^6c^2d^*h^m^4 + 6a^6b^c^*j^ \\
& 3m^3 - 6a^5c^3f^*h^k^4 + 6a^4c^4g^*h^4j + 6a^4c^4f^*h^4k + 6a^4c \\
& ^4e^*h^4*1 + 6a^4c^4d^*h^4m - 6a^3c^5f^4h^k - 6a^3c^5f^4g^*1 + 6a \\
& ^2c^6d^4h^m + 3a^5b^c^2j^5m + a^6b^c^k^3*1^3 + 3a^4b^4e^*g^m^4 + \\
& 3a^4b^4d^*h^m^4 + 6b^3c^5d^4g^*k - 3b^3c^5d^4h^*j - 3b^3c^5d^4f \\
& f^*1 - 3b^3c^5d^4e^m + 3a^b^7d^2g^*m^3 + 6a^5c^3d^*f^1^4 - 6a^4c^4 \\
& *e^*g^j^4 - 6a^4c^4d^*h^j^4 + 6a^3c^5e^*g^4j + 6a^3c^5d^*g^4k - 6a^ \\
& 2c^6e^4g^*j - 6a^2c^6e^4f^*k - 6a^2c^6d^*e^4m + 3a^4b^c^3h^5*1 + \\
& 6a^3c^5f^*g^4h - 3a^3b^5d^*e^m^4 + 3b^2c^6d^4e^*j + 3a^5b^c^2g^* \\
& k^5 + 3a^3b^c^4g^5k + 8a^b^6c^*d^3m^3 + 3b^2c^6d^4f^*h - 3a^5b^2
\end{aligned}$$

$$\begin{aligned}
& *c*e*1^5 - 3*a*b^2*c^5*e^5*1 - 6*a^3*c^5*d*f*h^4 + 6*a^2*c^6*e*f^4*g + 6*a^2*c^6*d*f^4*h + 3*a^4*b*c^3*f*j^5 + 3*a^2*b*c^5*f^5*j + 6*a*c^7*d^3*e^2*h - \\
& 6*a*c^7*d^2*e^3*g + 3*a^3*b*c^4*e*h^5 + 6*a*b*c^6*d^3*g^3 + 3*a^2*b*c^5*d* \\
& g^5 + a*b*c^6*e^3*f^3 - 9*a^6*c^2*j^2*k^2*1^2 - 9*a^6*c^2*h^2*k^2*m^2 - 9*a^6*c^2*g^2*1^2*m^2 - 18*a^5*c^3*f^2*j^2*m^2 - 9*a^5*c^3*h^2*j^2*k^2 - 9*a^5 \\
& *c^3*g^2*j^2*1^2 - 9*a^5*c^3*f^2*k^2*1^2 - 9*a^5*c^3*e^2*k^2*m^2 - 9*a^5*c^3 \\
& d^2*1^2*m^2 - 9*a^5*c^3*g^2*h^2*m^2 - 9*a^4*c^4*e^2*j^2*k^2 - 9*a^4*c^4*d^2*j^2*1^2 - 18*a^4*c^4*e^2*h^2*1^2 - 9*a^4*c^4*g^2*h^2*j^2 - 9*a^4*c^4*f^2 \\
& *h^2*k^2 - 9*a^4*c^4*f^2*g^2*1^2 - 9*a^4*c^4*e^2*g^2*m^2 - 9*a^4*c^4*d^2*h^2 \\
& *m^2 - 18*a^3*c^5*d^2*g^2*k^2 - 9*a^3*c^5*e^2*g^2*j^2 - 9*a^3*c^5*e^2*f^2*k^2 - 9*a^3*c^5*d^2*h^2*j^2 - 9*a^3*c^5*d^2*f^2*1^2 - 9*a^3*c^5*d^2*e^2*m^2 \\
& - 3*a^4*b^2*c^2*h^4*1^2 - 18*a^4*b^2*c^2*f^3*m^3 + 12*a^3*b^2*c^3*f^4*m^2 \\
& - 9*a^3*c^5*f^2*g^2*h^2 + 4*a^4*b^2*c^2*g^3*1^3 - 3*a^2*b^4*c^2*f^4*m^2 + 1 \\
& 4*a^3*b^3*c^2*e^3*m^3 - 5*a^3*b^3*c^2*f^3*1^3 - 3*a^4*b^2*c^2*g^2*k^4 - 3*a^3 \\
& *b^2*c^3*g^4*k^2 + a^3*b^3*c^2*g^3*k^3 - 20*a^2*b^4*c^2*d^3*m^3 - 18*a^3*b^2*c^3 \\
& *e^3*1^3 + 16*a^3*b^2*c^3*d^3*m^3 + 12*a^4*b^2*c^2*e^2*1^4 + 12*a^2*b^2*c^4 \\
& *e^4*1^2 - 9*a^2*c^6*d^2*e^2*j^2 + 6*a^2*b^4*c^2*e^3*1^3 + 4*a^3*b^2*c^3*f^3*k^3 \\
& + 14*a^2*b^3*c^3*d^3*1^3 - 9*a^2*c^6*e^2*f^2*g^2 - 9*a^2*c^6*d^2*f^2*h^2 - 5*a^2*b^3*c^3 \\
& *e^3*k^3 - 3*a^3*b^2*c^3*f^2*j^4 - 3*a^2*b^2*c^4*f^4*j^2 + a^2*b^3*c^3*f^3*j^3 - 18*a^2*b^2*c^4*d^3*k^3 \\
& + 12*a^3*b^2*c^3*d^2*k^4 + 4*a^2*b^2*c^4*e^3*j^3 - 3*a^2*b^4*c^2*d^2*k^4 - 3*a^2*b^2*c^4 \\
& *e^2*h^4 + 6*a^7*c*k*1^4*m - 3*a^7*b*k*1^4*m^4 - 6*a^7*c*h*k*m^4 - 6*a^7*c*g*1^4*m^4 + \\
& 3*a^6*b*c*h*1^5 - 6*a*c^7*d^4*e*j - 6*a*c^7*d^4*f*h - 3*b*c^7*d^4*e*f + 6* \\
& a*c^7*d^4*e*f + 3*a*b*c^6*e^5*h - a^5*b^2*c*j^3*1^3 - a^3*b^4*c*g^3*1^3 - a \\
& *b^4*c^3*e^3*j^3 - a*b^2*c^5*e^3*g^3 + 3*a^7*b*j*m^5 + 6*a^7*c*f*m^5 + 6*a* \\
& c^7*d^5*k + 3*b*c^7*d^5*g - 3*a^6*c^2*j^4*m^2 - 3*a^6*b^2*j^2*m^4 + 2*a^6*c^2 \\
& *j^3*1^3 + a^5*b^3*j^3*m^3 - 2*a^6*c^2*h^3*m^3 - 3*a^6*c^2*h^2*1^4 - 3*a^5 \\
& *c^3*h^4*1^2 - a*b^6*c*e^3*1^3 + 20*a^5*c^3*f^3*m^3 - 15*a^6*c^2*f^2*m^4 - 15 \\
& *a^4*c^4*f^4*m^2 + 2*a^5*c^3*h^3*k^3 - 2*a^5*c^3*g^3*1^3 + a^3*b^5*g^3*m^3 - 3*a^5 \\
& *c^3*g^2*k^4 - 3*a^4*c^4*g^4*k^2 - 3*a^4*b^4*f^2*m^4 + 20*a^4*c^4 \\
& *e^3*1^3 - 15*a^5*c^3*e^2*1^4 - 15*a^3*c^5*e^4*1^2 + 2*a^4*c^4*g^3*j^3 - 2* \\
& a^4*c^4*f^3*k^3 - 2*a^4*c^4*d^3*m^3 - 3*b^4*c^4*d^4*k^2 - 3*a^4*c^4*f^2*j^4 \\
& - 3*a^3*c^5*f^4*j^2 + 20*a^3*c^5*d^3*k^3 - 15*a^4*c^4*d^2*k^4 - 15*a^2*c^6 \\
& *d^4*k^2 - 2*a^3*c^5*e^3*j^3 + b^5*c^3*d^3*j^3 + 2*a^3*c^5*f^3*h^3 - 3*a^3*c^5 \\
& *e^2*h^4 - 3*a^2*c^6*e^4*h^2 - 3*b^2*c^6*d^4*g^2 + 2*a^2*c^6*e^3*g^3 - 2 \\
& *a^2*c^6*d^3*h^3 + b^3*c^5*d^3*g^3 - 3*a^2*c^6*d^2*g^4 - a^4*b^2*c^2*h^3*k^3 \\
& - a^3*b^2*c^3*g^3*j^3 - a^2*b^4*c^2*f^3*k^3 - a^2*b^2*c^4*f^3*h^3 + 2*a^7 \\
& *c*k^3*m^3 + a^7*b*1^3*m^3 - 3*a^7*c*j^2*m^4 + 6*a^3*c^5*f^5*m - 3*a^6*b^2* \\
& f*m^5 + 6*a^6*c^2*e*1^5 + 6*a^2*c^6*e^5*1 + b^7*c*d^3*1^3 + a*b^7*e^3*m^3 - \\
& 3*b^2*c^6*d^5*k + 6*a^5*c^3*d*k^5 - 3*a*c^7*d^4*g^2 + 2*a*c^7*d^3*f^3 + b* \\
& c^7*d^3*e^3 - a^6*b^2*k^3*m^3 - a^4*b^4*h^3*m^3 - a^2*b^6*f^3*m^3 - b^6*c^2 \\
& *d^3*k^3 - b^4*c^4*d^3*h^3 - b^2*c^6*d^3*f^3 - b^8*d^3*m^3 - a^6*c^2*k^6 - \\
& a^5*c^3*j^6 - a^4*c^4*h^6 - a^3*c^5*g^6 - a^2*c^6*f^6 - a^7*c*1^6 - a*c^7*e^6 \\
& - a^8*m^6 - c^8*d^6, z, k1)*(243*a*b^5*c^6 + 3888*a^3*b*c^8 - 1944*a^2*b^3*c^7))/c^3 + (x*(81*b^5*c^6*d - 1296*a^3*c^8*g + 648*a^2*b^2*c^7*g - 648*
\end{aligned}$$

$$\begin{aligned}
& a^3b^3c^7d + 1296a^2b^3c^8d - 81a^4b^4c^6g)/c^3) + (216a^2b^3c^7f^2 \\
& - 54a^3b^3c^6f^2 + 81a^4b^5c^4j^2 + 1512a^3b^3c^6j^2 + 81a^4b^7c^2m^2 - 648a^4b^3c^5m^2 - 702a^2b^3c^5j^2 - 702a^2b^5c^3m^2 + 1674a^3b^3c^4m^2 - 432a^2c^8d^2e + 27b^4c^6d^2e + 432a^3c^7g^2h + 432a^3c^7d^2l + 432a^3c^7e^2k - 864a^3c^7f^2j + 864a^4c^6j^2m - 432a^4c^6k^2l - 108a^3b^3c^6d^2h - 108a^3b^3c^6e^2g + 432a^2b^3c^7d^2h + 432a^2b^3c^7e^2g + 81a^4b^4c^5g^2h + 81a^4b^4c^5d^2l + 81a^4b^4c^5e^2k - 81a^4b^5c^4g^2l - 81a^4b^5c^4h^2k + 432a^3b^3c^6f^2m - 864a^3b^3c^6g^2l - 864a^3b^3c^6h^2k - 162a^4b^6c^3j^2m + 81a^4b^6c^3k^2l - 432a^2b^2c^6g^2h - 432a^2b^2c^6d^2l - 432a^2b^2c^6e^2k + 216a^2b^2c^6f^2j - 108a^2b^3c^5f^2m + 540a^2b^3c^5g^2l + 540a^2b^3c^5h^2k + 1404a^2b^4c^4j^2m - 621a^2b^4c^4k^2l - 3240a^3b^2c^5j^2m + 1296a^3b^2c^5k^2l)/c^3 + (x(216a^2c^8e^2 + 27b^4c^6e^2 - 216a^3c^7h^2 + 216a^4c^6l^2 - 162a^3b^2c^5l^2 + 432a^2c^8d^2f + 54b^4c^6d^2f - 81b^5c^5d^2j - 432a^3c^7d^2m - 432a^3c^7e^2l - 432a^3c^7f^2k + 864a^3c^7g^2j + 81b^6c^4d^2m + 432a^4c^6k^2m - 324a^4b^2c^7d^2f - 54a^4b^3c^6e^2h - 54a^4b^3c^6f^2g + 216a^2b^3c^7e^2h + 216a^2b^3c^7f^2g + 594a^4b^3c^6d^2j - 1080a^2b^3c^7d^2j - 648a^4b^4c^5d^2m + 81a^4b^4c^5g^2j - 81a^4b^5c^4g^2m - 1080a^3b^3c^6g^2m + 216a^3b^3c^6h^2l + 216a^3b^3c^6j^2k + 1404a^2b^2c^6d^2m + 108a^2b^2c^6e^2l + 108a^2b^2c^6f^2k - 540a^2b^2c^6g^2j + 594a^2b^3c^5g^2m - 54a^2b^3c^5h^2l - 54a^2b^3c^5j^2k + 54a^2b^4c^4k^2m - 324a^3b^2c^5k^2m))/c^3) + (36a^4c^8d^3 + 9a^4b^8m^3 - 9b^2c^7d^3 + 72a^2c^7f^3 + 36a^3c^6h^3 - 36a^4c^5k^3 - 72a^5c^4m^3 - 18a^4b^2c^6f^3 - 9a^4b^3c^5g^3 + 36a^2b^3c^6g^3 + 9a^4b^4c^4h^3 - 108a^2c^7d^2g^2 - 9a^4b^5c^3j^3 - 288a^3b^3c^5j^3 + 9a^4b^6c^2k^3 - 108a^2c^7e^2h + 108a^4b^3c^4l^3 - 81a^2b^6c^3m^3 - 108a^2c^7d^2k + 108a^3c^6d^2k^2 + 216a^3c^6f^2j^2 + 108a^3c^6g^2k^2 - 216a^3c^6f^2m + 216a^4c^5f^2m^2 - 108a^4c^5h^2l^2 - 216a^4c^5j^2m - 45a^2b^2c^5h^3 + 108a^2b^3c^4j^3 - 63a^2b^4c^3k^3 + 117a^3b^2c^4k^3 + 72a^2b^5c^2l^3 - 171a^3b^3c^3l^3 + 180a^3b^4c^2m^3 + 18a^4b^2c^3m^3 - 9a^4b^7c^3l^3 + 27b^3c^6d^2e^2f + 216a^2c^7d^2e^2j - 27b^4c^5d^2e^2j + 27b^5c^4d^2e^2m - 27a^4b^7c^3j^2m^2 + 216a^3c^6e^2h^2l - 216a^3c^6g^2h^2j - 216a^3c^6d^2j^2l - 216a^3c^6e^2j^2k + 216a^4c^5j^2k^2l + 27a^4b^2c^6d^2g^2 + 27a^4b^2c^6e^2h^2 - 27a^4b^3c^5e^2h^2 + 108a^2b^3c^6e^2h^2 + 27a^4b^2c^6d^2k^2 + 27a^4b^4c^4d^2k^2 + 54a^4b^3c^5f^2j^2 - 27a^4b^4c^4f^2j^2 - 216a^2b^3c^6f^2j^2 - 27a^4b^3c^5e^2l^2 - 27a^4b^5c^3e^2l^2 + 108a^2b^3c^6e^2l^2 - 216a^3b^3c^5e^2l^2 + 27a^4b^4c^4g^2k^2 - 27a^4b^5c^3g^2k^2 - 216a^3b^3c^5g^2k^2 - 54a^4b^4c^4f^2m^2 - 27a^4b^6c^2f^2m^2 - 27a^4b^5c^3h^2l^2 + 27a^4b^6c^2h^2l^2 - 216a^3b^3c^5h^2l^2 + 27a^4b^6c^2j^2m^2 + 216a^4b^3c^4j^2m^2 - 135a^2b^2c^5d^2k^2 + 54a^2b^2c^5f^2j^2 + 162a^2b^3c^4e^2l^2 - 135a^2b^2c^5g^2k^2 + 162a^2b^3c^4g^2k^2 + 270a^2b^2c^5f^2m^2 + 162a^2b^4c^3f^2m^2 - 270a^3b^2c^4f^2m^2 + 162a^2b^3c^4h^2l^2 - 189a^2b^4c^3h^2l^2 + 351a^3b^2c^4h^2l^2 - 297a^2b^4c^3j^2m^2 + 270a^2b^5c^2j^2m^2 + 810a^3b^2c^4j^2m^2)
\end{aligned}$$

$$\begin{aligned}
& 2*m - 702*a^3*b^3*c^3*j*m^2 - 108*a*b*c^7*d*e*f + 27*a*b^7*c*k*1*m + 54*a*b \\
& ^2*c^6*d*e*j - 27*a*b^3*c^5*f*g*h + 108*a^2*b*c^6*f*g*h - 81*a*b^3*c^5*d*e* \\
& m - 27*a*b^3*c^5*d*f*1 - 54*a*b^3*c^5*d*g*k + 54*a*b^3*c^5*d*h*j - 27*a*b^3 \\
& *c^5*e*f*k + 54*a*b^3*c^5*e*g*j - 108*a^2*b*c^6*d*e*m + 108*a^2*b*c^6*d*f*1 \\
& + 216*a^2*b*c^6*d*g*k - 216*a^2*b*c^6*d*h*j + 108*a^2*b*c^6*e*f*k - 216*a^ \\
& 2*b*c^6*e*g*j - 54*a*b^4*c^4*d*h*m - 54*a*b^4*c^4*e*g*m + 54*a*b^4*c^4*e*h* \\
& 1 + 27*a*b^4*c^4*f*g*1 + 27*a*b^4*c^4*f*h*k - 27*a*b^4*c^4*g*h*j - 27*a*b^4 \\
& *c^4*d*j*1 - 27*a*b^4*c^4*e*j*k + 27*a*b^5*c^3*g*h*m + 108*a^3*b*c^5*g*h*m \\
& + 27*a*b^5*c^3*d*1*m + 27*a*b^5*c^3*e*k*m + 54*a*b^5*c^3*f*j*m - 27*a*b^5*c \\
& ^3*f*k*1 + 27*a*b^5*c^3*g*j*1 + 27*a*b^5*c^3*h*j*k + 108*a^3*b*c^5*d*1*m + \\
& 108*a^3*b*c^5*e*k*m - 108*a^3*b*c^5*f*k*1 + 432*a^3*b*c^5*g*j*1 + 432*a^3*b \\
& *c^5*h*j*k - 27*a*b^6*c^2*g*1*m - 27*a*b^6*c^2*h*k*m - 27*a*b^6*c^2*j*k*1 - \\
& 108*a^4*b*c^4*k*1*m + 216*a^2*b^2*c^5*d*h*m + 216*a^2*b^2*c^5*e*g*m - 270* \\
& a^2*b^2*c^5*e*h*1 - 108*a^2*b^2*c^5*f*g*1 - 108*a^2*b^2*c^5*f*h*k + 162*a^2 \\
& *b^2*c^5*g*h*j + 162*a^2*b^2*c^5*d*j*1 + 162*a^2*b^2*c^5*e*j*k - 135*a^2*b^ \\
& 3*c^4*g*h*m - 135*a^2*b^3*c^4*d*1*m - 135*a^2*b^3*c^4*e*k*m - 216*a^2*b^3*c \\
& ^4*f*j*m + 135*a^2*b^3*c^4*f*k*1 - 216*a^2*b^3*c^4*g*j*1 - 216*a^2*b^3*c^4* \\
& h*j*k + 189*a^2*b^4*c^3*g*1*m + 189*a^2*b^4*c^3*h*k*m - 324*a^3*b^2*c^4*g*1 \\
& *m - 324*a^3*b^2*c^4*h*k*m + 243*a^2*b^4*c^3*j*k*1 - 594*a^3*b^2*c^4*j*k*1 \\
& - 216*a^2*b^5*c^2*k*1*m + 459*a^3*b^3*c^3*k*1*m)/c^3 + (x*(27*b^2*c^7*d^2*e \\
& - 108*a^2*c^7*e*g^2 + 27*b^3*c^6*e^2*f - 27*b^3*c^6*d^2*h - 108*a^2*c^7*e^ \\
& 2*j + 27*b^5*c^4*d*j^2 + 108*a^2*c^7*d^2*1 - 108*a^3*c^6*e*k^2 - 27*b^4*c^5 \\
& *e^2*j - 216*a^3*c^6*g*j^2 + 27*b^4*c^5*d^2*1 + 108*a^3*c^6*h^2*j + 27*b^7* \\
& c^2*d*m^2 + 108*a^3*c^6*g^2*1 + 27*b^5*c^4*e^2*m - 108*a^4*c^5*j*1^2 + 108* \\
& a^4*c^5*k^2*1 - 108*a*c^8*d^2*e - 108*a*b*c^7*e^2*f + 108*a*b*c^7*d^2*h - 2 \\
& 7*b^3*c^6*d*e*g + 216*a^2*c^7*e*f*h + 216*a^2*c^7*d*e*k - 216*a^2*c^7*d*f*j \\
& + 27*b^4*c^5*d*g*h + 27*b^4*c^5*d*e*k - 27*b^4*c^5*d*f*j + 27*b^5*c^4*d*f* \\
& m - 27*b^5*c^4*d*g*1 - 27*b^5*c^4*d*h*k - 216*a^3*c^6*e*h*m - 216*a^3*c^6*f \\
& *h*1 + 216*a^3*c^6*d*j*m - 216*a^3*c^6*d*k*1 + 216*a^3*c^6*e*j*1 + 216*a^3* \\
& c^6*f*j*k - 54*b^6*c^3*d*j*m + 27*b^6*c^3*d*k*1 + 216*a^4*c^5*h*1*m - 216*a \\
& ^4*c^5*j*k*m + 27*a*b^2*c^6*e*g^2 - 189*a*b^3*c^5*d*j^2 + 324*a^2*b*c^6*d*j \\
& ^2 + 135*a*b^2*c^6*e^2*j - 27*a*b^3*c^5*g^2*h + 108*a^2*b*c^6*g^2*h - 135*a \\
& *b^2*c^6*d^2*1 - 27*a*b^4*c^4*g*j^2 - 216*a*b^5*c^3*d*m^2 - 216*a^3*b*c^5*d \\
& *m^2 - 162*a*b^3*c^5*e^2*m + 216*a^2*b*c^6*e^2*m + 108*a^3*b*c^5*f*1^2 + 27 \\
& *a*b^4*c^4*g^2*1 + 108*a^3*b*c^5*h*k^2 - 27*a*b^6*c^2*g*m^2 - 108*a^3*b*c^5 \\
& *h^2*m - 108*a^3*b*c^5*j^2*k + 216*a^4*b*c^4*k*m^2 + 27*a^2*b^2*c^5*e*k^2 + \\
& 162*a^2*b^2*c^5*g*j^2 + 486*a^2*b^3*c^4*d*m^2 - 27*a^2*b^2*c^5*h^2*j - 27* \\
& a^2*b^3*c^4*f*1^2 - 135*a^2*b^2*c^5*g^2*1 - 27*a^2*b^3*c^4*h*k^2 + 189*a^2* \\
& b^4*c^3*g*m^2 - 324*a^3*b^2*c^4*g*m^2 + 27*a^2*b^3*c^4*h^2*m + 27*a^2*b^3*c \\
& ^4*j^2*k + 27*a^3*b^2*c^4*j*1^2 + 27*a^2*b^4*c^3*k^2*1 - 135*a^3*b^2*c^4*k^ \\
& 2*1 + 27*a^2*b^5*c^2*k*m^2 - 162*a^3*b^3*c^3*k*m^2 + 108*a*b*c^7*d*e*g - 10 \\
& 8*a*b^2*c^6*d*g*h - 54*a*b^2*c^6*e*f*h - 162*a*b^2*c^6*d*e*k + 162*a*b^2*c^ \\
& 6*d*f*j - 162*a*b^3*c^5*d*f*m + 135*a*b^3*c^5*d*g*1 + 162*a*b^3*c^5*d*h*k - \\
& 27*a*b^3*c^5*e*g*k + 54*a*b^3*c^5*e*h*j + 27*a*b^3*c^5*f*g*j + 216*a^2*b*c \\
& ^6*d*f*m - 108*a^2*b*c^6*d*g*1 - 216*a^2*b*c^6*d*h*k + 108*a^2*b*c^6*e*g*k
\end{aligned}$$

$$\begin{aligned}
& - 216a^2b^6c^6e^h*j - 108a^2b^6c^6f*g*j - 54a^2b^4c^4e^h*m - 27a^2b^4c^4f*g*m + 27a^2b^4c^4g^h*k + 405a^2b^4c^4d*j*m - 189a^2b^4c^4d*k*1 \\
& + 54a^2b^5c^3g*j*m - 27a^2b^5c^3g*k*1 - 216a^3b^6c^5e^l*m - 216a^3b^6c^5f*k*m + 540a^3b^6c^5g*j*m - 108a^3b^6c^5g*k*1 + 270a^2b^2c^5e^h*m \\
& + 108a^2b^2c^5f*g*m + 54a^2b^2c^5f*h*1 - 108a^2b^2c^5g^h*k - 810a^2b^2c^5d*j*m + 378a^2b^2c^5d*k*1 - 54a^2b^2c^5e^j*1 - 54a^2b^2c^5f*j*k \\
& + 54a^2b^3c^4e^l*m + 54a^2b^3c^4f*k*m - 351a^2b^3c^4g*j*m + 135a^2b^3c^4g*k*1 - 54a^3b^2c^4h*1*m - 54a^2b^4c^3j*k*m + 270a^3b^2c^4j*k*m) / c^3 - (6a^3b^5m^4 - 9b^6c^7d^2e^2 \\
& - 27a^3b^6c^4j^4 + 12a^2c^6f*g^3 - 30a^4b^3c^m^4 + 21a^5b^c^2m^4 - 6b^2c^6d^3j + 24a^2c^6f^3j + 24a^3c^5f*j^3 + 12a^2c^6e^3m \\
& + 12a^3c^5h^3j + 12a^4c^4f*1^3 + 6b^3c^5d^3m - 12a^3c^5g^3m - 12a^4c^4j*k^3 - 6a^2b^6j*m^3 - 24a^4c^4j^3m - 24a^5c^3j*m^3 \\
& - 12a^5c^3l^3m + 6a^2b^3c^3j^4 - 3a^2b^6c^6f^4 - 12a^2c^7e^3f + 6b^6c^7d^3f + 12a^2c^7d^3j + 6a^2b^7f*m^3 + 36a^2c^7d^3e^f^2 + 6a^2b^6c^6e^3j \\
& - 36a^2c^7d^2f*g - 18a^2b^6c^6d^3m - 6a^2b^6c^6f*1^3 - 54a^2b^3c^3f^2m^2 - 81a^3b^3c^2j^2m^2 - 9a^2b^6c^6d^2h^2 - 9a^2b^6c^6e^2g^2 \\
& - 6a^2b^2c^5f*g^3 + 6a^2b^3c^4f*h^3 - 18a^2b^6c^5f*h^3 - 9b^2c^6d^2e^h + 6a^2b^5c^2f*k^3 + 6a^2b^6c^5g^3j + 36a^2c^6d^2e^j^2 + 36a^2c^6e^f*h^2 \\
& + 30a^3b^6c^4f*k^3 - 6a^2b^2c^5e^3m - 9b^4c^4d^2e^j^2 - 12a^2b^6c^5f^3m - 42a^2b^5c^4f*m^3 - 36a^2c^6d^2g^2j - 36a^2c^6f^2g^h - 60a^4b^6c^3f*m^3 \\
& - 9b^3c^5d^2e^2k - 36a^2c^6d^2f^2l - 36a^2c^6e^f^2k + 36a^3c^5d^2e^m^2 - 9b^3c^5d^2e^l + 36a^2c^6e^2f*1 - 36a^2c^6e^2h*j + 6a^3b^6c^4h^3m \\
& - 36a^3c^5e^f*1^2 - 9b^6c^2d^2e^m^2 + 6a^2b^5c^3j*1^3 + 36a^2c^6d^2g^m - 36a^3c^5f*g*k^2 + 30a^4b^6c^3j*1^3 - 36a^2c^6d^2j*k + 18a^3b^4c^2j*m^3 \\
& + 36a^3c^5d^2j*k^2 - 36a^3c^5g^h*j^2 - 36a^3c^5d^2j^2*1 - 36a^3c^5e^h^2m - 36a^3c^5e^j^2k - 36a^3c^5f*h^2*1 - 18a^4b^6c^3k^3m - 6a^3b^4c^1^3m + 36a^3c^5g^2j*k \\
& - 36a^4c^4g^h*m^2 - 72a^3c^5f^2j*m + 36a^3c^5f^2k*1 - 36a^4c^4d^1m^2 - 36a^4c^4e^k*m^2 + 72a^4c^4f*j*m^2 - 36a^3c^5e^2l*m \\
& + 36a^4c^4e^l^2m - 36a^4c^4h*j*1^2 + 36a^4c^4g^k^2m + 36a^4c^4h^2*1m + 36a^4c^4j^2k*1 + 36a^5c^3k*1m^2 - 9a^2b^6c^5g^2h^2 \\
& + 9a^2b^3c^4f^2j^2 - 9a^2b^6c^5d^2*1^2 - 9a^2b^6c^5e^2k^2 - 54a^2b^6c^5f^2j^2 + 24a^2b^2c^4f*f*j^3 - 30a^2b^3c^3f*k^3 - 6a^2b^2c^4h^3j \\
& + 36a^2b^4c^2f*1^3 - 54a^3b^2c^3f*1^3 + 9a^2b^5c^2f^2m^2 + 54a^3b^6c^4f^2m^2 - 9a^3b^6c^4g^2*1^2 - 9a^3b^6c^4h^2k^2 + 84a^3b^3c^2f*m^3 \\
& - 6a^2b^4c^2j*k^3 + 24a^3b^2c^3j*k^3 - 30a^3b^3c^2j*1^3 - 18a^2b^4c^2j^3m + 18a^2b^5c^2j^2m^2 + 84a^3b^2c^3j^3m + 18a^4b^6c^3j^2m^2 \\
& - 9a^4b^6c^3k^2*1^2 + 36a^4b^2c^2j*m^3 + 6a^3b^3c^2k^3m + 24a^4b^2c^2*1^3m - 45a^2b^2c^4d^2e^m^2 + 9a^2b^2c^4d^2g*1^2 \\
& + 72a^2b^2c^4e^f*1^2 + 9a^2b^2c^4e^h*k^2 + 72a^2b^2c^4f*g*k^2 - 18a^2b^2c^4d^2j*k^2 + 9a^2b^2c^4g^h*j^2 - 36a^2b^3c^3d^2h*m^2 \\
& - 36a^2b^3c^3e^g*m^2 + 9a^2b^2c^4d^2j^2*1 + 9a^2b^2c^4e^j^2k + 72a^2b^2c^4f*h^2*1 + 9a^2b^2c^4g^h^2k - 90a^2b^2c^4e^j^2k \\
& + 72a^2b^2c^4f*h^2*1 + 9a^2b^2c^4g^h^2k - 90a^2b^2c^4e^j^2k
\end{aligned}$$

$$\begin{aligned}
& 2b^3c^3f^*h^*l^2 + 9a^2b^2c^4g^2h^*l - 9a^2b^3c^3d^*k^*l^2 + 18a^2b^3c^3e^*j^*l^2 - 18a^2b^2c^4g^2j^*k - 9a^2b^3c^3e^*k^2l + 18a^2b^3c^3g^*j^*k^2 - 9a^2b^4c^2g^*h^*m^2 + 45a^3b^2c^3g^*h^*m^2 + 108a^2b^2c^4f^2j^*m - 45a^2b^2c^4f^2k^*l - 90a^2b^3c^3f^*j^2m - 18a^2b^3c^3g^*j^2l - 18a^2b^3c^3h^*j^2k - 9a^2b^4c^2d^*l^*m^2 - 9a^2b^4c^2e^*k^*m^2 + 108a^2b^4c^2f^*j^*m^2 + 45a^3b^2c^3d^*l^*m^2 + 45a^3b^2c^3e^*k^*m^2 - 144a^3b^2c^3f^*j^*m^2 + 18a^2b^3c^3h^2j^*l - 18a^2b^4c^2h^*j^*l^2 - 18a^3b^2c^3e^*l^2m + 9a^3b^2c^3g^*k^*l^2 + 72a^3b^2c^3h^*j^*l^2 - 18a^3b^2c^3g^*k^2m + 9a^3b^2c^3h^*k^2l - 9a^3b^3c^2g^*l^*m^2 - 9a^3b^3c^2h^*k^*m^2 + 18a^2b^4c^2j^2k^*l - 18a^3b^2c^3h^2l^*m - 81a^3b^2c^3j^2k^*l + 18a^3b^3c^2h^*l^2m - 81a^4b^2c^2k^*l^*m^2 + 18a^*b^*c^6d^*f^*g^2 + 18a^*b^*c^6e^2f^*h + 18a^*b^*c^6d^*e^2k + 18a^*b^*c^6d^2e^*l + 18a^*b^*c^6d^2f^*k + 18a^*b^*c^6d^2g^*j - 9b^3c^5d^*e^*g^*h + 18b^3c^5d^*e^*f^*j - 72a^2c^6d^*e^*f^*m + 72a^2c^6d^*f^*g^*k - 18b^4c^4d^*e^*f^*m + 9b^4c^4d^*e^*g^*l + 9b^4c^4d^*e^*h^*k - 18a^*b^6c^*f^*j^*m^2 + 18b^5c^3d^*e^*j^*m - 9b^5c^3d^*e^*k^*l + 72a^3c^5f^*g^*h^*m + 72a^3c^5d^*f^*l^*m - 72a^3c^5d^*g^*k^*m + 72a^3c^5e^*f^*k^*m + 72a^3c^5e^*h^*j^*l - 72a^4c^4f^*k^*l^*m + 27a^*b^2c^5d^*e^*j^2 + 9a^*b^2c^5d^*g^*h^2 - 18a^*b^2c^5e^*f^*h^2 + 9a^*b^2c^5e^*g^2h + 9a^*b^2c^5f^2g^*h + 18a^*b^3c^4d^*f^*k^2 - 54a^2b^*c^5d^*f^*k^2 + 9a^*b^2c^5d^*f^2l + 9a^*b^2c^5e^*f^2k + 9a^*b^3c^4d^*h^*j^2 + 9a^*b^3c^4e^*g^*j^2 + 45a^*b^4c^3d^*e^*m^2 - 36a^2b^*c^5d^*h^*j^2 - 36a^2b^*c^5e^*g^*j^2 - 18a^*b^2c^5e^2f^*l + 9a^*b^2c^5e^2g^*k - 9a^*b^3c^4d^*h^2k - 18a^*b^4c^3e^*f^*l^2 + 18a^2b^*c^5d^*h^2k + 18a^2b^*c^5e^*h^2j - 18a^*b^2c^5d^2g^*m + 9a^*b^2c^5d^2h^*l - 9a^*b^3c^4e^*g^2l + 18a^*b^3c^4f^*g^2k - 18a^*b^4c^3f^*g^*k^2 + 18a^2b^*c^5d^*g^2m + 18a^2b^*c^5e^*g^2l - 54a^2b^*c^5f^*g^2k - 9a^*b^3c^4f^2g^*l - 9a^*b^3c^4f^2h^*k + 9a^*b^5c^2d^*h^*m^2 + 9a^*b^5c^2e^*g^*m^2 + 36a^2b^*c^5f^2g^*l + 36a^2b^*c^5f^2h^*k - 18a^*b^4c^3f^*h^2l + 18a^*b^5c^2f^*h^*l^2 + 18a^2b^*c^5e^2h^*m + 90a^3b^*c^4f^*h^*l^2 + 18a^2b^*c^5e^2j^*l + 18a^3b^*c^4d^*k^*l^2 - 54a^3b^*c^4e^*j^*l^2 + 18a^2b^*c^5d^2k^*m + 18a^3b^*c^4d^*k^2m + 18a^3b^*c^4e^*k^2l - 54a^3b^*c^4g^*j^*k^2 - 18a^*b^4c^3f^2j^*m + 9a^*b^4c^3f^2k^*l + 18a^*b^5c^2f^*j^2m + 36a^3b^*c^4f^*j^2m + 72a^3b^*c^4g^*j^2l + 72a^3b^*c^4h^*j^2k - 54a^3b^*c^4h^2j^*l + 18a^3b^*c^4g^2k^*m + 36a^4b^*c^3h^*k^*m^2 - 54a^4b^*c^3h^*l^2m + 18a^3b^4c^*k^*l^*m^2 - 90a^2b^2c^4f^*g^*h^*m - 90a^2b^2c^4d^*f^*l^*m + 72a^2b^2c^4d^*h^*j^*m - 18a^2b^2c^4d^*h^*k^*l - 90a^2b^2c^4e^*f^*k^*m + 72a^2b^2c^4e^*g^*j^*m - 18a^2b^2c^4e^*g^*k^*l - 36a^2b^2c^4e^*h^*j^*l - 72a^2b^2c^4f^*g^*j^*l - 72a^2b^2c^4f^*h^*j^*k + 90a^2b^3c^3f^*g^*l^*m + 90a^2b^3c^3f^*h^*k^*m - 9a^2b^3c^3g^*h^*k^*l + 90a^2b^3c^3f^*j^*k^*l - 108a^2b^4c^2f^*k^*l^*m + 18a^2b^4c^2g^*j^*l^*m + 18a^2b^4c^2h^*j^*k^*m + 162a^3b^2c^3f^*k^*l^*m - 72a^3b^2c^3g^*j^*l^*m - 72a^3b^2c^3h^*j^*k^*m + 72a^3b^3c^2j^*k^*l^*m - 72a^*b^*c^6d^*e^*f^*j + 18a^*b^6c^*f^*k^*l^*m + 90a^*b^2c^5d^*e^*f^*m - 18a^*b^2c^5d^*e^*g^*l - 18a^*b^2c^5d^*e^*h^*k - 36a^*b^2c^5d^*f^*g^*k - 9a^*b^3c^4d^*g^*h^*l + 36a^*b^3c^4e^*f^*h^*l - 9a^*b^3c^4e^*g^*h^*k - 18a^*b^3c^4f^*g^*h^*j - 108a^2b^*c^5e^*f^*h^*l + 72a^2b^*c
\end{aligned}$$



$$\begin{aligned}
& ^5f*g*h*j - 72*a*b^3*c^4*d*e*j*m + 36*a*b^3*c^4*d*e*k*1 - 18*a*b^3*c^4*d*f*j*1 - 18*a*b^3*c^4*e*f*j*k - 36*a^2*b*c^5*d*e*k*1 + 72*a^2*b*c^5*d*f*j*1 + \\
& 36*a^2*b*c^5*d*g*j*k + 72*a^2*b*c^5*e*f*j*k + 18*a*b^4*c^3*f*g*h*m + 18*a*b^4*c^3*d*f*1*m - 18*a*b^4*c^3*d*h*j*m + 9*a*b^4*c^3*d*h*k*1 + 18*a*b^4*c^3 \\
& *e*f*k*m - 18*a*b^4*c^3*e*g*j*m + 9*a*b^4*c^3*e*g*k*1 + 18*a*b^4*c^3*f*g*j*1 + 18*a*b^4*c^3*f*h*j*k - 18*a*b^5*c^2*f*g*1*m - 18*a*b^5*c^2*f*h*k*m + 36 \\
& *a^3*b*c^4*e*h*1*m - 72*a^3*b*c^4*f*g*1*m - 72*a^3*b*c^4*f*h*k*m - 18*a*b^5*c^2*f*j*k*1 - 72*a^3*b*c^4*f*j*k*1 - 18*a^2*b^5*c*j*k*1*m)/c^3 + (x*(6*c^8 \\
& *d^4 + 3*b^8*d*m^3 - 6*a^2*c^6*g^4 + 6*a^4*c^4*k^4 + 3*a*b^2*c^5*g^4 - 18*a*c^7*e^2*f^2 - 6*b^2*c^6*d*f^3 - 12*a^2*c^6*d*h^3 - 3*b^3*c^5*d*g^3 - 9*b^2 \\
& *c^6*e^3*g + 3*b^4*c^4*d*h^3 - 24*a^3*c^5*d*k^3 - 3*b^5*c^3*d*j^3 + 12*b^2*c^6*d^3*k + 3*b^6*c^2*d*k^3 - 12*a^2*c^6*f^3*k + 24*a^3*c^5*g*j^3 - 12*a^4*c^4*d*m^3 + 9*b^3*c^5*e^3*k + 12*a^3*c^5*h^3*k - 24*a^4*c^4*g*1^3 + 3*a^2*b \\
& ^6*k*m^3 + 12*a^5*c^3*k*m^3 + 9*b^2*c^6*d^2*g^2 + 9*b^2*c^6*e^2*f^2 + 3*a^2*b^4*c^2*k^4 - 12*a^3*b^2*c^3*k^4 + 18*a^2*c^6*f^2*h^2 + 36*a^2*c^6*d^2*k^2 \\
& + 18*a^2*c^6*e^2*j^2 + 9*b^4*c^4*d^2*k^2 + 9*b^4*c^4*e^2*j^2 - 18*a^3*c^5*e^2*m^2 - 18*a^3*c^5*f^2*1^2 - 18*a^3*c^5*h^2*j^2 + 9*b^6*c^2*e^2*m^2 + 18*a^4*c^4*h^2*m^2 + 18*a^4*c^4*j^2*1^2 - 18*a^5*c^3*1^2*m^2 + 12*a*c^7*d*f^3 \\
& + 6*b*c^7*d*e^3 + 24*a*c^7*e^3*g - 12*b*c^7*d^3*g - 24*a*c^7*d^3*k - 3*b^7*c*d*1^3 - 3*a*b^7*g*m^3 + 6*a*b*c^6*f^3*g - 36*a*c^7*d*e^2*h - 30*a*b*c^6*e^3*k - 24*a*b^6*c*d*m^3 + 36*a*c^7*d^2*e*j + 3*a*b^6*c*g*1^3 - 9*b^7*c*d*j*m^2 + 81*a^2*b^2*c^4*e^2*m^2 + 9*a^2*b^2*c^4*f^2*1^2 - 27*a^2*b^2*c^4*g^2*k^2 + 9*a^2*b^2*c^4*h^2*j^2 + 9*a^2*b^4*c^2*h^2*m^2 - 36*a^3*b^2*c^3*h^2*m^2 + 9*a^4*b^2*c^2*1^2*m^2 - 12*a*b^2*c^5*d*h^3 + 24*a*b^3*c^4*d*j^3 - 42*a^2*b*c^5*d*j^3 - 3*a*b^3*c^4*g*h^3 - 18*a*b^4*c^3*d*k^3 + 18*a^2*b*c^5*g*h^3 + 21*a*b^5*c^2*d*1^3 + 30*a^3*b*c^4*d*1^3 - 9*b^3*c^5*d*e*h^2 + 3*a*b^4*c^3*g*j^3 - 9*a*b^3*c^4*g^3*k - 3*a*b^5*c^2*g*k^3 + 24*a^2*b*c^5*g^3*k + 36*a^2*c^6*d*f*j^2 + 12*a^3*b*c^4*g*k^3 - 9*b^2*c^6*d^2*e*j + 9*b^3*c^5*d*f^2*j + 9*b^3*c^5*e^2*g*h + 21*a^2*b^5*c*g*m^3 + 36*a^2*c^6*e*g^2*j - 6*a^4*b*c^3*g*m^3 - 18*b^3*c^5*e^2*f*j - 9*b^5*c^3*d*e*1^2 - 36*a^2*c^6*d*f^2*m + 36*a^2*c^6*e*f^2*1 + 18*a^3*b*c^4*j^3*k + 36*a^3*c^5*d*f*m^2 + 9*b^3*c^5*d^2*e*m - 18*b^3*c^5*d^2*g*k + 9*b^3*c^5*d^2*h*j + 9*b^4*c^4*d*g^2*k - 9*b^5*c^3*d*g*k^2 + 36*a^2*c^6*e^2*f*m - 72*a^2*c^6*e^2*g*1 + 36*a^2*c^6*e^2*h*k - 36*a^3*c^5*d*h*1^2 + 72*a^3*c^5*e*g*1^2 - 9*b^4*c^4*d*f^2*m - 3*a^2*b^5*c*k*1^3 - 6*a^4*b*c^3*k*1^3 + 18*b^4*c^4*e^2*f*m - 9*b^4*c^4*e^2*g*1 - 9*b^4*c^4*e^2*h*k - 9*b^5*c^3*d*h^2*1 + 9*b^6*c^2*d*h*1^2 - 36*a^2*c^6*d^2*j*1 - 18*a^3*b^4*c*k*m^3 + 36*a^3*c^5*e*j*k^2 - 9*b^4*c^4*d^2*h*m - 36*a^3*c^5*d*j^2*m - 36*a^3*c^5*e*j^2*1 - 36*a^3*c^5*f*h^2*m - 36*a^3*c^5*f*j^2*k - 9*b^4*c^4*d^2*j*1 + 9*b^6*c^2*d*j^2*m - 36*a^3*c^5*g^2*j*1 - 18*b^5*c^3*e^2*j*m + 9*b^5*c^3*e^2*k*1 + 36*a^3*c^5*f^2*k*m + 36*a^4*c^4*e*1*m^2 - 36*a^4*c^4*f*k*m^2 + 9*b^5*c^3*d^2*1*m + 36*a^4*c^4*f*1^2*m + 36*a^4*c^4*h*k*1^2 - 36*a^4*c^4*j*k^2*1 + 36*a^4*c^4*j^2*k*m - 36*a*b^2*c^5*d^2*k^2 - 36*a*b^2*c^5*e^2*j^2 + 36*a^2*b^2*c^4*d*k^3 - 42*a^2*b^3*c^3*d*1^3 - 21*a^2*b^2*c^4*g*j^3 + 51*a^2*b^4*c^2*d*m^3 - 12*a^3*b^2*c^3*d*m^3 - 54*a*b^4*c^3*e^2*m^2 + 9*a*b^4*c^3*g^2*k^2 + 6*a^2*b^3*c^3*g*k^3 - 6*a^2*b^2*c^4*h^3*k - 18*a^2*b^4*c^
\end{aligned}$$

$$\begin{aligned}
& 2*g^1^3 + 27*a^3*b^2*c^3*g^1^3 - 33*a^3*b^3*c^2*g^m^3 - 3*a^2*b^3*c^3*j^3*k \\
& + 15*a^3*b^3*c^2*k^1^3 + 18*a^4*b^2*c^2*k^m^3 + 9*b^7*c*d*k^1*m - 18*a^2*b^2*c^4*d*f^m^2 + 72*a^2*b^2*c^4*d*h^1^2 - 63*a^2*b^2*c^4*e*g^1^2 - 9*a^2*b^2*c^4*e*j^k^2 + 90*a^2*b^3*c^3*e*h^m^2 + 144*a^2*b^2*c^4*d*j^2*m + 18*a^2*b^2*c^4*e*j^2*1 + 18*a^2*b^2*c^4*f*h^2*m - 45*a^2*b^2*c^4*g*h^2*1 - 153*a^2*b^3*c^3*d*j^m^2 + 45*a^2*b^3*c^3*g*h^1^2 + 36*a^2*b^2*c^4*g^2*h^m + 9*a^2*b^3*c^3*e*k^1^2 + 45*a^2*b^2*c^4*g^2*j*1 + 9*a^2*b^3*c^3*e*k^2*m + 9*a^2*b^3*c^3*h*j^k^2 - 18*a^2*b^2*c^4*f^2*k^m + 63*a^2*b^3*c^3*g*j^2*m + 18*a^2*b^4*c^2*e^1*m^2 - 63*a^2*b^4*c^2*g*j^m^2 - 72*a^3*b^2*c^3*e^1*m^2 + 99*a^3*b^2*c^3*g*j^m^2 - 18*a^2*b^3*c^3*h^2*j^m + 9*a^2*b^4*c^2*h*k^1^2 - 54*a^3*b^2*c^3*h*k^1^2 - 45*a^2*b^3*c^3*g^2*1*m - 9*a^2*b^4*c^2*h*k^2*m + 36*a^3*b^2*c^3*h*k^2*m - 9*a^2*b^4*c^2*j^k^2*1 + 45*a^3*b^2*c^3*j^k^2*1 - 18*a^3*b^3*c^2*h^1*m^2 + 9*a^2*b^4*c^2*j^2*k^m - 54*a^3*b^2*c^3*j^2*k^m + 54*a^3*b^3*c^2*j^k^m^2 - 45*a^3*b^3*c^2*k^2*1*m + 54*a*b*c^6*d*e*h^2 - 18*a*b*c^6*e*f^2*h - 18*a*b*c^6*d*f^2*j - 18*a*b*c^6*e^2*g*h + 18*a*b*c^6*d*e^2*1 + 54*a*b*c^6*e^2*f*j - 36*a*b*c^6*d^2*e^m + 36*a*b*c^6*d^2*g*k - 36*a*b*c^6*d^2*h*j + 9*b^3*c^5*d*e*g*j + 72*a^2*c^6*d*e*h^1 - 72*a^2*c^6*e*f*h*j - 72*a^2*c^6*d*e*j^k - 9*b^4*c^4*d*e*g^m + 18*b^4*c^4*d*e*h^1 - 9*b^4*c^4*d*g*h*j - 9*b^4*c^4*d*e*j^k + 9*a*b^6*c*g*j^m^2 + 9*b^5*c^3*d*g*h^m + 9*b^5*c^3*d*e*k^m + 9*b^5*c^3*d*g*j*1 + 9*b^5*c^3*d*h*j^k - 72*a^3*c^5*e*f^1*m + 72*a^3*c^5*e*h*j^m - 72*a^3*c^5*e*h*k^1 + 72*a^3*c^5*f*h*j*1 + 72*a^3*c^5*d*j^k*1 - 9*b^6*c^2*d*g^1*m - 9*b^6*c^2*d*h*k^m - 9*b^6*c^2*d*j^k*1 - 72*a^4*c^4*h*j*1*m - 18*a*b^2*c^5*d*f^j^2 - 9*a*b^2*c^5*e*g*h^2 + 54*a*b^3*c^4*d*e^1^2 - 54*a^2*b*c^5*d*e^1^2 - 18*a*b^2*c^5*d*g^2*k - 9*a*b^2*c^5*e*g^2*j + 36*a*b^3*c^4*d*g*k^2 - 36*a^2*b*c^5*d*g*k^2 + 36*a*b^2*c^5*d*f^2*m - 9*a*b^2*c^5*f^2*g*j - 18*a*b^3*c^4*e*h*j^2 + 54*a^2*b*c^5*e*h*j^2 + 18*a^2*b*c^5*f*g*j^2 - 72*a*b^2*c^5*e^2*f^m + 45*a*b^2*c^5*e^2*g^1 + 18*a*b^2*c^5*e^2*h*k + 45*a*b^3*c^4*d*h^2*1 + 18*a*b^3*c^4*e*h^2*k - 54*a*b^4*c^3*d*h^1^2 + 9*a*b^4*c^3*e*g^1^2 - 18*a^2*b*c^5*d*h^2*1 - 54*a^2*b*c^5*e*h^2*k - 18*a^2*b*c^5*f*h^2*j + 36*a*b^2*c^5*d^2*h^m + 9*a*b^3*c^4*e*g^2*m + 9*a*b^3*c^4*g^2*h*j - 36*a^2*b*c^5*e*g^2*m - 36*a^2*b*c^5*g^2*h*j + 45*a*b^2*c^5*d^2*j*1 + 9*a*b^3*c^4*f^2*g^m - 18*a*b^5*c^2*e*h^m^2 - 18*a^2*b*c^5*f^2*g^m - 18*a^2*b*c^5*f^2*h^1 - 90*a^3*b*c^4*e*h^m^2 + 18*a^3*b*c^4*f*g^m^2 - 72*a*b^4*c^3*d*j^2*m + 9*a*b^4*c^3*g*h^2*1 + 72*a*b^5*c^2*d*j^m^2 - 9*a*b^5*c^2*g*h^1^2 + 18*a^2*b*c^5*f^2*j^k + 54*a^3*b*c^4*d*j^m^2 - 18*a^3*b*c^4*g*h^1^2 + 90*a*b^3*c^4*e^2*j^m - 45*a*b^3*c^4*e^2*k^1 - 9*a*b^4*c^3*g^2*h^m - 90*a^2*b*c^5*e^2*j^m + 54*a^2*b*c^5*e^2*k^1 - 18*a^3*b*c^4*e*k^1^2 - 18*a^3*b*c^4*f*j^1^2 - 45*a*b^3*c^4*d^2*1*m - 9*a*b^4*c^3*g^2*j*1 + 36*a^2*b*c^5*d^2*1*m - 36*a^3*b*c^4*e*k^2*m - 36*a^3*b*c^4*h*j^k^2 - 9*a*b^5*c^2*g*j^2*m - 90*a^3*b*c^4*g*j^2*m - 18*a^3*b*c^4*h*j^2*1 + 54*a^3*b*c^4*h^2*j^m + 18*a^3*b*c^4*h^2*k^1 + 9*a*b^5*c^2*g^2*1*m + 36*a^3*b*c^4*g^2*1*m + 54*a^4*b*c^3*h^1*m^2 - 9*a^2*b^5*c*j^k^m^2 - 54*a^4*b*c^3*j^k^m^2 - 18*a^4*b*c^3*j^1^2*m + 9*a^2*b^5*c*k^2*1*m + 36*a^4*b*c^3*k^2*1*m - 36*a^2*b^2*c^4*d*g^1*m - 72*a^2*b^2*c^4*d*h*k^m + 36*a^2*b^2*c^4*e*f^1*m + 36*a^2*b^2*c^4*e*g*k^m - 144*a^2*b^2*c^4*e*h*j^m + 72*a^2*b^2*c^4*e*h*k^1 - 18*a^2*b^2*c^4*f*g*j^m + 36*a^2*b^2*c^4*g*h*j^k
\end{aligned}$$

$$\begin{aligned}
& - 126a^2b^2c^4d^*jk^*k^*l - 36a^2b^3c^3g^*h^*k^*m + 126a^2b^3c^3d^*k^*l^* \\
& m - 36a^2b^3c^3e^*j^*l^*m - 45a^2b^3c^3g^*j^*k^*l + 45a^2b^4c^2g^*k^*l^* \\
& m - 36a^3b^2c^3g^*k^*l^*m + 36a^3b^2c^3h^*j^*l^*m - 36a^*b^*c^6d^*e^*g^*j - \\
& 9a^*b^6c^*g^*k^*l^*m + 36a^*b^2c^5d^*e^*g^*m - 108a^*b^2c^5d^*e^*h^*l + 36a^*b^2 \\
& *c^5d^*g^*h^*j + 36a^*b^2c^5e^*f^*h^*j + 54a^*b^2c^5d^*e^*j^*k - 36a^*b^3c^4d^ \\
& *g^*h^*m - 36a^*b^3c^4e^*f^*h^*m + 108a^2b^*c^5e^*f^*h^*m + 36a^2b^*c^5e^*g^*h^* \\
& l - 54a^*b^3c^4d^*e^*k^*m + 18a^*b^3c^4d^*f^*j^*m - 45a^*b^3c^4d^*g^*j^*l - 54 \\
& *a^*b^3c^4d^*h^*j^*k + 9a^*b^3c^4e^*g^*j^*k + 72a^2b^*c^5d^*e^*k^*m - 36a^2b^*c^5d^*f^*j^* \\
& m + 36a^2b^*c^5d^*g^*j^*l + 72a^2b^*c^5d^*h^*j^*k - 36a^2b^*c^5e^*f^*j^*l - 36a^2b^*c^5e^*g^*j^*k + \\
& 45a^*b^4c^3d^*g^*l^*m + 54a^*b^4c^3d^*h^*k^*m - 9a^*b^4c^3e^*g^*k^*m + 36a^*b^4c^3e^*h^*j^*m - \\
& 18a^*b^4c^3e^*h^*k^*l - 9a^*b^4c^3g^*h^*j^*k + 63a^*b^4c^3d^*j^*k^*l + 9a^*b^5c^2g^*h^*k^*m - 36a^3b^*c^4f^* \\
& h^*l^*m - 63a^*b^5c^2d^*k^*l^*m + 9a^*b^5c^2g^*j^*k^*l - 72a^3b^*c^4d^*k^*l^*m + 108a^3b^*c^4e^*j^*l^*m + \\
& 36a^3b^*c^4f^*j^*k^*m + 36a^3b^*c^4g^*j^*k^*l)/c^3))\text{root}(34992a^4b^2c^8z^6 - 8748a^3b^4c^7z^6 + 729a^2b^6c^6z^6 \\
& - 46656a^5c^9z^6 + 34992a^4b^3c^6mz^5 - 8748a^3b^5c^5mz^5 + 729a^2b^7c^4mz^5 - 34992a^4b^2c^7jz^5 + 8748a^3b^4c^6jz^5 - 7 \\
& 29a^2b^6c^5jz^5 - 46656a^5b^*c^7mz^5 + 46656a^5c^8jz^5 + 34992a^5b^*c^6j^*mz^4 - 11664a^5b^*c^6k^*l^*z^4 + 3888a^4b^*c^7f^*j^*z^4 + 3888 \\
& *a^4b^*c^7e^*k^*z^4 + 3888a^4b^*c^7d^*l^*z^4 + 3888a^4b^*c^7g^*h^*z^4 + 3888 \\
& *a^3b^*c^8d^*e^*z^4 + 243a^*b^5c^6d^*e^*z^4 - 25272a^4b^3c^5j^*mz^4 + 9720a^4b^3c^5k^*l^*z^4 + 6075a^3b^5c^4j^*mz^4 - 2673a^3b^5c^4k^*l^*z^4 \\
& - 486a^2b^7c^3j^*mz^4 + 243a^2b^7c^3k^*l^*z^4 - 7776a^4b^2c^6h^*k^*z^4 - 7776a^4b^2c^6g^*l^*z^4 - 7776a^4b^2c^6f^*mz^4 + 2430a^3b^4c^5h^*k^*z^4 + 2430a^3b^4c^5g^*l^*z^4 + 2430a^3b^4c^5f^*mz^4 - 243a^2b^6c^4h^*k^*z^4 - 243a^2b^6c^4g^*l^*z^4 - 243a^2b^6c^4f^*mz^4 - 1944a^3b^3c^6f^*j^*z^4 - 1944a^3b^3c^6e^*k^*z^4 - 1944a^3b^3c^6d^*l^*z^4 + 243a^2b^5c^5f^*j^*z^4 + 243a^2b^5c^5e^*k^*z^4 + 243a^2b^5c^5d^*l^*z^4 - 1944a^3b^3c^6g^*h^*z^4 + 243a^2b^5c^5g^*h^*z^4 + 3888a^3b^2c^7e^*g^*z^4 + 3888a^3b^2c^7d^*h^*z^4 - 486a^2b^4c^6e^*g^*z^4 - 486a^2b^4c^6d^*h^*z^4 - 1944a^2b^3c^7d^*e^*z^4 + 7776a^5c^7h^*k^*z^4 + 7776a^5c^7g^*l^*z^4 + 7776a^5c^7f^*mz^4 - 7776a^4c^8e^*g^*z^4 - 7776a^4c^8d^*h^*z^4 - 13608a^5b^2c^5m^2z^4 + 11421a^4b^4c^4m^2z^4 - 2916a^3b^6c^3m^2z^4 + 243a^2b^8c^2m^2z^4 + 13608a^4b^2c^6j^2z^4 - 3159a^3b^4c^5j^2z^4 + 243a^2b^6c^4j^2z^4 + 1944a^3b^2c^7f^2z^4 - 243a^2b^4c^6f^2z^4 - 3888a^6c^6m^2z^4 - 19440a^5c^7j^2z^4 - 3888a^4c^8f^2z^4 + 3078a^4b^4c^3k^*l^*mz^3 - 2592a^5b^2c^4k^*l^*mz^3 - 891a^3b^6c^2k^*l^*mz^3 - 4536a^4b^3c^4j^*k^*l^*z^3 + 1053a^3b^5c^3j^*k^*l^*z^3 - 81a^2b^7c^2j^*k^*l^*z^3 - 2592a^4b^3c^4h^*k^*mz^3 - 2592a^4b^3c^4g^*l^*mz^3 + 810a^3b^5c^3h^*k^*mz^3 + 810a^3b^5c^3g^*l^*mz^3 - 81a^2b^7c^2h^*k^*mz^3 - 81a^2b^7c^2g^*l^*mz^3 + 7776a^4b^2c^5f^*j^*mz^3 + 3888a^4b^2c^5h^*j^*k^*z^3 + 3888a^4b^2c^5g^*j^*l^*z^3 - 3888a^4b^2c^5f^*k^*l^*z^3 - 2916a^3b^4c^4f^*j^*mz^3 + 1458a^3b^4c^4f^*k^*l^*z^3 - 972a^3b^4c^4h^*j^*k^*z^3 - 972a^3b^4c^4g^*j^*l^*z^3 - 486a^3b^4c^4e^*k^*mz^3 - 486a^3b^4c^4d^*l^*mz^3 + 324a^2b^6c^3f^*j^*mz^3 - 162
\end{aligned}$$

$$\begin{aligned}
& a^2 b^6 c^3 f^* k^* l^* z^3 + 81 a^2 b^6 c^3 h^* j^* k^* z^3 + 81 a^2 b^6 c^3 g^* j^* l^* z^3 \\
& + 81 a^2 b^6 c^3 e^* k^* m^* z^3 + 81 a^2 b^6 c^3 d^* l^* m^* z^3 - 486 a^3 b^4 c^4 g^* \\
& h^* m^* z^3 + 81 a^2 b^6 c^3 g^* h^* m^* z^3 + 648 a^3 b^3 c^5 e^* j^* k^* z^3 + 648 a^3 b^3 \\
& c^5 d^* j^* l^* z^3 - 81 a^2 b^5 c^4 e^* j^* k^* z^3 - 81 a^2 b^5 c^4 d^* j^* l^* z^3 + 25 \\
& 92 a^3 b^3 c^5 e^* g^* m^* z^3 + 2592 a^3 b^3 c^5 d^* h^* m^* z^3 - 1296 a^3 b^3 c^5 f^* \\
& h^* k^* z^3 - 1296 a^3 b^3 c^5 f^* g^* l^* z^3 - 1296 a^3 b^3 c^5 e^* h^* l^* z^3 + 648 a^3 \\
& b^3 c^5 g^* h^* j^* z^3 - 324 a^2 b^5 c^4 e^* g^* m^* z^3 - 324 a^2 b^5 c^4 d^* h^* m^* z^3 \\
& + 162 a^2 b^5 c^4 f^* h^* k^* z^3 + 162 a^2 b^5 c^4 f^* g^* l^* z^3 + 162 a^2 b^5 c^4 e^* \\
& h^* l^* z^3 - 81 a^2 b^5 c^4 g^* h^* j^* z^3 + 5184 a^3 b^2 c^6 d^* e^* m^* z^3 - 2592 a^3 \\
& b^2 c^6 e^* g^* j^* z^3 - 2592 a^3 b^2 c^6 d^* h^* j^* z^3 - 2106 a^2 b^4 c^5 d^* e^* m^* z^3 \\
& + 1296 a^3 b^2 c^6 e^* f^* k^* z^3 + 1296 a^3 b^2 c^6 d^* g^* k^* z^3 + 1296 a^3 b^2 c^6 \\
& d^* f^* l^* z^3 + 324 a^2 b^4 c^5 e^* g^* j^* z^3 + 324 a^2 b^4 c^5 d^* h^* j^* z^3 - 162 \\
& a^2 b^4 c^5 e^* f^* k^* z^3 - 162 a^2 b^4 c^5 d^* g^* k^* z^3 - 162 a^2 b^4 c^5 d^* f^* l^* \\
& z^3 + 1296 a^3 b^2 c^6 f^* g^* h^* z^3 - 162 a^2 b^4 c^5 f^* g^* h^* z^3 + 1944 a^2 b^3 \\
& c^6 d^* e^* j^* z^3 - 1296 a^2 b^2 c^7 d^* e^* f^* z^3 + 81 a^2 b^8 c^* k^* l^* m^* z^3 + 6480 \\
& a^5 b^* c^5 j^* k^* l^* z^3 + 2592 a^5 b^* c^5 h^* k^* m^* z^3 + 2592 a^5 b^* c^5 g^* l^* m^* z^3 \\
& - 1296 a^4 b^* c^6 e^* j^* k^* z^3 - 1296 a^4 b^* c^6 d^* j^* l^* z^3 - 5184 a^4 b^* c^6 e^* g^* \\
& m^* z^3 - 5184 a^4 b^* c^6 d^* h^* m^* z^3 + 2592 a^4 b^* c^6 f^* h^* k^* z^3 + 2592 a^4 b^* c^6 \\
& f^* g^* l^* z^3 + 2592 a^4 b^* c^6 e^* h^* l^* z^3 - 1296 a^4 b^* c^6 g^* h^* j^* z^3 + 243 a^* b^6 \\
& c^4 d^* e^* m^* z^3 - 3888 a^3 b^* c^7 d^* e^* j^* z^3 - 243 a^* b^5 c^5 d^* e^* j^* z^3 + 162 \\
& a^* b^4 c^6 d^* e^* f^* z^3 - 2592 a^6 c^5 k^* l^* m^* z^3 - 5184 a^5 c^6 h^* j^* k^* z^3 - 51 \\
& 84 a^5 c^6 g^* j^* l^* z^3 - 5184 a^5 c^6 f^* j^* m^* z^3 + 2592 a^5 c^6 f^* k^* l^* z^3 + 25 \\
& 92 a^5 c^6 e^* k^* m^* z^3 + 2592 a^5 c^6 d^* l^* m^* z^3 + 2592 a^5 c^6 g^* h^* m^* z^3 + 51 \\
& 84 a^4 c^7 e^* g^* j^* z^3 + 5184 a^4 c^7 d^* h^* j^* z^3 - 2592 a^4 c^7 e^* f^* k^* z^3 - 25 \\
& 92 a^4 c^7 d^* g^* k^* z^3 - 2592 a^4 c^7 d^* f^* l^* z^3 - 2592 a^4 c^7 d^* e^* m^* z^3 - 25 \\
& 92 a^4 c^7 f^* g^* h^* z^3 + 2592 a^3 c^8 d^* e^* f^* z^3 + 6480 a^5 b^2 c^4 j^* m^2 z^3 \\
& + 6480 a^4 b^3 c^4 j^2 m^* z^3 - 5022 a^4 b^4 c^3 j^* m^2 z^3 - 1296 a^3 b^5 c^3 \\
& j^2 m^* z^3 + 1134 a^3 b^6 c^2 j^* m^2 z^3 + 81 a^2 b^7 c^2 j^2 m^* z^3 + 2592 a^4 \\
& b^3 c^4 h^* l^2 z^3 - 1944 a^4 b^2 c^5 h^2 l^* z^3 - 810 a^3 b^5 c^3 h^* l^2 z^3 \\
& + 729 a^3 b^4 c^4 h^2 l^* z^3 + 81 a^2 b^7 c^2 h^* l^2 z^3 - 81 a^2 b^6 c^3 \\
& h^2 l^* z^3 - 5184 a^4 b^3 c^4 f^* m^2 z^3 + 1620 a^3 b^5 c^3 f^* m^2 z^3 + 1296 \\
& a^3 b^3 c^5 f^2 m^* z^3 - 162 a^2 b^7 c^2 f^* m^2 z^3 - 162 a^2 b^5 c^4 f^2 m^* \\
& z^3 - 1944 a^4 b^2 c^5 g^* k^2 z^3 + 729 a^3 b^4 c^4 g^* k^2 z^3 - 648 a^3 b^3 c^5 \\
& g^2 k^* z^3 - 81 a^2 b^6 c^3 g^* k^2 z^3 + 81 a^2 b^5 c^4 g^2 k^* z^3 - 1944 a^4 \\
& b^2 c^5 e^* l^2 z^3 + 729 a^3 b^4 c^4 e^* l^2 z^3 + 648 a^3 b^2 c^6 e^2 l^* z^3 \\
& - 81 a^2 b^6 c^3 e^* l^2 z^3 - 81 a^2 b^4 c^5 e^2 l^* z^3 + 1296 a^3 b^3 c^5 \\
& f^* j^2 z^3 - 1296 a^3 b^2 c^6 f^2 j^* z^3 - 162 a^2 b^5 c^4 f^* j^2 z^3 + 162 a^2 \\
& b^4 c^5 f^2 j^* z^3 - 648 a^3 b^3 c^5 d^* k^2 z^3 + 81 a^2 b^5 c^4 d^* k^2 z^3 \\
& + 648 a^3 b^2 c^6 e^* h^2 z^3 - 81 a^2 b^4 c^5 e^* h^2 z^3 - 648 a^2 b^2 c^7 d^2 \\
& g^* z^3 - 10368 a^5 b^* c^5 j^2 m^* z^3 - 81 a^2 b^8 c^* j^* m^2 z^3 - 2592 a^5 b^* \\
& c^5 h^* l^2 z^3 + 5184 a^5 b^* c^5 f^* m^2 z^3 - 2592 a^4 b^* c^6 f^2 m^* z^3 + 1296 a^4 \\
& b^* c^6 g^2 k^* z^3 - 2592 a^4 b^* c^6 f^* j^2 z^3 + 1296 a^4 b^* c^6 d^* k^2 z^3 + \\
& 81 a^* b^4 c^6 d^2 g^* z^3 + 2592 a^6 c^5 j^* m^2 z^3 + 1296 a^5 c^6 h^2 l^* z^3 + \\
& 1296 a^5 c^6 g^* k^2 z^3 + 1296 a^5 c^6 e^* l^2 z^3 - 1296 a^4 c^7 e^2 l^* z^3 + \\
& 2592 a^4 c^7 f^2 j^* z^3 - 2592 a^6 b^* c^4 m^3 z^3 - 324 a^3 b^7 c^* m^3 z^3 -
\end{aligned}$$

$$\begin{aligned}
& 27a^2b^8c^1z^3 - 1296a^4c^7e^h^2z^3 - 864a^5b^5c^5k^3z^3 + 1296a^3c^8d^2g^*z^3 + 432a^4b^6c^6h^3z^3 + 27a^4b^4c^6e^3z^3 - 432a^2b^6c^8d^3z^3 + 216a^4b^3c^7d^3z^3 + 1134a^4b^5c^2m^3z^3 - 432a^5b^3c^3m^3z^3 + 1512a^5b^2c^4l^3z^3 - 1107a^4b^4c^3l^3z^3 + 297a^3b^6c^2l^3z^3 + 864a^4b^3c^4k^3z^3 - 270a^3b^5c^3k^3z^3 \\
& + 27a^2b^7c^2k^3z^3 - 2592a^4b^2c^5j^3z^3 + 486a^3b^4c^4j^3z^3 - 27a^2b^6c^3j^3z^3 - 216a^3b^3c^5h^3z^3 + 27a^2b^5c^4h^3z^3 + 216a^3b^2c^6g^3z^3 - 27a^2b^4c^5g^3z^3 - 216a^2b^2c^7e^3z^3 - 432a^6c^5l^3z^3 + 27a^2b^9m^3z^3 + 4320a^5c^6j^3z^3 - 432a^4c^7g^3z^3 + 432a^3c^8e^3z^3 - 27b^5c^6d^3z^3 + 81a^3b^6c^*j^*k^*l^*m^*z^2 - 1296a^5b^6c^4h^*j^*k^*m^*z^2 - 1296a^5b^6c^4g^*j^*l^*m^*z^2 + 1296a^5b^6c^4f^*k^*l^*m^*z^2 - 81a^2b^7c^*f^*k^*l^*m^*z^2 + 2592a^4b^6c^5e^*g^*j^*m^*z^2 + 2592a^4b^6c^5d^*h^*j^*m^*z^2 - 1296a^4b^6c^5f^*h^*j^*k^*z^2 - 1296a^4b^6c^5f^*g^*j^*l^*z^2 - 1296a^4b^6c^5e^*f^*k^*m^*z^2 - 1296a^4b^6c^5d^*f^*l^*m^*z^2 - 648a^4b^6c^5e^*h^*j^*l^*z^2 - 648a^4b^6c^5e^*g^*k^*l^*z^2 - 648a^4b^6c^5d^*h^*k^*l^*z^2 - 648a^4b^6c^5d^*g^*k^*m^*z^2 - 1296a^4b^6c^5f^*g^*h^*m^*z^2 - 162a^4b^6c^3d^*e^*j^*m^*z^2 + 81a^4b^6c^3d^*e^*k^*l^*z^2 + 1296a^3b^6c^6d^*e^*f^*m^*z^2 - 648a^3b^6c^6d^*f^*g^*k^*z^2 - 648a^3b^6c^6d^*e^*h^*k^*z^2 - 648a^3b^6c^6d^*e^*g^*l^*z^2 - 81a^4b^5c^4d^*e^*h^*k^*z^2 - 81a^4b^5c^4d^*e^*g^*l^*z^2 + 81a^4b^5c^4d^*e^*f^*m^*z^2 - 81a^4b^4c^5d^*e^*f^*j^*z^2 + 81a^4b^4c^5d^*e^*g^*h^*z^2 + 648a^5b^2c^3j^*k^*l^*m^*z^2 - 567a^4b^4c^2j^*k^*l^*m^*z^2 - 1944a^4b^3c^3f^*k^*l^*m^*z^2 + 729a^3b^5c^2f^*k^*l^*m^*z^2 + 648a^4b^3c^3h^*j^*k^*m^*z^2 + 648a^4b^3c^3g^*j^*l^*m^*z^2 - 81a^3b^5c^2h^*j^*k^*m^*z^2 - 81a^3b^5c^2g^*j^*l^*m^*z^2 + 1944a^4b^2c^4f^*j^*k^*l^*z^2 - 729a^3b^4c^3f^*j^*k^*l^*z^2 + 648a^4b^2c^4e^*j^*k^*m^*z^2 + 648a^4b^2c^4d^*j^*l^*m^*z^2 - 81a^3b^4c^3e^*j^*k^*m^*z^2 - 81a^3b^4c^3d^*j^*l^*m^*z^2 + 81a^2b^6c^2f^*j^*k^*l^*z^2 + 1296a^4b^2c^4f^*h^*k^*m^*z^2 + 1296a^4b^2c^4f^*g^*l^*m^*z^2 + 648a^4b^2c^4g^*h^*j^*m^*z^2 - 648a^3b^4c^3f^*h^*k^*m^*z^2 - 648a^3b^4c^3f^*g^*l^*m^*z^2 - 324a^4b^2c^4g^*h^*k^*l^*z^2 - 324a^4b^2c^4e^*h^*l^*m^*z^2 + 81a^3b^4c^3g^*h^*k^*l^*z^2 - 81a^3b^4c^3g^*h^*j^*m^*z^2 + 81a^2b^6c^2f^*h^*k^*m^*z^2 + 81a^2b^6c^2f^*g^*l^*m^*z^2 - 1296a^3b^3c^4e^*g^*j^*m^*z^2 - 1296a^3b^3c^4d^*h^*j^*m^*z^2 + 648a^3b^3c^4f^*h^*j^*k^*z^2 + 648a^3b^3c^4f^*g^*j^*l^*z^2 + 648a^3b^3c^4e^*f^*k^*m^*z^2 + 648a^3b^3c^4d^*f^*l^*m^*z^2 + 486a^3b^3c^4e^*g^*k^*l^*z^2 + 486a^3b^3c^4d^*h^*k^*l^*z^2 + 162a^3b^3c^4e^*h^*j^*l^*z^2 + 162a^3b^3c^4d^*g^*k^*m^*z^2 + 162a^2b^5c^3e^*g^*j^*m^*z^2 + 162a^2b^5c^3d^*h^*j^*m^*z^2 - 81a^2b^5c^3f^*h^*j^*k^*z^2 - 81a^2b^5c^3f^*g^*j^*l^*z^2 - 81a^2b^5c^3e^*g^*k^*l^*z^2 - 81a^2b^5c^3e^*f^*k^*m^*z^2 - 81a^2b^5c^3d^*h^*k^*l^*z^2 - 81a^2b^5c^3d^*f^*l^*m^*z^2 + 648a^3b^3c^4f^*g^*h^*m^*z^2 - 81a^2b^5c^3f^*g^*h^*m^*z^2 - 3240a^3b^2c^5d^*e^*j^*m^*z^2 + 1620a^3b^2c^5d^*e^*k^*l^*z^2 + 1377a^2b^4c^4d^*e^*j^*m^*z^2 - 648a^3b^2c^5e^*f^*j^*k^*z^2 - 648a^3b^2c^5d^*f^*j^*l^*z^2 - 648a^2b^4c^4d^*e^*k^*l^*z^2 - 324a^3b^2c^5d^*g^*j^*k^*z^2 + 81a^2b^4c^4e^*f^*j^*k^*z^2 + 81a^2b^4c^4d^*f^*j^*l^*z^2 + 972a^3b^2c^5e^*f^*h^*l^*z^2 - 648a^3b^2c^5f^*g^*h^*j^*z^2 - 324a^3b^2c^5e^*g^*h^*k^*z^2 - 324a^3b^2c^5d^*g^*h^*l^*z^2 - 162a^2b^4c^4e^*f^*h^*l^*z^2 + 81a^2b^4c^4f^*g^*h^*j^*z^2 + 81a^2b^4c^4e^*g^*h^*k^*z^2 + 81a^2b^4c^4d^*g^*h^*l^*z^2 -
\end{aligned}$$

$$\begin{aligned}
& 648a^2b^3c^5d*efmz^2 + 486a^2b^3c^5d*ehkz^2 + 486a^2b^3c^5d*eg*lz^2 + 162a^2b^3c^5d*fg*kmz^2 + 648a^2b^2c^6d*ef*jz^2 - \\
& 324a^2b^2c^6d*eg*hz^2 - 1296a^6b^3c^3k*lm^2z^2 - 81a^4b^5c*k*lm^2z^2 - 1296a^5b^3c^4j^2k*lmz^2 - 324a^5b^3c^4h^2*lmz^2 + 324a^5b^3c^4h*k^2*lmz^2 - 324a^5b^3c^4g*k^2*mmz^2 + 972a^5b^3c^4h*j*l^2z^2 \\
& + 324a^5b^3c^4g*k*l^2z^2 - 324a^5b^3c^4e*l^2*mmz^2 - 324a^4b^3c^5e^2*lmz^2 - 1944a^5b^3c^4f*j*m^2z^2 + 1296a^5b^3c^4e*k*m^2z^2 + 1296a^5b^3c^4d*lm^2z^2 + 648a^4b^3c^5f^2*j*mmz^2 + 81a^2b^7c*f*j*m^2z^2 + 1296a^5b^3c^4g*h*m^2z^2 - 324a^4b^3c^5g^2*j*kz^2 + 324a^4b^3c^5g^2*h*lmz^2 + 972a^4b^3c^5f*h^2*lmz^2 + 324a^4b^3c^5g*h^2*kz^2 - 324a^4b^3c^5e*h^2*mmz^2 - 324a^4b^3c^5d*j*k^2z^2 - 324a^3b^3c^6d^2*j*kz^2 + 972a^4b^3c^5f*g*k^2z^2 + 972a^3b^3c^6d^2*g*mmz^2 + 324a^4b^3c^5e*h*k^2z^2 + 324a^3b^3c^6d^2*h*lmz^2 + 81a*b^5c^4d^2*g*mmz^2 + 972a^4b^3c^5e*f*l^2z^2 + 324a^4b^3c^5d*g*l^2z^2 - 324a^3b^3c^6e^2*h*jz^2 + 324a^3b^3c^6e^2*g*kz^2 - 324a^3b^3c^6e^2*f*lmz^2 - 1296a^4b^3c^5d*em^2z^2 + 81a*b^7c^2d*em^2z^2 - 324a^3b^3c^6d*g^2*jz^2 - 81a*b^4c^5d^2*g*jz^2 + 81a*b^4c^5d^2*e*lmz^2 + 324a^3b^3c^6e*g^2*hz^2 + 81a*b^4c^5d^2*kz^2 + 1296a^3b^3c^6d*ej^2z^2 - 324a^3b^3c^6e*f*h^2z^2 + 324a^3b^3c^6d*g*h^2z^2 + 81a*b^5c^4d*ej^2z^2 - 324a^2b^3c^7d^2*f*g*z^2 + 324a^2b^3c^7d^2*e*h*z^2 + 81a*b^3c^6d^2*f*g*z^2 - 81a*b^3c^6d^2*e*h*z^2 + 324a^2b^3c^7d^2*g*z^2 - 81a*b^3c^6d^2*g*z^2 + 1296a^6c^4j*k*lmz^2 - 1296a^5c^5f*j*k*lmz^2 - 1296a^5c^5e*j*k*mmz^2 - 1296a^5c^5d*j*lmz^2 - 1296a^5c^5g*h*j*mmz^2 + 1296a^5c^5e*h*lmz^2 + 1296a^4c^6e*f*j*kz^2 + 1296a^4c^6d*g*j*kz^2 + 1296a^4c^6d*f*j*lmz^2 - 1296a^4c^6d*e*k*lmz^2 + 1296a^4c^6d*e*j*mmz^2 + 1296a^4c^6f*g*h*jz^2 - 1296a^4c^6e*f*h*lmz^2 - 1296a^3c^7d*ef*jz^2 + 648a^5b^3c^2k*lm^2z^2 + 648a^4b^3c^3j^2k*lmz^2 + 486a^5b^2c^3h*lm^2z^2 - 81a^4b^4c^2h*lm^2z^2 + 81a^4b^3c^3h^2*lmz^2 - 81a^3b^5c^2j^2k*lmz^2 - 162a^4b^2c^4g^2k*mmz^2 - 81a^4b^3c^3h*k^2*lmz^2 + 81a^4b^3c^3g*k^2*mmz^2 - 567a^4b^3c^3h*j*l^2z^2 + 486a^4b^2c^4h^2*j*lmz^2 - 81a^4b^3c^3g*k*l^2z^2 + 81a^4b^3c^3e*l^2*mmz^2 + 81a^3b^5c^2h*j*l^2z^2 - 81a^3b^4c^3h^2*j*lmz^2 + 81a^3b^3c^4e^2*lmz^2 + 2430a^4b^3c^3f*j*m^2z^2 - 2268a^4b^2c^4f*j^2*mmz^2 - 810a^3b^5c^2f*j*m^2z^2 + 810a^3b^4c^3f*j^2*mmz^2 - 648a^4b^3c^3e*k*mm^2z^2 - 648a^4b^3c^3d*lm^2z^2 - 648a^4b^2c^4h*j^2*kz^2 - 648a^4b^2c^4g*j^2*lmz^2 - 162a^3b^3c^4f^2*j*mmz^2 + 81a^3b^5c^2e*k*mm^2z^2 + 81a^3b^5c^2d*lm^2z^2 + 81a^3b^4c^3h*j^2*kz^2 + 81a^3b^4c^3g*j^2*lmz^2 - 81a^2b^6c^2f*j^2*mmz^2 - 648a^4b^3c^3g*h*mm^2z^2 + 486a^4b^2c^4g*j*k^2z^2 - 486a^4b^2c^4e*k^2*lmz^2 + 486a^3b^2c^5d^2k*mmz^2 - 162a^4b^2c^4d*k^2*mmz^2 + 81a^3b^5c^2g*h*mm^2z^2 - 81a^3b^4c^3g*j*k^2z^2 + 81a^3b^4c^3e*k^2*lmz^2 + 81a^3b^3c^4g^2*j*kz^2 - 81a^2b^4c^4d^2k*mmz^2 + 486a^4b^2c^4e*j*l^2z^2 - 486a^4b^2c^4d*k*l^2z^2 - 162a^3b^2c^5e^2*j*lmz^2 - 81a^3b^4c^3e*j*l^2z^2 + 81a^3b^4c^3d*k*l^2z^2 - 81a^3b^3c^4g^2*h*lmz^2 - 1458a^4b^2c^4f*h*lm^2z^2 + 648a^3b^4c^3f*h*lm^2z^2 -
\end{aligned}$$

$$\begin{aligned}
& 567a^3b^3c^4fh^2l^2z^2 + 486a^3b^2c^5e^2hmz^2 - 81a^3b^3c^4 \\
& *gh^2kz^2 + 81a^3b^3c^4e^2hmz^2 - 81a^2b^6c^2fhl^2z^2 + 81 \\
& *a^2b^5c^3fh^2l^2z^2 - 81a^2b^4c^4e^2hmz^2 - 1296a^4b^2c^4ee \\
& gm^2z^2 - 1296a^4b^2c^4d^2hm^2z^2 + 648a^3b^4c^3e^2gm^2z^2 + 64 \\
& 8a^3b^4c^3d^2hm^2z^2 + 81a^3b^3c^4d^2jk^2z^2 - 81a^2b^6c^2e^2gm \\
& m^2z^2 - 81a^2b^6c^2d^2hm^2z^2 + 81a^2b^3c^5d^2jkmz^2 - 567a^3 \\
& b^3c^4f^2gk^2z^2 - 567a^2b^3c^5d^2gmz^2 + 486a^3b^2c^5f^2g^2 \\
& *kz^2 - 486a^3b^2c^5e^2g^2l^2z^2 + 486a^3b^2c^5d^2gm^2z^2 - 81a^3 \\
& *b^3c^4e^2hk^2z^2 + 81a^2b^5c^3f^2gk^2z^2 - 81a^2b^4c^4f^2g^2kz \\
& z^2 + 81a^2b^4c^4e^2g^2l^2z^2 - 81a^2b^4c^4d^2gm^2z^2 - 81a^2b^3c \\
& ^5d^2hl^2z^2 - 567a^3b^3c^4e^2fl^2z^2 - 486a^3b^2c^5d^2hk^2z^2 \\
& - 162a^3b^2c^5e^2hl^2jz^2 - 81a^3b^3c^4d^2gl^2z^2 + 81a^2b^5c^3 \\
& e^2fl^2z^2 + 81a^2b^4c^4d^2hk^2z^2 + 81a^2b^3c^5e^2h^2jz^2 - 8 \\
& 1a^2b^3c^5e^2g^2kz^2 + 81a^2b^3c^5e^2fl^2z^2 + 1944a^3b^3c^4d \\
& *em^2z^2 - 729a^2b^5c^3d^2em^2z^2 + 648a^3b^2c^5e^2g^2j^2z^2 + 64 \\
& 8a^3b^2c^5d^2hj^2z^2 - 81a^2b^4c^4e^2g^2j^2z^2 - 81a^2b^4c^4d^2h \\
& *j^2z^2 + 486a^3b^2c^5d^2fk^2z^2 + 486a^2b^2c^6d^2g^2jz^2 - 486 \\
& a^2b^2c^6d^2e^2l^2z^2 - 162a^2b^2c^6d^2fk^2z^2 - 81a^2b^4c^4d^2fk \\
& k^2z^2 + 81a^2b^3c^5d^2g^2jz^2 - 486a^2b^2c^6d^2e^2kz^2 - 81a^2 \\
& *b^3c^5e^2g^2hz^2 - 648a^2b^3c^5d^2ej^2z^2 - 162a^2b^2c^6e^2f^2 \\
& hz^2 + 81a^2b^3c^5e^2fh^2z^2 - 81a^2b^3c^5d^2gh^2z^2 - 162a^2b \\
& ^2c^6d^2fg^2z^2 - 189a^5b^3c^2l^3mz^2 + 162a^5b^2c^3k^3mz^2 \\
& - 27a^4b^4c^2k^3mz^2 - 702a^4b^3c^3j^3mz^2 - 81a^3b^6c^2j^2m \\
& ^2z^2 + 81a^3b^5c^2j^3mz^2 - 54a^5b^3c^2j^3m^3z^2 - 486a^5b^2c \\
& ^3j^2l^3z^2 + 216a^4b^4c^2j^2l^3z^2 - 189a^4b^3c^3j^2k^3z^2 - 54 \\
& a^4b^2c^4h^3mz^2 + 27a^3b^5c^2j^2k^3z^2 + 27a^3b^3c^4g^3mz^2 \\
& - 810a^4b^4c^2f^2m^3z^2 + 540a^5b^2c^3f^2m^3z^2 - 324a^3b^2c^5f \\
& ^3mz^2 + 54a^2b^4c^4f^3mz^2 + 675a^4b^3c^3f^2l^3z^2 - 243a^3b \\
& ^5c^2f^2l^3z^2 - 189a^2b^3c^5e^3mz^2 + 27a^3b^3c^4h^3jz^2 - \\
& 486a^4b^2c^4f^2k^3z^2 - 486a^2b^2c^6d^3mz^2 + 216a^3b^4c^3f^2k \\
& ^3z^2 - 54a^3b^2c^5g^3jz^2 - 27a^2b^6c^2f^2k^3z^2 - 270a^3b^3c \\
& ^4f^2j^3z^2 - 54a^2b^3c^5f^3jz^2 + 27a^2b^5c^3f^2j^3z^2 + 162a \\
& ^2b^2c^6e^3jz^2 + 162a^3b^2c^5f^2h^3z^2 - 27a^2b^4c^4f^2h^3z^2 \\
& + 27a^2b^3c^5f^2g^3z^2 + 81a^2b^2c^7d^2e^2z^2 - 648a^6c^4h^2l^2 \\
& mz^2 + 648a^5c^5g^2k^2mz^2 - 648a^5c^5h^2j^2l^2z^2 + 1296a^5c^5h \\
& j^2kz^2 + 1296a^5c^5g^2j^2l^2z^2 + 1296a^5c^5f^2j^2mz^2 - 648a^5c \\
& ^5g^2jk^2z^2 + 648a^5c^5e^2k^2l^2z^2 + 648a^5c^5d^2k^2mz^2 - 648a^ \\
& 4c^6d^2k^2mz^2 - 648a^5c^5e^2j^2l^2z^2 + 648a^5c^5d^2k^2l^2z^2 + 648 \\
& a^4c^6e^2j^2l^2z^2 + 324a^6b^3c^3l^3mz^2 + 27a^4b^5c^3l^3mz^2 + 6 \\
& 48a^5c^5f^2hl^2z^2 - 648a^4c^6e^2hmz^2 + 1512a^5b^3c^4j^3mz^2 \\
& + 1080a^6b^3c^3j^2m^3z^2 - 162a^4b^5c^3j^2m^3z^2 - 648a^4c^6f^2g^2k \\
& z^2 + 648a^4c^6e^2g^2l^2z^2 - 648a^4c^6d^2gm^2z^2 - 27a^3b^6c^2j^2l \\
& ^3z^2 + 648a^4c^6e^2h^2jz^2 + 648a^4c^6d^2hk^2z^2 + 324a^5b^3c^4 \\
& j^2k^3z^2 - 1296a^4c^6e^2g^2j^2z^2 - 1296a^4c^6d^2hj^2z^2 - 108a^4b \\
& *c^5g^3mz^2 - 648a^4c^6d^2fk^2z^2 - 648a^3c^7d^2g^2jz^2 + 648a^
\end{aligned}$$

$$\begin{aligned}
& 3c^7d^2fkz^2 + 648a^3c^7d^2e^1lz^2 + 270a^3b^6c^6f^3m^3z^2 + 648 \\
& a^3c^7d^2e^2kz^2 - 540a^5b^6c^4f^1l^3z^2 + 324a^3b^6c^6e^3m^3z^2 - \\
& 108a^4b^6c^5h^3jz^2 + 27a^2b^7c^6f^1l^3z^2 + 27a^2b^5c^4e^3m^3z^2 + \\
& 648a^3c^7e^2f^1hz^2 + 216a^2b^4c^5d^3m^3z^2 + 648a^4b^6c^5f^3j^3z^2 \\
& + 216a^3b^6c^6f^3jz^2 + 648a^3c^7d^2f^1g^2z^2 - 27a^2b^4c^5e^3jz^2 \\
& + 324a^2b^6c^7d^3jz^2 - 189a^2b^3c^6d^3jz^2 - 108a^3b^6c^6f^1g^3z^2 \\
& - 108a^2b^6c^7e^3fz^2 + 27a^2b^3c^6e^3fz^2 + 162a^2b^2c^7d^3fz^2 \\
& - 1134a^5b^2c^3j^2m^2z^2 + 648a^4b^4c^2j^2m^2z^2 + 81a^5b^2c^3k^2l^2z^2 \\
& + 162a^4b^2c^4f^2m^2z^2 + 81a^4b^2c^4h^2k^2z^2 + 81a^4b^2c^4g^2l^2z^2 \\
& + 162a^3b^2c^5f^2j^2z^2 + 81a^3b^2c^5e^2k^2z^2 + 81a^3b^2c^5d^2l^2z^2 \\
& + 81a^3b^2c^5g^2h^2z^2 + 81a^2b^2c^6e^2g^2z^2 + 81a^2b^2c^6d^2h^2z^2 - 216a^6c^4 \\
& k^3m^3z^2 + 216a^6c^4j^1l^3z^2 + 27a^3b^7j^3m^3z^2 + 216a^5c^5h^3 \\
& m^3z^2 + 432a^6c^4f^3m^3z^2 + 432a^4c^6f^3m^3z^2 - 27b^6c^4d^3m^3z^2 \\
& - 27a^2b^8f^3m^3z^2 + 216a^5c^5f^1k^3z^2 + 216a^4c^6g^3jz^2 + \\
& 216a^3c^7d^3m^3z^2 + 216a^5b^4c^6m^4z^2 - 216a^3c^7e^3jz^2 + 27 \\
& b^5c^5d^3jz^2 - 216a^4c^6f^1h^3z^2 - 27b^4c^6d^3fz^2 - 216a^2 \\
& c^8d^3fz^2 - 648a^6c^4j^2m^2z^2 - 324a^6c^4k^2l^2z^2 - 648a^5 \\
& c^5f^2m^2z^2 - 324a^5c^5h^2k^2z^2 - 324a^5c^5g^2l^2z^2 - 648 \\
& a^4c^6f^2j^2z^2 - 324a^4c^6e^2k^2z^2 - 324a^4c^6d^2l^2z^2 - \\
& 405a^6b^2c^2m^4z^2 - 324a^4c^6g^2h^2z^2 - 324a^3c^7e^2g^2z^2 \\
& - 324a^3c^7d^2h^2z^2 + 243a^4b^2c^4j^4z^2 - 27a^3b^4c^3j^4z^2 \\
& - 324a^2c^8d^2e^2z^2 + 27a^2b^2c^6f^4z^2 - 108a^7c^3m^4z^2 \\
& - 27a^4b^6m^4z^2 - 540a^5c^5j^4z^2 - 108a^3c^7f^4z^2 - 216a^5 \\
& b^6c^3f^1j^1k^1m^3z - 54a^3b^5c^6f^1j^1k^1m^3z + 27a^3b^5c^6g^1h^1k^1m^3z - \\
& 27a^2b^6c^6e^1g^1k^1m^3z - 27a^2b^6c^6d^1h^1k^1m^3z + 432a^4b^6c^4d^1g^1j^1k^1 \\
& m^3z - 432a^4b^6c^4d^1e^1k^1m^3z + 216a^4b^6c^4e^1g^1j^1k^1m^3z + 216a^4b^6c^4 \\
& e^1f^1j^1k^1m^3z + 216a^4b^6c^4d^1h^1j^1k^1m^3z + 216a^4b^6c^4d^1f^1j^1l^1m^3z + 216 \\
& a^4b^6c^4f^1g^1h^1j^1m^3z - 27a^2b^6c^2d^1e^1j^1k^1m^3z - 27a^2b^6c^2d^1e^1h^1k^1m^3 \\
& z - 27a^2b^6c^2d^1e^1g^1l^1m^3z + 216a^3b^6c^5d^1e^1h^1j^1k^1m^3z + 216a^3b^6c^5d^1 \\
& e^1g^1j^1l^1m^3z - 216a^3b^6c^5d^1e^1f^1j^1m^3z + 27a^2b^5c^3d^1e^1h^1j^1k^1m^3z + 27a^2b^5 \\
& c^3d^1e^1g^1j^1l^1m^3z + 27a^2b^5c^3d^1e^1g^1h^1m^3z - 27a^2b^4c^4d^1e^1g^1h^1j^1z + 27 \\
& a^2b^7c^4d^1e^1k^1m^3z + 270a^4b^3c^2f^1j^1k^1m^3z - 108a^4b^3c^2g^1h^1k^1 \\
& l^1m^3z - 216a^4b^2c^3f^1h^1j^1k^1m^3z - 216a^4b^2c^3f^1g^1j^1l^1m^3z - 216a^4 \\
& b^2c^3e^1g^1k^1m^3z - 216a^4b^2c^3d^1h^1k^1m^3z + 162a^3b^4c^2e^1g^1k^1 \\
& l^1m^3z + 162a^3b^4c^2d^1h^1k^1m^3z + 108a^4b^2c^3g^1h^1j^1k^1m^3z + 108a^4 \\
& b^2c^3e^1h^1j^1l^1m^3z + 54a^3b^4c^2f^1h^1j^1k^1m^3z + 54a^3b^4c^2f^1g^1j^1l^1 \\
& m^3z - 27a^3b^4c^2g^1h^1j^1k^1m^3z + 540a^3b^3c^3d^1e^1k^1m^3z - 216a^2b^5 \\
& c^2d^1e^1k^1m^3z - 162a^3b^3c^3e^1g^1j^1k^1m^3z - 162a^3b^3c^3d^1h^1j^1k^1 \\
& m^3z - 108a^3b^3c^3d^1g^1j^1k^1m^3z - 54a^3b^3c^3e^1f^1j^1k^1m^3z - 54a^3b^3c^3 \\
& c^3d^1f^1j^1l^1m^3z + 27a^2b^5c^2e^1g^1j^1k^1m^3z + 27a^2b^5c^2d^1h^1j^1k^1m^3z - \\
& 108a^3b^3c^3e^1g^1h^1k^1m^3z - 108a^3b^3c^3d^1g^1h^1l^1m^3z - 54a^3b^3c^3 \\
& f^1g^1h^1j^1m^3z + 27a^2b^5c^2e^1g^1h^1k^1m^3z + 27a^2b^5c^2d^1g^1h^1l^1m^3z - 54 \\
& 0a^3b^2c^4d^1e^1j^1k^1m^3z + 216a^2b^4c^3d^1e^1j^1k^1m^3z - 216a^3b^2c^4d^1 \\
& e^1h^1k^1m^3z - 216a^3b^2c^4d^1e^1g^1l^1m^3z + 162a^2b^4c^3d^1e^1h^1k^1m^3z + 16
\end{aligned}$$



$$\begin{aligned}
& 2a^2b^4c^3d*eg*lm^z + 108a^3b^2c^4*eg*h*j*k^z - 108a^3b^2c^4* \\
& *f*h*j*l^z + 108a^3b^2c^4*d*g*h*j*l^z + 108a^3b^2c^4*d*f*g*k*m^z - 27 \\
& *a^2b^4c^3*eg*h*j*k^z - 27a^2b^4c^3*d*g*h*j*l^z - 162a^2b^3c^4*d*e \\
& *h*j*k^z - 162a^2b^3c^4*d*eg*j*l^z + 54a^2b^3c^4*d*ef*j*m^z - 108a \\
& ^2b^3c^4*d*eg*h*m^z + 108a^2b^2c^5*d*eg*h*j^z + 324a^6b*c^2*j*k*l \\
& m^2*z - 81a^5b^3c*j*k*l*m^2*z + 27a^4b^4c*j^2*k*l*m^z - 27a^4b^4c* \\
& h*k^2*l*m^z - 27a^4b^4c*g*k*l^2*m^z + 216a^5b*c^3*h*j^2*k*m^z + 216a^ \\
& 5b*c^3*g*j^2*l*m^z + 54a^4b^4c*f*k*l*m^2*z + 27a^4b^4c*h*j*k*m^2*z + \\
& 27a^4b^4c*g*j*l*m^2*z + 27a^2b^6*c*f^2*k*l*m^z + 216a^5b*c^3*e*k^2* \\
& l*m^z - 108a^5b*c^3*h*j*k^2*l^z + 27a^3b^5*c*e*k^2*l*m^z + 216a^5b*c^ \\
& 3*d*k*l^2*m^z + 216a^4b*c^4*e^2*j*l*m^z - 108a^5b*c^3*g*j*k*l^2*z + 27* \\
& a^3b^5*c*d*k*l^2*m^z - 324a^5b*c^3*e*j*k*m^2*z - 324a^5b*c^3*d*j*l*m^2 \\
& *z - 216a^5b*c^3*f*h*l^2*m^z - 108a^4b*c^4*f^2*j*k*l^z - 27a^3b^5*c*e \\
& *j*k*m^2*z - 27a^3b^5*c*d*j*l*m^2*z - 324a^5b*c^3*g*h*j*m^2*z + 216a^5 \\
& *b*c^3*f*h*k*m^2*z + 216a^5b*c^3*f*g*l*m^2*z + 216a^5b*c^3*e*h*l*m^2*z \\
& - 216a^4b*c^4*f^2*h*k*m^z - 216a^4b*c^4*f^2*g*l*m^z - 27a^3b^5*c*g*h \\
& j*m^2*z + 216a^4b*c^4*eg^2*l*m^z - 108a^4b*c^4*g^2*h*j*l^z - 216a^4b \\
& *c^4*f*h^2*j*l^z + 216a^4b*c^4*e*h^2*j*m^z + 216a^4b*c^4*d*h^2*k*m^z - \\
& 108a^4b*c^4*g*h^2*j*k^z - 432a^4b*c^4*eg*j^2*m^z - 432a^4b*c^4*d*h*j \\
& ^2*m^z + 216a^4b*c^4*f*h*j^2*k^z + 216a^4b*c^4*f*g*j^2*l^z + 27a^2b^6 \\
& *c*eg*j*m^2*z + 27a^2b^6*c*d*h*j*m^2*z - 432a^3b*c^5*d^2*g*j*m^z - 216 \\
& *a^4b*c^4*f*g*j*k^2*z + 216a^3b*c^5*d^2*f*k*m^z + 216a^3b*c^5*d^2*e*l \\
& m^z - 108a^4b*c^4*e*h*j*k^2*z - 108a^4b*c^4*d*g*k^2*l^z - 108a^3b*c^5 \\
& *d^2*h*j*l^z + 108a^3b*c^5*d^2*g*k*l^z - 54a*b^5*c^3*d^2*g*j*m^z + 27*a \\
& b^5*c^3*d^2*g*k*l^z + 27*a*b^5*c^3*d^2*e*l*m^z - 216a^4b*c^4*ef*j*l^2*z \\
& + 216a^3b*c^5*d*e^2*k*m^z - 108a^4b*c^4*d*g*j*l^2*z - 108a^3b*c^5*e^2 \\
& *g*j*k^z + 27*a*b^5*c^3*d*e^2*k*m^z + 324a^4b*c^4*d*ej*m^2*z + 216a^3b \\
& *c^5*e^2*f*h*m^z - 108a^4b*c^4*eg*h*l^2*z + 108a^3b*c^5*e^2*g*h*l^z + \\
& 108a^3b*c^5*ef^2*j*k^z + 108a^3b*c^5*d*f^2*j*l^z + 27*a*b^6*c^2*d*ej^ \\
& 2*m^z - 216a^3b*c^5*ef^2*h*l^z + 108a^3b*c^5*f^2*g*h*j^z - 27*a*b^4*c^ \\
& 4*d^2*ej*l^z + 216a^3b*c^5*d*f*g^2*m^z - 108a^3b*c^5*eg^2*h*j^z + 54* \\
& a*b^4*c^4*d^2*f*g*m^z - 27*a*b^4*c^4*d^2*g*h*k^z - 27*a*b^4*c^4*d^2*e*h*m^z \\
& - 27*a*b^4*c^4*d*e^2*j*k^z - 108a^3b*c^5*d*g*h^2*j^z + 54*a*b^4*c^4*d*e^ \\
& 2*h*l^z + 27*a*b^6*c^2*d*e*h*l^2*z - 27*a*b^5*c^3*d*e*h^2*l^z - 27*a*b^4*c^ \\
& 4*d*e^2*g*m^z - 27*a*b^4*c^4*d*ef^2*m^z + 216a^2b*c^6*d^2*f*g*j^z - 108* \\
& a^3b*c^5*d*eg*k^2*z - 108a^2b*c^6*d^2*e*h*j^z + 108a^2b*c^6*d^2*eg*k \\
& ^z - 54*a*b^3*c^5*d^2*f*g*j^z - 27*a*b^5*c^3*d*eg*k^2*z + 27*a*b^4*c^4*d*e \\
& *g^2*k^z + 27*a*b^3*c^5*d^2*e*h*j^z - 27*a*b^3*c^5*d^2*eg*k^z - 108a^2b* \\
& c^6*d*e^2*g*j^z + 27*a*b^3*c^5*d*e^2*g*j^z - 108a^2b*c^6*d*ef^2*j^z + 27 \\
& *a*b^3*c^5*d*ef^2*j^z - 432a^5*c^4*e*h*j*l*m^z + 432a^4*c^5*d*ej*k*l^z \\
& + 432a^4*c^5*ef*h*j*l^z - 432a^4*c^5*d*f*g*k*m^z - 27*a*b^7*c*d*ej*m^2* \\
& z - 54a^5b^2*c^2*j^2*k*l*m^z + 108a^5b^2*c^2*h*k^2*l*m^z + 108a^5b^2* \\
& c^2*g*k*l^2*m^z - 54a^5b^2*c^2*h*j*l^2*m^z + 378a^4b^2*c^3*f^2*k*l*m^z \\
& - 270a^5b^2*c^2*f*k*l*m^2*z - 189a^3b^4*c^2*f^2*k*l*m^z - 108a^5b^2*c \\
& ^2*h*j*k*m^2*z - 108a^5b^2*c^2*g*j*l*m^2*z - 54a^4b^3*c^2*h*j^2*k*m^z -
\end{aligned}$$

$$\begin{aligned}
& 54a^4b^3c^2g^*j^2*1*m*z - 162a^4b^3c^2e*k^2*1*m*z + 54a^4b^2c^3* \\
& g^2*j*k*m*z + 27a^4b^3c^2*h*j*k^2*1*z - 162a^4b^3c^2*d*k*1^2*m*z + 10 \\
& 8a^4b^2c^3g^2*h*1*m*z - 54a^3b^3c^3e^2*j*1*m*z + 27a^4b^3c^2g^*j \\
& *k*1^2*z - 27a^3b^4c^2g^2*h*1*m*z - 270a^4b^2c^3f*j^2*k*1*z + 189a^ \\
& ^4b^3c^2e*j*k*m^2*z + 189a^4b^3c^2*d*j*1*m^2*z - 162a^4b^2c^3e*j^ \\
& ^2*k*m*z - 162a^4b^2c^3*d*j^2*1*m*z + 135a^3b^3c^3f^2*j*k*1*z + 108a^ \\
& ^4b^2c^3g^*h^2*k*m*z + 54a^4b^3c^2f*h*1^2*m*z - 54a^4b^2c^3f*h^2* \\
& 1*m*z + 54a^3b^4c^2f*j^2*k*1*z - 27a^3b^4c^2g^*h^2*k*m*z + 27a^3b^ \\
& ^4c^2e*j^2*k*m*z + 27a^3b^4c^2*d*j^2*1*m*z - 27a^2b^5c^2f^2*j*k*1*z \\
& - 270a^3b^2c^4d^2*j*k*m*z + 189a^4b^3c^2g^*h*j*m^2*z - 162a^4b^2* \\
& c^3g^*h*j^2*m*z + 162a^4b^2c^3e*j*k^2*1*z + 162a^3b^3c^3f^2*h*k*m*z \\
& + 162a^3b^3c^3f^2*g*1*m*z - 54a^4b^3c^2f*h*k*m^2*z - 54a^4b^3c^ \\
& ^2f*g*1*m^2*z - 54a^4b^3c^2e*h*1*m^2*z + 54a^4b^2c^3*d*j*k^2*m*z + 5 \\
& 4a^2b^4c^3d^2*j*k*m*z + 27a^3b^4c^2g^*h*j^2*m*z - 27a^3b^4c^2e*j \\
& *k^2*1*z - 27a^2b^5c^2f^2*h*k*m*z - 27a^2b^5c^2f^2*g*1*m*z + 162a^ \\
& ^4b^2c^3d*j*k*1^2*z - 162a^3b^3c^3e*g^2*1*m*z + 108a^4b^2c^3e*h*k \\
& ^2*m*z + 108a^3b^2c^4d^2*h*1*m*z - 54a^4b^2c^3f*g*k^2*m*z - 27a^3* \\
& b^4c^2e*h*k^2*m*z - 27a^3b^4c^2*d*j*k*1^2*z + 27a^3b^3c^3g^2*h*j*1 \\
& *z + 27a^2b^5c^2e*g^2*1*m*z - 27a^2b^4c^3d^2*h*1*m*z + 270a^4b^2* \\
& c^3f*h*j*1^2*z - 270a^3b^2c^4e^2*h*j*m*z - 162a^4b^2c^3e*h*k*1^2*z \\
& - 162a^3b^3c^3d*h^2*k*m*z + 162a^3b^2c^4e^2*h*k*1*z + 108a^4b^2* \\
& c^3d*g*1^2*m*z + 108a^3b^2c^4e^2g*k*m*z - 54a^4b^2c^3e*f*1^2*m*z \\
& - 54a^3b^4c^2f*h*j*1^2*z + 54a^3b^3c^3f*h^2*j*1*z - 54a^3b^3c^3* \\
& e*h^2*j*m*z + 54a^3b^2c^4e^2f*1*m*z + 54a^2b^4c^3e^2h*j*m*z + 27* \\
& a^3b^4c^2e*h*k*1^2*z - 27a^3b^4c^2*d*g*1^2*m*z + 27a^3b^3c^3g^*h^2 \\
& *j*k*z + 27a^2b^5c^2d*h^2*k*m*z - 27a^2b^4c^3e^2h*k*1*z - 27a^2b^ \\
& ^4c^3e^2g*k*m*z + 432a^4b^2c^3e*g*j*m^2*z + 432a^4b^2c^3d*h*j*m^ \\
& ^2*z - 270a^4b^2c^3d*g*k*m^2*z - 216a^3b^4c^2e*g*j*m^2*z - 216a^3b \\
& ^4c^2d*h*j*m^2*z + 216a^3b^3c^3e*g*j^2*m*z + 216a^3b^3c^3d*h*j^2* \\
& m*z - 162a^3b^2c^4e*f^2*k*m*z - 162a^3b^2c^4d*f^2*1*m*z - 108a^3b \\
& ^2c^4f^2h*j*k*z - 108a^3b^2c^4f^2g*j*1*z + 54a^4b^2c^3e*f*k*m^2 \\
& *z + 54a^4b^2c^3d*f*1*m^2*z + 54a^3b^4c^2d*g*k*m^2*z - 54a^3b^3c \\
& ^3f*h*j^2*k*z - 54a^3b^3c^3f*g*j^2*1*z - 27a^2b^5c^2e*g*j^2*m*z - \\
& 27a^2b^5c^2d*h*j^2*m*z + 27a^2b^4c^3f^2h*j*k*z + 27a^2b^4c^3f^ \\
& ^2g*j*1*z + 27a^2b^4c^3e*f^2*k*m*z + 27a^2b^4c^3d*f^2*1*m*z + 324a^ \\
& ^2b^3c^4d^2g*j*m*z - 270a^3b^2c^4d*g^2*j*m*z - 162a^3b^2c^4f^2* \\
& g^*h*m*z + 162a^3b^2c^4e*g^2*j*1*z - 162a^2b^3c^4d^2e*1*m*z - 135a^ \\
& ^2b^3c^4d^2g*k*1*z + 108a^3b^2c^4d*g^2*k*1*z + 54a^4b^2c^3f*g^*h \\
& *m^2*z + 54a^3b^3c^3f*g*j*k^2*z - 54a^3b^2c^4f*g^2*j*k*z + 54a^2b \\
& ^4c^3d*g^2*j*m*z - 54a^2b^3c^4d^2f*k*m*z + 27a^3b^3c^3e*h*j*k^2* \\
& z + 27a^3b^3c^3d*g*k^2*1*z + 27a^2b^4c^3f^2g^*h*m*z - 27a^2b^4c^ \\
& ^3e*g^2*j*1*z - 27a^2b^4c^3d*g^2*k*1*z + 27a^2b^3c^4d^2h*j*1*z + 1 \\
& 62a^3b^2c^4d*h^2*j*k*z - 162a^2b^3c^4d*e^2*k*m*z + 108a^3b^2c^4* \\
& e*g^2*h*m*z + 54a^3b^3c^3e*f*j*1^2*z + 27a^3b^3c^3d*g*j*1^2*z - 27* \\
& a^2b^4c^3e*g^2*h*m*z - 27a^2b^4c^3d*h^2*j*k*z + 27a^2b^3c^4e^2*g
\end{aligned}$$

$$\begin{aligned}
& *j*k*z - 621*a^3*b^3*c^3*d*e*j*m^2*z + 594*a^3*b^2*c^4*d*e*j^2*m*z + 243*a^2*b^5*c^2*d*e*j*m^2*z - 243*a^2*b^4*c^3*d*e*j^2*m*z + 135*a^3*b^3*c^3*e*g*h \\
& *l^2*z - 108*a^3*b^2*c^4*e*g*h^2*l*z + 108*a^3*b^2*c^4*d*g*h^2*m*z + 54*a^3 \\
& *b^2*c^4*e*f*j^2*k*z + 54*a^3*b^2*c^4*e*f*h^2*m*z + 54*a^3*b^2*c^4*d*g*j^2* \\
& k*z + 54*a^3*b^2*c^4*d*f*j^2*l*z - 54*a^2*b^3*c^4*e^2*f*h*m*z - 27*a^2*b^5* \\
& c^2*e*g*h*l^2*z + 27*a^2*b^4*c^3*e*g*h^2*l*z - 27*a^2*b^4*c^3*d*g*h^2*m*z - \\
& 27*a^2*b^3*c^4*e^2*g*h*l*z - 27*a^2*b^3*c^4*e*f^2*j*k*z - 27*a^2*b^3*c^4*d \\
& *f^2*j*l*z + 162*a^2*b^2*c^5*d^2*e*j*l*z + 54*a^3*b^2*c^4*f*g*h*j^2*z - 54* \\
& a^3*b^2*c^4*d*f*j*k^2*z + 54*a^2*b^3*c^4*e*f^2*h*l*z + 54*a^2*b^2*c^5*d^2*f \\
& *j*k*z - 27*a^2*b^3*c^4*f^2*g*h*j*z - 270*a^2*b^2*c^5*d^2*f*g*m*z - 162*a^3 \\
& *b^2*c^4*d*g*h*k^2*z + 162*a^2*b^2*c^5*d^2*g*h*k*z + 162*a^2*b^2*c^5*d*e^2* \\
& j*k*z + 108*a^2*b^2*c^5*d^2*e*h*m*z - 54*a^2*b^3*c^4*d*f*g^2*m*z + 27*a^2*b \\
& ^4*c^3*d*g*h*k^2*z + 27*a^2*b^3*c^4*e*g^2*h*j*z + 270*a^3*b^2*c^4*d*e*h*l^2 \\
& *z - 270*a^2*b^2*c^5*d*e^2*h*l*z - 162*a^2*b^4*c^3*d*e*h*l^2*z + 108*a^2*b^ \\
& 3*c^4*d*e*h^2*l*z + 108*a^2*b^2*c^5*d*e^2*g*m*z + 54*a^2*b^2*c^5*e^2*f*h*j* \\
& z + 27*a^2*b^3*c^4*d*g*h^2*j*z + 162*a^2*b^2*c^5*d*e*f^2*m*z - 54*a^3*b^2*c \\
& ^4*d*e*f*m^2*z - 54*a^2*b^2*c^5*d*f^2*g*k*z + 135*a^2*b^3*c^4*d*e*g*k^2*z - \\
& 108*a^2*b^2*c^5*d*e*g^2*k*z + 54*a^2*b^2*c^5*d*f*g^2*j*z - 54*a^2*b^2*c^5* \\
& d*e*f*j^2*z - 9*a*b^7*c*d*e*l^3*z - 36*a*b*c^7*d^3*e*g*z - 108*a^6*b*c^2*k^ \\
& 2*l^2*m*z + 27*a^5*b^3*c*k^2*l^2*m*z - 18*a^5*b^2*c^2*j*k^3*m*z - 27*a^4*b^ \\
& 3*c^2*j^3*k*l*z - 108*a^5*b*c^3*h^2*k^2*m*z - 108*a^5*b*c^3*g^2*l^2*m*z + 1 \\
& 08*a^5*b*c^3*h^2*k*l^2*z + 108*a^5*b*c^3*g^2*k*m^2*z + 90*a^5*b^2*c^2*f*l^3 \\
& *m*z - 18*a^5*b^2*c^2*h*k*k*l^3*z + 18*a^4*b^2*c^3*h^3*k*l*z + 18*a^4*b^2*c^3 \\
& *h^3*j*m*z - 108*a^5*b*c^3*h*j^2*l^2*z + 18*a^4*b^3*c^2*f*k^3*m*z - 18*a^3* \\
& b^3*c^3*g^3*j*m*z - 9*a^4*b^3*c^2*g*k^3*l*z + 9*a^3*b^3*c^3*g^3*k*l*z + 252 \\
& *a^4*b^2*c^3*f*j^3*m*z + 216*a^5*b*c^3*f*j^2*m^2*z + 180*a^3*b^2*c^4*f^3*j* \\
& m*z - 108*a^4*b*c^4*e^2*k^2*m*z - 108*a^4*b*c^4*d^2*l^2*m*z + 90*a^5*b^2*c^ \\
& 2*e*k*m^3*z + 90*a^5*b^2*c^2*d*l*m^3*z - 90*a^3*b^2*c^4*f^3*k*l*z + 54*a^3* \\
& b^5*c*f*j^2*m^2*z - 54*a^3*b^4*c^2*f*j^3*m*z + 36*a^5*b^2*c^2*f*j*m^3*z + 3 \\
& 6*a^4*b^2*c^3*h*j^3*k*z + 36*a^4*b^2*c^3*g*j^3*l*z - 36*a^2*b^4*c^3*f^3*j*m \\
& *z - 27*a^2*b^6*c*f^2*j*m^2*z + 18*a^2*b^4*c^3*f^3*k*l*z - 216*a^4*b*c^4*d^ \\
& 2*k*m^2*z + 108*a^5*b*c^3*d*k^2*m^2*z - 108*a^4*b^3*c^2*f*j*l^3*z - 108*a^4 \\
& *b*c^4*g^2*h^2*m*z + 108*a^2*b^3*c^4*e^3*j*m*z + 90*a^5*b^2*c^2*g*h*m^3*z + \\
& 54*a^4*b^3*c^2*e*k*l^3*z - 54*a^2*b^3*c^4*e^3*k*l*z + 234*a^2*b^2*c^5*d^3* \\
& j*m*z - 144*a^2*b^2*c^5*d^3*k*l*z + 90*a^4*b^2*c^3*f*j*k^3*z - 72*a^4*b^2*c \\
& ^3*d*k^3*l*z + 27*a^4*b^3*c^2*g*h*l^3*z - 27*a^3*b^3*c^3*g*h^3*l*z - 18*a^3 \\
& *b^4*c^2*f*j*k^3*z + 9*a^3*b^4*c^2*d*k^3*l*z + 216*a^4*b*c^4*f^2*h*l^2*z - \\
& 216*a^4*b*c^4*e^2*h*m^2*z + 108*a^4*b*c^4*g^2*h*k^2*z - 18*a^4*b^2*c^3*g*h* \\
& k^3*z + 18*a^3*b^2*c^4*g^3*h*k*z + 18*a^3*b^2*c^4*f*g^3*m*z + 9*a^3*b^4*c^2 \\
& *g*h*k^3*z - 9*a^3*b^3*c^3*e*j^3*k*z - 9*a^3*b^3*c^3*d*j^3*l*z - 144*a^4*b^ \\
& 3*c^2*e*g*m^3*z - 144*a^4*b^3*c^2*d*h*m^3*z - 108*a^3*b*c^5*e^2*g^2*m*z + 1 \\
& 08*a^3*b*c^5*d^2*j^2*k*z - 108*a^3*b*c^5*d^2*h^2*m*z - 18*a^2*b^3*c^4*f^3*h \\
& *k*z - 18*a^2*b^3*c^4*f^3*g*l*z - 9*a^3*b^3*c^3*g*h*j^3*z - 216*a^4*b*c^4*d \\
& *g^2*m^2*z + 144*a^4*b^2*c^3*e*g*l^3*z - 126*a^3*b^2*c^4*d*h^3*l*z - 108*a^ \\
& 4*b*c^4*d*h^2*l^2*z - 108*a^3*b*c^5*f^2*g^2*k*z - 108*a^3*b*c^5*e^2*h^2*k*z
\end{aligned}$$

$$\begin{aligned}
& - 90a^2b^2c^5e^3f^*m^*z + 72a^2b^2c^5e^3g^*l^*z - 63a^3b^4c^2e^*g^*l^3z - 36a^3b^4c^2d^*h^*l^3z + 27a^2b^4c^3d^*h^3l^*z + 27a^*b^6c^2d^2g^*m^2z - 18a^4b^2c^3d^*h^*l^3z - 18a^3b^2c^4f^*h^3j^*z - 18a^3b^2c^4e^*h^3k^*z + 18a^2b^2c^5e^3h^*k^*z + 108a^3b^*c^5e^2h^*j^2z + 54a^3b^3c^3d^*h^*k^3z + 27a^3b^3c^3e^*g^*k^3z - 27a^2b^3c^4e^*g^3k^*z + 27a^2b^3c^4d^*g^3l^*z - 27a^*b^4c^4d^2g^2l^*z - 9a^2b^5c^2e^*g^*k^3z - 9a^2b^5c^2d^*h^*k^3z + 207a^3b^4c^2d^*e^*m^3z - 108a^2b^*c^6d^2e^2m^*z - 90a^4b^2c^3d^*e^*m^3z - 72a^3b^2c^4e^*g^*j^3z - 72a^3b^2c^4d^*h^*j^3z + 27a^*b^3c^5d^2e^2m^*z + 18a^2b^2c^5e^*f^3k^*z + 18a^2b^2c^5d^*f^3l^*z + 9a^2b^4c^3e^*g^*j^3z + 9a^2b^4c^3d^*h^*j^3z - 216a^3b^*c^5d^*e^2l^2z - 198a^3b^3c^3d^*e^*l^3z + 108a^3b^*c^5d^*g^2j^2z - 108a^3b^*c^5d^*f^2k^2z + 72a^2b^5c^2d^*e^*l^3z - 27a^*b^5c^3d^*e^2l^2z + 27a^*b^4c^4d^2g^*j^2z + 18a^2b^2c^5f^3g^*h^*z + 144a^3b^2c^4d^*e^*k^3z - 63a^2b^4c^3d^*e^*k^3z + 27a^*b^4c^4d^2e^*k^2z - 9a^2b^3c^4e^*g^*h^3z - 108a^2b^*c^6d^2g^2h^*z + 81a^2b^3c^4d^*e^*j^3z + 27a^*b^3c^5d^2g^2h^*z - 27a^*b^2c^6d^2e^2j^*z - 18a^2b^2c^5d^*g^3h^*z + 108a^2b^*c^6d^2e^2h^2z - 27a^*b^3c^5d^*e^2h^2z + 27a^*b^2c^6d^2f^2g^*z - 18a^2b^2c^5d^*e^*h^3z - 216a^6c^3j^2k^*l^*m^*z + 216a^6c^3h^*j^*l^2m^*z + 216a^6c^3f^*k^*l^*m^2z - 216a^5c^4f^2k^*l^*m^*z - 216a^5c^4g^2j^*k^*m^*z + 216a^5c^4f^*j^2k^*l^*z + 216a^5c^4f^*h^2l^*m^*z + 216a^5c^4e^*j^2k^*m^*z + 216a^5c^4d^*j^2l^*m^*z + 216a^5c^4g^*h^*j^2m^*z - 216a^5c^4e^*j^*k^2l^*z - 216a^5c^4d^*j^*k^2m^*z + 216a^4c^5d^2j^*k^*m^*z - 18a^6b^2c^*k^*l^*m^3z + 216a^5c^4f^*g^*k^2m^*z - 216a^5c^4d^*j^*k^*l^2z - 72a^6b^*c^2j^*l^3m^*z + 18a^5b^3c^*j^*l^3m^*z - 216a^5c^4f^*h^*j^*l^2z + 216a^5c^4e^*h^*k^*l^2z + 216a^5c^4e^*f^*l^2m^*z - 216a^4c^5e^2h^*k^*l^*z + 216a^4c^5e^2h^*j^*m^*z - 216a^4c^5e^2f^*l^*m^*z - 216a^5c^4e^*f^*k^*m^2z + 216a^5c^4d^*g^*k^*m^2z - 216a^5c^4d^*f^*l^*m^2z + 216a^4c^5e^*f^2k^*m^*z + 216a^4c^5d^*f^2l^*m^*z + 108a^5b^*c^3j^3k^*l^*z - 216a^5c^4f^*g^*h^*m^2z + 216a^4c^5f^2g^*h^*m^*z + 216a^4c^5f^*g^2j^*k^*z - 216a^4c^5e^*g^2j^*l^*z + 216a^4c^5d^*g^2j^*m^*z - 72a^6b^*c^2h^*k^*m^3z - 72a^6b^*c^2g^*l^*m^3z + 54a^5b^3c^*h^*k^*m^3z + 54a^5b^3c^*g^*l^*m^3z - 216a^4c^5d^*h^2j^*k^*z - 18a^4b^4c^*f^*l^3m^*z + 9a^4b^4c^*h^*k^*l^3z - 216a^4c^5e^*f^*j^2k^*z - 216a^4c^5e^*f^*h^2m^*z - 216a^4c^5d^*g^*j^2k^*z - 216a^4c^5d^*f^*j^2l^*z - 216a^4c^5d^*e^*j^2m^*z - 72a^5b^*c^3f^*k^3m^*z + 72a^4b^*c^4g^3j^*m^*z + 36a^5b^*c^3g^*k^3l^*z - 36a^4b^*c^4g^3k^*l^*z - 216a^4c^5f^*g^*h^*j^2z + 216a^4c^5d^*f^*j^*k^2z - 216a^3c^6d^2f^*j^*k^*z - 216a^3c^6d^2e^*j^*l^*z + 72a^4b^4c^*f^*j^*m^3z - 63a^4b^4c^*e^*k^*m^3z - 63a^4b^4c^*d^*l^*m^3z + 216a^4c^5d^*g^*h^*k^2z - 216a^3c^6d^2g^*h^*k^*z + 216a^3c^6d^2f^*g^*m^*z - 216a^3c^6d^2e^2j^*k^*z + 144a^5b^*c^3f^*j^*l^3z - 144a^3b^*c^5e^3j^*m^*z - 72a^5b^*c^3e^*k^*l^3z + 72a^3b^*c^5e^3k^*l^*z - 63a^4b^4c^*g^*h^*m^3z + 18a^3b^5c^*f^*j^*l^3z - 18a^*b^5c^3e^3j^*m^*z - 9a^3b^5c^*e^*k^*l^3z + 9a^*b^5c^3e^3k^*l^*z - 216a^4c^5d^*e^*h^*l^2z - 216a^3c^6e^2f^*h^*j^*z + 216a^3c^6d^2e^2h^*l^*z - 126a^*b^4c^4d^3j^*m^*z + 108a^4b^*c^4g^*h^3l^*z + 63a^*b^4c^4d^3k^*l^*z + 36a^5b^*c^3g^*h^*l^3z - 9a^3b^5c^*g^*h^*l^3z + 216a^4c^5d^*e^*f^*m^*
\end{aligned}$$

$$\begin{aligned}
& 2*z + 216*a^3*c^6*d*f^2*g*k*z - 216*a^3*c^6*d*e*f^2*m*z + 36*a^4*b*c^4*e*j^3*k*z + 36*a^4*b*c^4*d*j^3*l*z - 216*a^3*c^6*d*f*g^2*j*z + 72*a^3*b^5*c*e*g*m^3*z + 72*a^3*b^5*c*d*h*m^3*z + 72*a^3*b*c^5*f^3*h*k*z + 72*a^3*b*c^5*f^3*g*l*z + 36*a^4*b*c^4*g*h*j^3*z + 18*a*b^4*c^4*e^3*f*m*z + 9*a^2*b^6*c*e*g*l^3*z + 9*a^2*b^6*c*d*h*l^3*z - 9*a*b^4*c^4*e^3*h*k*z - 9*a*b^4*c^4*e^3*g*l*z + 216*a^3*c^6*d*e*f*j^2*z - 144*a^2*b*c^6*d^3*f*m*z + 108*a^3*b*c^5*e*g^3*k*z - 108*a^3*b*c^5*d*g^3*l*z + 108*a*b^3*c^5*d^3*f*m*z - 72*a^4*b*c^4*d*h*k^3*z + 72*a^2*b*c^6*d^3*h*k*z - 54*a*b^3*c^5*d^3*h*k*z + 36*a^4*b*c^4*e*g*k^3*z - 36*a^2*b*c^6*d^3*g*l*z - 27*a*b^3*c^5*d^3*g*l*z - 81*a^2*b^6*c*d*e*m^3*z + 216*a^4*b*c^4*d*e*l^3*z + 72*a^2*b*c^6*e^3*f*j*z + 72*a^2*b*c^6*d*e^3*l*z - 18*a*b^3*c^5*e^3*f*j*z - 18*a*b^3*c^5*d*e^3*l*z - 90*a*b^2*c^6*d^3*f*j*z + 72*a*b^2*c^6*d^3*e*k*z + 36*a^3*b*c^5*e*g*h^3*z - 36*a^2*b*c^6*e^3*g*h*z + 9*a*b^6*c^2*d*e*k^3*z + 9*a*b^3*c^5*e^3*g*h*z - 180*a^3*b*c^5*d*e*j^3*z + 18*a*b^2*c^6*d^3*g*h*z - 9*a*b^5*c^3*d*e*j^3*z + 18*a*b^2*c^6*d*e^3*h*z + 9*a*b^4*c^4*d*e*h^3*z + 36*a^2*b*c^6*d*e*g^3*z - 9*a*b^3*c^5*d*e*g^3*z - 18*a*b^2*c^6*d*e*f^3*z + 27*a^5*b^2*c^2*h^2*l*m^2*z - 27*a^5*b^2*c^2*j*k^2*l^2*z + 27*a^4*b^3*c^2*h^2*k^2*m*z + 27*a^4*b^3*c^2*g^2*l^2*m*z + 27*a^5*b^2*c^2*g*k^2*m^2*z - 27*a^4*b^3*c^2*h^2*k*l^2*z - 27*a^4*b^3*c^2*g^2*k*m^2*z - 135*a^4*b^2*c^3*e^2*l*m^2*z + 27*a^5*b^2*c^2*e*l^2*m^2*z + 27*a^4*b^3*c^2*h*j^2*l^2*z - 27*a^4*b^2*c^3*h^2*j^2*l*z + 27*a^3*b^4*c^2*e^2*l*m^2*z - 270*a^4*b^3*c^2*f*j^2*m^2*z - 270*a^4*b^2*c^3*f^2*j*m^2*z + 162*a^3*b^4*c^2*f^2*j*m^2*z - 108*a^3*b^3*c^3*f^2*j^2*m*z - 27*a^4*b^2*c^3*h^2*j*k^2*z - 27*a^4*b^2*c^3*g^2*j*l^2*z + 27*a^3*b^3*c^3*e^2*k^2*m*z + 27*a^3*b^3*c^3*d^2*l^2*m*z + 27*a^2*b^5*c^2*f^2*j^2*m*z + 162*a^3*b^3*c^3*d^2*k*m^2*z - 27*a^4*b^3*c^2*d*k^2*m^2*z - 27*a^4*b^2*c^3*g*j^2*k^2*z + 27*a^3*b^3*c^3*g^2*h^2*m*z - 27*a^2*b^5*c^2*d^2*k*m^2*z + 162*a^3*b^2*c^4*d^2*k^2*l*z - 108*a^4*b^2*c^3*g*h^2*l^2*z - 27*a^4*b^2*c^3*e*j^2*l^2*z + 27*a^3*b^4*c^2*g*h^2*l^2*z + 27*a^3*b^2*c^4*e^2*j^2*l*z - 27*a^2*b^4*c^3*d^2*k^2*l*z - 162*a^3*b^3*c^3*f^2*h*l^2*z + 162*a^3*b^3*c^3*e^2*h*m^2*z - 135*a^4*b^2*c^3*e*h^2*m^2*z + 135*a^3*b^2*c^4*f^2*h^2*l*z + 27*a^3*b^4*c^2*e*h^2*m^2*z - 27*a^3*b^3*c^3*g^2*h*k^2*z - 27*a^3*b^2*c^4*e^2*j*k^2*z - 27*a^3*b^2*c^4*d^2*j*l^2*z + 27*a^2*b^5*c^2*f^2*h*l^2*z - 27*a^2*b^5*c^2*e^2*h*m^2*z - 27*a^2*b^4*c^3*f^2*h^2*l*z - 27*a^3*b^2*c^4*g^2*h^2*j*z + 27*a^2*b^3*c^4*e^2*g^2*m*z - 27*a^2*b^3*c^4*d^2*j^2*k*z + 27*a^2*b^3*c^4*d^2*h^2*m*z + 351*a^3*b^2*c^4*d^2*g*m^2*z - 189*a^2*b^4*c^3*d^2*g*m^2*z + 162*a^3*b^3*c^3*d*g^2*m^2*z - 162*a^3*b^2*c^4*e^2*g*l^2*z + 135*a^3*b^3*c^3*d*h^2*l^2*z + 135*a^3*b^2*c^4*f^2*g*k^2*z - 27*a^2*b^5*c^2*d*h^2*l^2*z - 27*a^2*b^5*c^2*d*g^2*m^2*z - 27*a^2*b^4*c^3*f^2*g*k^2*z + 27*a^2*b^4*c^3*e^2*g*l^2*z + 27*a^2*b^3*c^4*f^2*g^2*k*z + 27*a^2*b^3*c^4*e^2*h^2*k*z + 135*a^3*b^2*c^4*e*f^2*l^2*z - 108*a^3*b^2*c^4*e*g^2*k^2*z + 108*a^2*b^2*c^5*d^2*g^2*l*z + 27*a^3*b^2*c^4*e*h^2*j^2*z + 27*a^2*b^4*c^3*e*g^2*k^2*z - 27*a^2*b^4*c^3*e*f^2*l^2*z - 27*a^2*b^3*c^4*e^2*h*j^2*z - 27*a^2*b^2*c^5*e^2*f^2*l*z - 27*a^2*b^2*c^5*e^2*g^2*j*z - 27*a^2*b^2*c^5*d^2*h^2*j*z + 162*a^2*b^3*c^4*d*e^2*l^2*z - 135*a^2*b^2*c^5*d^2*g*j^2*z - 27*a^2*b^3*c^4*d*g^2*j^2*z + 27*a^2*b^3*c^4*d*f^2*k^2*z - 162*a^2*b^2*c^5*d^2*e*k^2*z - 27*a^2*b^2*c^5*e*f^2*h^2*z - 72*a^7*c^2*k*l*m^3
\end{aligned}$$

$$\begin{aligned}
& z + 9a^5b^4k^1m^3z + 72a^6c^3jk^3m^2z - 72a^6c^3hk^1z - 72a^6c^3f^1z - 72a^5c^4h^3k^1z - 72a^5c^4h^3jm^2z - 9a^4b^5hk^1m^3z - 9a^4b^5g^1m^3z - 144a^6c^3f^1jm^3z - 144a^5c^4h^3j^3k^2z - 144a^5c^4g^1j^3z - 144a^5c^4f^1j^3m^2z - 144a^4c^5f^3jm^2z + 72a^6c^3ek^1m^3z + 72a^6c^3d^1m^3z + 72a^4c^5f^3k^1z + 72a^6c^3gh^1m^3z + 18b^6c^3d^3jm^2z - 18a^3b^6f^1jm^3z - 9b^6c^3d^3k^1z + 9a^3b^6ek^1m^3z + 9a^3b^6d^1m^3z + 144a^5c^4dk^3z + 144a^3c^6d^3k^1z - 72a^5c^4f^1jk^3z - 72a^3c^6d^3jm^2z + 9a^3b^6gh^1m^3z - 72a^5c^4gh^1k^3z - 72a^4c^5g^3hk^1z - 72a^4c^5f^1g^3m^2z - 108a^5b^3c^3j^4m^2z + 63a^6b^2c^3jm^4z + 36a^6b^2c^2k^1z - 9a^5b^3c^3k^1z - 144a^5c^4eg^1z - 144a^3c^6e^3g^1z + 72a^5c^4d^1h^3z + 72a^4c^5f^1h^3j^2z + 72a^4c^5e^1h^3k^2z + 72a^4c^5d^1h^3z + 72a^3c^6e^3hk^1z + 72a^3c^6e^3fm^2z - 18b^5c^4d^3f^1m^2z + 9b^5c^4d^3hk^1z + 9b^5c^4d^3g^1z - 9a^2b^7eg^1m^3z - 9a^2b^7d^1hm^3z + 144a^4c^5eg^1j^3z + 144a^4c^5d^1hj^3z - 72a^5c^4d^1em^3z - 72a^3c^6ef^3k^2z - 72a^3c^6d^1f^3z + 144a^6b^2c^2fm^4z - 108a^5b^3c^3fm^4z - 72a^3c^6f^3gh^1z + 36a^5b^2c^3hk^1z - 36a^3b^2c^5f^4m^2z + 18b^4c^5d^3f^1j^2z - 9b^4c^5d^3ek^1z + 9a^4b^4c^3g^1z - 144a^4c^5d^1ek^3z - 144a^2c^7d^3ek^1z + 72a^2c^7d^3f^1j^2z - 9b^4c^5d^3gh^1z + 72a^3c^6d^1g^3h^1z + 72a^2c^7d^3gh^1z - 72a^5b^2c^3d^1z - 72a^4b^2c^4f^1j^4z + 45a^2b^2c^6d^4z - 36a^2b^2c^6e^4k^2z - 9a^3b^5c^3d^1z + 9a^2b^3c^5e^4k^2z - 72a^3c^6d^1eh^3z - 72a^2c^7d^1eh^3z + 9b^3c^6d^3eg^1z + 72a^2c^7d^1ef^3z + 36a^3b^2c^5d^1h^4z - 9a^2b^2c^6e^4g^1z + 36a^2b^2c^7d^3f^2z + 90a^5b^2c^2j^3m^2z + 45a^5b^2c^2j^2z + 9a^4b^3c^2j^2k^3z - 9a^4b^3c^2h^3m^2z - 45a^4b^2c^3g^3m^2z + 9a^3b^4c^2g^3m^2z + 198a^4b^3c^2f^2m^3z - 108a^3b^3c^3f^3m^2z + 18a^2b^5c^2f^3m^2z - 117a^4b^2c^3f^2z + 117a^3b^2c^4e^3m^2z + 63a^3b^4c^2f^2z - 63a^2b^4c^3e^3m^2z - 171a^2b^3c^4d^3m^2z - 54a^3b^3c^3f^2k^3z + 9a^3b^2c^4g^3j^2z + 9a^2b^5c^2f^2k^3z + 18a^3b^2c^4f^2j^3z + 18a^2b^3c^4f^3j^2z - 9a^2b^4c^3f^2j^3z - 45a^2b^2c^5e^3j^2z + 9a^2b^3c^4f^2h^3z - 9a^2b^2c^5f^2g^3z + 9a^2b^8d^1em^3z - 36a^2b^2c^7d^4h^2z - 108a^6c^3h^2z + 108a^6c^3jk^2z - 108a^6c^3g^1k^2m^2z - 108a^6c^3e^1z + 108a^5c^4h^2j^2z + 108a^5c^4e^2z + 216a^5c^4f^2jm^2z + 108a^5c^4h^2jk^2z + 108a^5c^4g^2j^1z + 108a^5c^4g^1j^2k^2z - 216a^4c^5d^2k^2z + 108a^5c^4ej^2z - 108a^4c^5e^2j^2z - 9a^6b^2c^1z + 108a^5c^4eh^2z - 108a^4c^5f^2h^2z + 108a^4c^5e^2jk^2z + 108a^4c^5d^2j^1z - 144a^6b^2c^2j^2m^3z + 108a^4c^5g^2h^2j^2z - 27a^4b^4c^3j^3m^2z + 27a^4b^3c^2j^4m^2z + 9a^5b^2c^2k^4z + 216a^4c^5e^2g^1z - 108a^4c^5f^2g^1k^2z - 108a^4c^5d^2gm^2z - 9a^4b^4c^3j^2z - 108a^4c^5eh^2j^2z - 108a^4c^5ef^2z + 108a^3c^6e^2f^2z - 36a^5b^2c^3j^2k^3z + 36a^5b^2c^3h^3m^2z + 108a^3c^6e^2g^2j^2z + 108a^3c^6d^2h^2j^2z - 216a^5b^2c^3f^2m^3z
\end{aligned}$$

$$\begin{aligned}
& + 144a^4b^3c^4f^3m^2z + 108a^3c^6d^2g^*j^2z - 72a^3b^5c^f^2m^3z - 45a^5b^2c^2g^*l^4z - 9a^4b^3c^2h^*k^4z - 9a^3b^2c^4g^4l^*z \\
& + 9a^2b^3c^4f^4m^*z + 216a^3c^6d^2e^*k^2z - 9a^2b^6c^f^2l^3z + 9a^b^6c^2e^3m^2z + 108a^3c^6e^*f^2h^2z + 108a^3b^*c^5d^3m^2z \\
& + 108a^2c^7d^2e^2j^*z + 72a^4b^*c^4f^2k^3z + 72a^*b^5c^3d^3m^2z - 72a^3b^*c^5f^3j^2z + 54a^4b^3c^2d^*l^4z - 45a^4b^2c^3e^*k^4z \\
& + 18a^3b^3c^3f^*j^4z + 9a^3b^4c^2e^*k^4z - 9a^2b^2c^5f^4j^*z - 108a^2c^7d^2f^2g^*z + 9a^3b^2c^4g^*h^4z + 9a^*b^4c^4e^3j^2z - \\
& 72a^2b^*c^6d^3j^2z + 54a^*b^3c^5d^3j^2z - 36a^3b^*c^5f^2h^3z - 9a^2b^3c^4d^*h^4z + 9a^2b^2c^5e^*g^4z + 9a^*b^2c^6e^3f^2z + 36a^7c^2l^3m^2z + 72a^6c^3j^3m^2z - 36a^6c^3j^2l^3z + 9a^4b^5j^2m^3z + 36a^5c^4g^3m^2z + 36a^5c^4f^2l^3z - 36a^4c^5e^3m^2z - 9b^7c^2d^3m^2z + 9a^2b^7f^2m^3z - 36a^4c^5g^3j^2z + 72a^4c^5f^2j^3z + 36a^3c^6e^3j^2z - 9b^5c^4d^3j^2z + 36a^3c^6f^2g^3z - 9a^4b^2c^3j^5z - 36a^2c^7e^3f^2z - 9b^3c^6d^3f^2z + 36a^7c^2j^*m^4z - 36a^6c^3k^4l^*z - 18a^5b^4j^*m^4z + 36a^6c^3g^*l^4z + 36a^4c^5g^4l^*z + 18a^4b^5f^*m^4z - 9b^4c^5d^4l^*z + 36a^5c^4e^*k^4z + 36a^3c^6f^4j^*z - 36a^2c^7d^4l^*z - 36a^4c^5g^*h^4z + 9b^3c^6d^4h^*z - 36a^3c^6e^*g^4z + 36a^2c^7e^4g^*z - 9b^2c^7d^4e^*z - 36a^7b^*c^m^5z + 36a^*c^8d^4e^*z + 9a^6b^3m^5z + 36a^5c^4j^5z + 9a^4b^3c^*g^*h^*j^*k^*l^*m - 9a^3b^4c^*e^*g^*j^*k^*l^*m - 9a^3b^4c^*d^*h^*j^*k^*l^*m - 9a^3b^4c^*f^*g^*h^*k^*l^*m + 36a^4b^*c^3d^*e^*j^*k^*l^*m + 9a^2b^5c^*d^*e^*j^*k^*l^*m + 36a^4b^*c^3e^*f^*h^*j^*l^*m + 36a^4b^*c^3e^*f^*g^*k^*l^*m + 36a^4b^*c^3d^*f^*h^*k^*l^*m + 9a^2b^5c^*e^*f^*g^*k^*l^*m + 9a^2b^5c^*d^*f^*h^*k^*l^*m + 36a^3b^*c^4d^*e^*f^*j^*k^*l^* + 9a^*b^5c^2d^*e^*f^*j^*k^*l^* + 36a^3b^*c^4d^*e^*g^*h^*k^*l^* + 36a^3b^*c^4d^*e^*f^*h^*k^*m + 36a^3b^*c^4d^*e^*f^*g^*l^*m + 9a^*b^5c^2d^*e^*f^*h^*k^*m + 9a^*b^5c^2d^*e^*f^*g^*l^*m - 9a^*b^4c^3d^*e^*f^*h^*j^*k - 9a^*b^4c^3d^*e^*f^*g^*j^*l - 9a^*b^4c^3d^*e^*f^*g^*h^*m + 9a^*b^3c^4d^*e^*f^*g^*h^*j - 9a^*b^6c^d^*e^*f^*k^*l^*m + 18a^4b^2c^2e^*g^*j^*k^*l^*m + 18a^4b^2c^2d^*h^*j^*k^*l^*m + 18a^4b^2c^2f^*g^*h^*k^*l^*m - 36a^3b^3c^2d^*e^*j^*k^*l^*m - 36a^3b^3c^2e^*f^*g^*k^*l^*m - 36a^3b^3c^2d^*f^*h^*k^*l^*m + 9a^3b^3c^2f^*g^*h^*j^*k^*l^* + 9a^3b^3c^2e^*g^*h^*j^*k^*m + 9a^3b^3c^2d^*g^*h^*j^*l^*m - 108a^3b^2c^3d^*e^*f^*k^*l^*m + 54a^2b^4c^2d^*e^*f^*k^*l^*m - 36a^3b^2c^3d^*f^*g^*j^*k^*m + 18a^3b^2c^3e^*f^*g^*j^*k^*l^* + 18a^3b^2c^3d^*f^*h^*j^*k^*l^* + 18a^3b^2c^3d^*e^*h^*j^*k^*m + 18a^3b^2c^3d^*e^*g^*j^*l^*m - 9a^2b^4c^2e^*f^*g^*j^*k^*l^* - 9a^2b^4c^2d^*f^*h^*j^*k^*l^* - 9a^2b^4c^2d^*e^*h^*j^*k^*m - 9a^2b^4c^2d^*e^*g^*j^*l^*m + 18a^3b^2c^3e^*f^*g^*h^*k^*m + 18a^3b^2c^3d^*f^*g^*h^*l^*m - 9a^2b^4c^2e^*f^*g^*h^*k^*m - 9a^2b^4c^2d^*f^*g^*h^*l^*m - 36a^2b^3c^3d^*e^*f^*j^*k^*l^* - 36a^2b^3c^3d^*e^*f^*h^*k^*m - 36a^2b^3c^3d^*e^*f^*g^*l^*m + 9a^2b^3c^3e^*f^*g^*h^*j^*k + 9a^2b^3c^3d^*f^*g^*h^*j^*l + 9a^2b^3c^3d^*e^*g^*h^*j^*m + 18a^2b^2c^4d^*e^*f^*h^*j^*k + 18a^2b^2c^4d^*e^*f^*g^*j^*l + 18a^2b^2c^4d^*e^*f^*g^*h^*m - 9a^5b^2c^h^*j^*k^2l^*m - 9a^5b^2c^*g^*j^*k^*l^2m + 27a^5b^2c^*f^*j^*k^*l^m^2 - 9a^4b^3c^*f^*j^2k^*l^*m + 9a^3b^4c^*f^2j^*k^*l^*m - 18a^5b^*c^2e^*j^*k^2l^*m - 9a^5b^2c^*g^*h^*k^*l^m^2 + 9a^4b^3c^*e^*j^*k^2l^*m - 18a^5b^*c^2f^*h^*k^2l^*m - 18a^5b^*c^2d^*j^*k^*l^2m + 9a^4b^3c^*f^*h^*k^2l^*m + 9a^4b^3c^*d^*j^*
\end{aligned}$$

$$\begin{aligned}
& k^2m + 36a^5b^2c^2ehk^2m - 36a^4b^3c^3e^2hk^2m + 18a^5b^2c^2fh^2j^2m - 18a^5b^2c^2f^2g^2k^2m - 18a^4b^3c^3e^2hk^2m + 9a^4b^3c^3f^2g^2k^2m + 9a^3b^4c^4e^2hk^2m - 9a^2b^5c^5e^2hk^2m - 54a^5b^2c^2eh^2j^2m - 18a^5b^2c^2e^2g^2k^2m - 18a^5b^2c^2d^2hk^2m^2 + 18a^4b^3c^3e^2h^2j^2m - 9a^4b^3c^3f^2h^2j^2m - 9a^4b^3c^3f^2g^2j^2m^2 + 9a^4b^3c^3e^2g^2k^2m + 9a^4b^3c^3d^2hk^2m + 18a^4b^3c^3f^2g^2j^2k^2m - 18a^4b^3c^3e^2g^2j^2m + 18a^3b^4c^4d^2g^2k^2m - 9a^3b^4c^4e^2f^2k^2m - 9a^2b^5c^5d^2g^2k^2m - 18a^4b^3c^3f^2g^2h^2m - 18a^4b^3c^3d^2h^2j^2k^2m - 9a^3b^4c^4d^2f^2k^2m - 54a^4b^3c^3d^2g^2j^2k^2m - 18a^4b^3c^3f^2g^2h^2k^2m - 18a^4b^3c^3e^2g^2j^2k^2m - 18a^4b^3c^3d^2h^2j^2k^2m - 18a^3b^4c^4d^2g^2j^2k^2m + 9a^3b^4c^4e^2f^2j^2k^2m + 9a^3b^4c^4d^2f^2j^2m - 9a^3b^4c^4d^2e^2k^2m - 54a^3b^4c^4d^2f^2j^2k^2m + 36a^4b^3c^3d^2g^2j^2k^2m - 36a^3b^4c^4d^2g^2j^2k^2m - 18a^4b^3c^3e^2f^2j^2k^2m + 18a^4b^3c^3d^2f^2j^2k^2m - 18a^3b^4c^4d^2e^2j^2m + 9a^3b^4c^4f^2g^2h^2j^2m - 9a^2b^5c^5d^2g^2j^2k^2m + 36a^4b^3c^3d^2g^2h^2k^2m - 36a^3b^4c^4d^2g^2h^2k^2m + 18a^4b^3c^3e^2g^2h^2k^2m - 18a^4b^3c^3e^2f^2h^2k^2m - 18a^4b^3c^3d^2f^2j^2k^2m - 18a^3b^4c^4d^2f^2h^2m - 18a^3b^4c^4d^2e^2j^2k^2m - 9a^2b^5c^5d^2g^2h^2k^2m - 54a^4b^3c^3d^2g^2h^2k^2m - 54a^3b^4c^4e^2f^2h^2j^2m - 18a^4b^3c^3d^2f^2g^2m - 18a^3b^4c^4e^2f^2g^2k^2m - 54a^4b^3c^3d^2f^2g^2k^2m - 36a^4b^3c^3e^2f^2g^2j^2m - 36a^4b^3c^3d^2f^2h^2j^2m + 36a^3b^4c^4e^2f^2g^2j^2m + 36a^3b^4c^4d^2f^2h^2j^2m - 18a^4b^3c^3d^2e^2h^2k^2m - 18a^4b^3c^3d^2e^2g^2m^2 + 18a^3b^4c^4e^2f^2h^2j^2m - 18a^3b^4c^4e^2f^2g^2k^2m - 18a^3b^4c^4d^2f^2h^2k^2m + 18a^3b^4c^4d^2f^2g^2k^2m - 9a^2b^5c^5e^2f^2g^2j^2m - 9a^2b^5c^5d^2f^2h^2j^2m - 54a^3b^4c^4d^2f^2g^2j^2m - 18a^3b^4c^4e^2f^2g^2j^2m - 18a^2b^5c^5d^2f^2g^2j^2m + 9a^2b^4c^3d^2f^2g^2j^2m + 9a^2b^4c^3d^2f^2g^2k^2m + 9a^2b^4c^3d^2e^2f^2m - 18a^3b^4c^4e^2f^2m - 18a^3b^4c^4e^2f^2g^2h^2m - 18a^3b^4c^4d^2f^2h^2j^2k^2m - 9a^2b^4c^3d^2e^2f^2k^2m + 18a^3b^4c^4d^2f^2g^2j^2k^2m - 18a^3b^4c^4d^2f^2g^2h^2m - 18a^3b^4c^4d^2e^2h^2j^2k^2m - 18a^3b^4c^4d^2e^2g^2j^2k^2m + 18a^2b^5c^5d^2e^2f^2j^2m - 9a^2b^5c^5d^2e^2f^2j^2m - 9a^2b^4c^3d^2e^2f^2k^2m - 18a^2b^4c^3d^2e^2f^2j^2m - 9a^2b^3c^4d^2e^2g^2j^2k^2m + 9a^2b^3c^4d^2e^2f^2j^2m - 54a^2b^3c^4d^2e^2g^2h^2m - 18a^2b^3c^4d^2e^2f^2j^2k^2m - 18a^2b^3c^4d^2e^2g^2h^2k^2m + 9a^2b^3c^4d^2e^2f^2j^2k^2m - 36a^3b^4c^4d^2e^2f^2h^2m + 36a^2b^3c^4d^2e^2f^2h^2m + 18a^2b^3c^4d^2e^2g^2h^2k^2m - 18a^2b^3c^4d^2e^2f^2g^2m - 18a^2b^3c^4d^2e^2f^2h^2k^2m - 18a^2b^3c^4d^2e^2f^2g^2m + 9a^2b^3c^4d^2e^2f^2h^2k^2m + 9a^2b^3c^4d^2e^2f^2g^2m + 27a^2b^2c^5d^2e^2f^2g^2k^2m + 9a^2b^4c^3d^2e^2f^2g^2k^2m - 9a^2b^3c^4d^2e^2f^2g^2k^2m - 9a^2b^2c^5d^2e^2f^2h^2j^2m - 9a^2b^2c^5d^2e^2f^2g^2j^2m - 9a^2b^2c^5d^2e^2f^2g^2h^2m + 72a^4c^4d^2f^2g^2j^2k^2m + 72a^4c^4d^2e^2f^2k^2m + 9a^2b^6c^6d^2g^2k^2m + 9a^2b^6c^6d^2e^2f^2j^2m - 27a^4b^2c^2f^2j^2k^2m - 9a^4b^2c^2g^2h^2j^2m + 36a^3b^3c^2e^2h^2k^2m - 18a^4b^2c^2e^2h^2k^2m - 9a^4b^2c^2g^2h^2j^2k^2m + 18a^4b^2c^2f^2h^2j^2k^2m + 18a^4b^2c^2f^2g^2j^2m - 18a^4b^2c^2e^2h^2j^2m - 9a^4b^2c^2g^2h^2j^2k^2m - 9a^3b^3c^2f^2h^2j^2k^2m - 9a^3b^3c^2f^2g^2j^2m - 63a^4b^2c^2d^2g^2k^2m
\end{aligned}$$



$$\begin{aligned}
& 1*m + 63*a^3*b^2*c^3*d^2*g*k^1*m - 45*a^2*b^4*c^2*d^2*g*k^1*m + 36*a^4*b^2*c^2*e*f*k^2*1*m + 27*a^3*b^3*c^2*d*g^2*k^1*m - 9*a^4*b^2*c^2*f*h*j*k^2*1 - \\
& 9*a^4*b^2*c^2*e*h*j*k^2*m + 9*a^3*b^3*c^2*e*g^2*j*1*m - 9*a^3*b^2*c^3*d^2*h*j*1*m + 36*a^4*b^2*c^2*d*f*k^1*2*m + 27*a^4*b^2*c^2*e*h*j*k^1*2 - 27*a^3*b^2*c^3*e^2*h*j*k^1 - \\
& 18*a^3*b^2*c^3*e^2*f*j*1*m - 9*a^4*b^2*c^2*f*g*j*k^1*2 - 9*a^4*b^2*c^2*d*g*j*1*2*m + 9*a^3*b^3*c^2*f*g^2*h*1*m - 9*a^3*b^3*c^2*e*h^2*j*k^1 + 9*a^3*b^3*c^2*d*h^2*j*k^1 - \\
& 9*a^3*b^2*c^3*e^2*g*j*k^1 + 9*a^2*b^4*c^2*e^2*h*j*k^1 + 72*a^4*b^2*c^2*d*g*j*k^1*2 + 36*a^4*b^2*c^2*d*e*k^1*m^2 + 27*a^4*b^2*c^2*e*g*h*1*2*m - 27*a^4*b^2*c^2*e*f*j*k^1*2 - \\
& 27*a^4*b^2*c^2*d*f*j*1*m^2 - 27*a^3*b^2*c^3*e^2*g*h*1*m + 27*a^3*b^2*c^3*e*f^2*j*k^1 + 27*a^3*b^2*c^3*d*f^2*j*1*m + 18*a^3*b^3*c^2*d*g*j^2*k^1 + 9*a^3*b^3*c^2*f*g*h^2*k^1 + \\
& 9*a^3*b^3*c^2*e*g*j^2*k^1 - 9*a^3*b^3*c^2*e*g*h^2*1*m - 9*a^3*b^3*c^2*e*f*j^2*k^1 + 9*a^3*b^3*c^2*d*h*j^2*k^1 - 9*a^3*b^3*c^2*d*f*j^2*1*m + 9*a^2*b^4*c^2*e^2*g*h*1*m + \\
& 36*a^2*b^3*c^3*d^2*g*j*k^1 - 27*a^4*b^2*c^2*f*g*h*j*1*2 + 27*a^3*b^2*c^3*f^2*g*h*j*1 - 18*a^4*b^2*c^2*e*f*h*1*m^2 - 18*a^3*b^3*c^2*d*g*j*k^2*1 - \\
& 18*a^3*b^2*c^3*d*g^2*j*k^1 + 18*a^2*b^3*c^3*d^2*f*j*k^1 - 9*a^4*b^2*c^2*e*g*h*k^1*2 - 9*a^4*b^2*c^2*d*g*h*1*m^2 - 9*a^3*b^3*c^2*f*g*h*j^2*m + 9*a^3*b^3*c^2*e*f*j*k^2*1 - \\
& 9*a^3*b^2*c^3*f^2*g*h*k^1 + 9*a^2*b^4*c^2*d*g^2*j*k^1 + 9*a^2*b^3*c^3*d^2*e*j*1*m + 36*a^3*b^2*c^3*e*f*g^2*1*m + 36*a^2*b^3*c^3*d^2*g*h*k^1 - 18*a^3*b^3*c^2*d*g*h*k^2*m - \\
& 18*a^3*b^2*c^3*d*g^2*h*k^1 + 9*a^3*b^3*c^2*e*f*h*k^2*m + 9*a^3*b^3*c^2*d*f*j*k^1*2 - 9*a^3*b^2*c^3*f*g^2*h*j*1 - 9*a^3*b^2*c^3*e*g^2*h*j*1 - 9*a^2*b^4*c^2*e*f*g^2*1*m + \\
& 9*a^2*b^4*c^2*d*g^2*h*k^1 + 9*a^2*b^3*c^3*d^2*f*h*1*m + 9*a^2*b^3*c^3*d*e^2*j*k^1 + 36*a^3*b^2*c^3*d*f*h^2*k^1 + 36*a^3*b^2*c^3*d*e*j^2*k^1 + 18*a^3*b^3*c^2*d*g*h*k^1*2 + \\
& 18*a^3*b^2*c^3*e*g*h^2*j*1 + 18*a^3*b^2*c^3*e*f*h^2*k^1 - 18*a^3*b^2*c^3*e*f*h^2*j*1 - 18*a^3*b^2*c^3*d*g*h^2*k^1 + 18*a^3*b^2*c^3*d*e*h^2*1*m + 18*a^2*b^3*c^3*e^2*f*h*j*1 - \\
& 9*a^3*b^3*c^2*e*g*h*j*1*2 - 9*a^3*b^3*c^2*d*f*g*1*2*m - 9*a^3*b^3*c^2*d*e*h*1*2*m - 9*a^3*b^2*c^3*f*g*h^2*j*k - 9*a^3*b^2*c^3*d*g*h^2*j*1 - 9*a^2*b^4*c^2*d*f*h^2*k^1 - \\
& 9*a^2*b^4*c^2*d*e*j^2*k^1 - 9*a^2*b^3*c^3*e^2*g*h*j*1 - 9*a^2*b^3*c^3*e^2*f*h*k^1 + 9*a^2*b^3*c^3*e^2*f*g*k^1 - 9*a^2*b^3*c^3*d*e^2*h*1*m + 36*a^3*b^3*c^2*e*f*g*j*1*2 + \\
& 36*a^3*b^3*c^2*d*f*h*j*1*2 + 18*a^3*b^3*c^2*d*f*g*k^1*2 - 18*a^3*b^2*c^3*e*f*g*j^2*m - 18*a^3*b^2*c^3*d*f*h*j^2*m - 18*a^2*b^3*c^3*e*f^2*g*j*1 - 18*a^2*b^3*c^3*d*f^2*h*j*1 + \\
& 9*a^3*b^3*c^2*d*e*h*k^1*2 + 9*a^3*b^3*c^2*d*e*g*1*m^2 - 9*a^3*b^2*c^3*e*g*h*j^2*k - 9*a^3*b^2*c^3*d*g*h*j^2*1 + 9*a^2*b^4*c^2*e*f*g*j^2*m + 9*a^2*b^4*c^2*d*f*h*j^2*m + \\
& 9*a^2*b^3*c^3*e*f^2*g*k^1 + 9*a^2*b^3*c^3*d*f^2*h*k^1 + 72*a^2*b^2*c^4*d^2*f*g*j*1 + 36*a^2*b^2*c^4*d^2*e*f*1*m + 27*a^3*b^2*c^3*d*g*h*j*k^2 + 27*a^3*b^2*c^3*d*f*g*k^2*1 + \\
& 27*a^3*b^2*c^3*d*e*g*k^2*m - 27*a^2*b^2*c^4*d^2*g*h*j*k - 27*a^2*b^2*c^4*d^2*f*g*k^1 - 27*a^2*b^2*c^4*d^2*e*g*k^1 + 18*a^2*b^3*c^3*d*f*g^2*j*1 - 18*a^2*b^2*c^4*d^2*e*h*k^1 - \\
& 9*a^3*b^2*c^3*e*f*h*j*k^2 + 9*a^2*b^3*c^3*e*f*g^2*j*1 - 9*a^2*b^3*c^3*d*g^2*h*j*k - 9*a^2*b^3*c^3*d*f*g^2*k^1 - 9*a^2*b^3*c^3*d*e*g^2*k^1 - 9*a^2*b^2*c^4*d^2*f*h*j*1 - \\
& 9*a^2*b^2*c^4*d^2*e*h*j*1 + 36*a^2*b^2*c^4*d*e^2*f*k^1 - 27*a^3*b^2*c^3*d*e*h*j*1*2 + 27*a^2*b^2*c^4*d*e^2*h*j*1 - 18*a^3*b^2*c^3*d*e*g*k^1*2 - 9*a^3*b
\end{aligned}$$

$$\begin{aligned}
& ^2c^3d*f*g*j^1^2 + 9a^2b^4c^2d*e*h*j^1^2 + 9a^2b^3c^3e*f*g^2*h*m \\
& + 9a^2b^3c^3d*f*h^2*j*k - 9a^2b^3c^3d*e*h^2*j^1 - 9a^2b^2c^4e^2 \\
& *f*g*j*k - 9a^2b^2c^4d*e^2*g*j*m + 63a^3b^2c^3d*e*f*j^m^2 - 63a^2* \\
& b^2c^4d*e*f^2*j^m - 45a^2b^4c^2d*e*f*j^m^2 + 36a^2b^2c^4d*e*f^2*k \\
& *l - 27a^3b^2c^3e*f*g*h^1^2 + 27a^2b^3c^3d*e*f*j^2*m + 27a^2b^2c \\
& ^4e^2*f*g*h^1 + 9a^2b^4c^2e*f*g*h^1^2 - 9a^2b^3c^3e*f*g*h^2*1 + 9* \\
& a^2b^3c^3d*f*g*h^2*m + 9a^2b^3c^3d*e*h*j^2*k + 9a^2b^3c^3d*e*g*j \\
& ^2*1 + 18a^2b^2c^4d*e*g^2*j*k - 9a^3b^2c^3d*e*g*h^m^2 - 9a^2b^3c \\
& ^3d*e*g*j*k^2 - 9a^2b^2c^4e*f^2*g*h*k - 9a^2b^2c^4d*f^2*g*h^1 + 18 \\
& *a^2b^2c^4d*f*g^2*h*k - 18a^2b^2c^4d*e*g^2*h^1 - 9a^2b^3c^3d*f*g \\
& *h*k^2 - 9a^2b^2c^4e*f*g^2*h^j + 36a^2b^3c^3d*e*f*h^1^2 - 18a^2b^ \\
& 2c^4d*e*f*h^2*1 - 9a^2b^2c^4d*f*g*h^2*j - 9a^2b^2c^4d*e*g*h^j^2 - \\
& 27a^2b^2c^4d*e*f*g*k^2 + 18a^2b^2c^4d^2*f*h*k^2 - 9a^2b^3c^3e* \\
& f*g^2*k^2 - 9a^2b^2c^4e^2*f*h*j^2 - 9a^2b^2c^4d*f^2*h^2*k + 45a^2* \\
& b^3c^3d*e*f^2*m^2 + 36a^2b^2c^4d^2*e*g^1^2 + 9a^2b^3c^3d*e*g^2*1^ \\
& 2 + 9a^2b^2c^4e*f^2*g*j^2 + 9a^2b^2c^4d*f^2*h^j^2 - 9a^2b^2c^4d \\
& *e^2*h*k^2 - 36a^2b^2c^4d*e^2*f^1^2 - 9a^2b^2c^4d*f*g^2*j^2 - 12a^ \\
& 6*b*c*h*k^1^3*m + 3a*b^6*c*e^3*k^1*m + 3a*b^6*c*d*e*f^1^3 - 12a*b*c^6*d* \\
& e^3*f*h + 9a^5*b^2*c*h^2*k^1^2*m + 18a^5*b*c^2*g^2*k^2*1*m - 9a^5*b^2*c* \\
& h^2*j^1*m^2 + 9a^5*b*c^2*h^2*j^2*1*m - 9a^4*b^3*c*g^2*k^2*1*m - 3a^4*b^2 \\
& *c^2*g^3*k^1*m + 18a^5*b*c^2*f^2*k^1*m^2 + 15a^3*b^3*c^2*f^3*k^1*m + 9a^ \\
& 5*b^2*c*h^j^2*k^m^2 + 9a^5*b^2*c*g*j^2*1*m^2 - 9a^5*b^2*c*f*k^2*1^2*m + 9 \\
& *a^5*b*c^2*h^2*j*k^2*m + 9a^5*b*c^2*g^2*j^1^2*m - 9a^4*b^3*c*f^2*k^1*m^2 \\
& + 36a^3*b^2c^3e^3*k^1*m - 27a^5*b*c^2*g^2*j*k^m^2 - 18a^5*b*c^2*h^2*j* \\
& k^1^2 - 18a^2b^4c^2e^3*k^1*m - 9a^5*b^2*c*g*j*k^2*m^2 - 9a^5*b^2*c*e* \\
& k^2*1*m^2 + 9a^5*b*c^2*h^j^2*k^2*1 + 9a^5*b*c^2*g*j^2*k^2*m + 9a^4*b^3*c \\
& *g^2*j*k^m^2 + 9a^3*b^4*c*e^2*k^1^2*m + 3a^4*b^2c^2h^3*j*k^1 - 54a^4*b \\
& *c^3d^2*k^2*1*m - 51a^2b^3c^3d^3*k^1*m - 27a^4*b*c^3e^2*j^2*1*m - 18 \\
& *a^5*b*c^2*g*h^2*1^2*m - 9a^5*b^2*c*e*j^1^2*m^2 - 9a^5*b^2*c*d*k^1^2*m^2 \\
& + 9a^5*b*c^2*g^2*h^1*m^2 + 9a^5*b*c^2*g*j^2*k^1^2 + 9a^5*b*c^2*e*j^2*1^2 \\
& *m - 9a^3*b^4*c*e^2*j^1*m^2 - 9a^2b^5*c*d^2*k^2*1*m + 3a^4*b^2c^2g*h^ \\
& 3*1*m - 3a^3*b^3c^2g^3*j*k^1 + 18a^5*b*c^2e*j^2*k^m^2 + 18a^5*b*c^2d \\
& *j^2*1*m^2 + 18a^4*b*c^3f^2*j^2*k^1 + 9a^5*b*c^2g*h^2*k^m^2 + 9a^5*b*c \\
& ^2f*h^2*1*m^2 + 9a^5*b*c^2f*j*k^2*1^2 - 9a^4*b^3*c*e*j^2*k^m^2 - 9a^4* \\
& b^3*c*d*j^2*1*m^2 + 9a^4*b^2c^2f*j^3*k^1 + 9a^4*b^2c^2e*j^3*k^m + 9a \\
& ^4*b^2c^2d*j^3*1*m + 9a^4*b*c^3f^2*h^2*1*m + 9a^4*b*c^3e^2*j*k^2*m + \\
& 9a^4*b*c^3d^2*j^1^2*m - 3a^3*b^3c^2g^3*h*k^m - 3a^3*b^2c^3f^3*j*k^1 \\
& + 3a^2b^4c^2f^3*j*k^1 + 45a^4*b*c^3d^2*j*k^m^2 - 27a^5*b*c^2d*j*k^ \\
& 2*m^2 + 18a^5*b*c^2g*h^j^2*m^2 + 18a^4*b*c^3e^2*j*k^1^2 + 15a^2b^3c^ \\
& 3e^3*j*k^1 - 12a^3b^2c^3f^3*h*k^m - 12a^3b^2c^3f^3*g^1*m + 9a^5*b \\
& *c^2g*h*k^2*1^2 - 9a^4*b^3*c*g*h^j^2*m^2 + 9a^4*b^3*c*d*j*k^2*m^2 + 9a^ \\
& 4*b^2c^2g*h^j^3*m + 9a^4*b*c^3g^2*h^2*k^1 + 9a^4*b*c^3g^2*h^2*j^m + 9 \\
& *a^2b^5*c*d^2*j*k^m^2 + 3a^2b^4c^2f^3*h*k^m + 3a^2b^4c^2f^3*g^1*m \\
& + 36a^2b^2c^4d^3*j*k^1 + 18a^4*b*c^3e^2*g^1^2*m + 15a^2b^3c^3e^3* \\
& g^1*m + 12a^4*b^2c^2d*j*k^3*1 + 9a^5*b*c^2f*g*k^2*m^2 + 9a^5*b*c^2e*
\end{aligned}$$

$$\begin{aligned}
& h^2 k^2 m^2 + 9 a^4 b^3 c^3 g^2 h^2 j^2 l + 9 a^4 b^3 c^3 f^2 h^2 k^2 l + 9 a^4 b^3 c^3 \\
& f^2 g^2 k^2 m + 9 a^4 b^3 c^3 d^2 h^2 l^2 m^2 - 9 a^3 b^3 c^2 e^2 h^3 k^2 m + 6 a^2 b^3 c^3 \\
& e^3 h^2 k^2 m + 45 a^4 b^3 c^3 e^2 h^2 j^2 m^2 + 36 a^2 b^2 c^4 d^3 h^2 k^2 m - 33 a^3 b^2 c^3 \\
& d^2 g^3 l^2 m - 27 a^4 b^3 c^3 f^2 h^2 j^2 l^2 - 27 a^4 b^3 c^3 e^2 f^2 l^2 m^2 - 27 a^4 b^3 c^3 \\
& e^2 h^2 j^2 m^2 - 18 a^4 b^3 c^3 g^2 h^2 j^2 k^2 - 18 a^4 b^3 c^3 f^2 g^2 k^2 l - 18 a^4 b^3 c^3 \\
& e^2 g^2 k^2 m - 18 a^3 b^3 c^4 d^2 g^2 l^2 m + 12 a^4 b^2 c^2 d^2 h^2 k^3 m + 9 a^5 b^3 c^2 e^2 f^2 l^2 m^2 \\
& + 9 a^5 b^3 c^2 d^2 g^2 l^2 m^2 + 9 a^4 b^3 c^3 f^2 g^2 k^2 l^2 + 9 a^4 b^3 c^3 e^2 g^2 k^2 m^2 + 9 a^4 b^3 c^3 \\
& g^2 h^2 j^2 k^2 + 9 a^4 b^3 c^3 f^2 h^2 j^2 l^2 + 9 a^4 b^3 c^3 e^2 f^2 l^2 m^2 - 9 a^3 b^4 c^2 e^2 h^2 j^2 m^2 + 9 a^3 \\
& b^4 c^2 e^2 f^2 l^2 m + 9 a^2 b^5 c^2 e^2 h^2 j^2 m^2 + 9 a^2 b^4 c^2 d^2 g^3 l^2 m - 9 a^2 b^2 c^4 d^3 g^3 l^2 m \\
& - 9 a^2 b^5 c^2 d^2 g^2 l^2 m - 6 a^4 b^2 c^2 e^2 h^2 k^3 l - 6 a^3 b^2 c^3 f^2 g^3 j^2 m + 3 a^4 b^2 c^2 g^2 h^2 j^2 k^3 \\
& + 3 a^4 b^2 c^2 f^2 g^2 k^3 l + 3 a^4 b^2 c^2 e^2 g^2 k^3 m + 3 a^3 b^2 c^3 g^3 h^2 j^2 k + 3 a^3 b^2 c^3 f^3 \\
& g^3 k^2 l + 3 a^3 b^2 c^3 e^2 g^3 k^2 m - 27 a^3 b^3 c^4 d^2 h^2 k^2 l + 18 a^4 b^3 c^3 e^2 f^2 k^2 m^2 + 18 a^4 b^3 c^3 \\
& d^2 f^2 l^2 m^2 + 9 a^4 b^3 c^3 f^2 h^2 j^2 k^2 + 9 a^4 b^3 c^3 f^2 g^2 j^2 l^2 + 9 a^4 b^3 c^3 e^2 g^2 k^2 l^2 + 9 a^4 b^3 c^3 \\
& d^2 h^2 k^2 l^2 + 9 a^3 b^4 c^2 e^2 g^2 j^2 m^2 + 9 a^3 b^4 c^2 d^2 h^2 j^2 m^2 - 9 a^3 b^3 c^2 e^2 g^2 j^3 m - 9 a^3 b^3 c^2 \\
& d^2 h^2 j^3 m + 9 a^3 b^3 c^4 e^2 g^2 k^2 l + 9 a^3 b^3 c^4 e^2 g^2 j^2 m + 9 a^3 b^3 c^4 d^2 h^2 j^2 m - 3 a^2 b^3 c^3 f^3 h^2 j^2 k \\
& - 3 a^2 b^3 c^3 f^3 g^2 j^2 l - 3 a^2 b^3 c^3 e^2 f^3 k^2 m - 3 a^2 b^3 c^3 d^2 f^3 l^2 m + 45 a^4 b^3 c^3 d^2 g^2 j^2 m^2 + 45 a^3 b^3 c^4 \\
& d^2 g^2 j^2 m + 24 a^4 b^2 c^2 d^2 g^2 k^2 l^3 + 24 a^2 b^2 c^4 e^3 f^2 j^2 m + 18 a^4 b^3 c^3 f^2 g^2 h^2 m^2 + 18 a^4 b^3 c^3 d^2 h^2 j^2 l^2 \\
& + 18 a^3 b^3 c^4 e^2 h^2 j^2 k - 12 a^4 b^2 c^2 e^2 g^2 j^2 l^3 - 12 a^4 b^2 c^2 e^2 f^2 k^2 l^3 - 12 a^4 b^2 c^2 d^2 e^2 l^3 m \\
& - 12 a^2 b^2 c^4 e^3 g^2 j^2 l - 12 a^2 b^2 c^4 e^3 f^2 k^2 l - 12 a^2 b^2 c^4 d^2 e^3 l^2 m + 9 a^4 b^3 c^3 f^2 g^2 j^2 k^2 + 9 a^4 b^3 c^3 e^2 h^2 \\
& j^2 k^2 + 9 a^3 b^2 c^3 e^2 h^3 j^2 k + 9 a^3 b^2 c^3 d^2 h^3 j^2 l + 9 a^3 b^2 c^4 f^2 g^2 j^2 k + 9 a^3 b^2 c^4 d^2 h^2 j^2 l + 9 a^2 b^5 c^2 \\
& d^2 g^2 j^2 m - 3 a^4 b^2 c^2 d^2 h^2 j^2 l^3 - 3 a^2 b^3 c^3 f^3 g^2 h^2 m - 3 a^2 b^2 c^4 e^3 h^2 j^2 k + 18 a^4 b^3 c^3 f^2 g^2 h^2 l^2 + 18 a^3 b^3 c^4 e^2 g^2 h^2 m \\
& + 18 a^3 b^3 c^4 d^2 h^2 j^2 k^2 + 18 a^3 b^3 c^4 d^2 f^2 k^2 l + 18 a^3 b^3 c^4 d^2 e^2 k^2 m + 9 a^4 b^3 c^3 e^2 g^2 h^2 m^2 + 9 a^4 b^3 c^3 e^2 f^2 j^2 l^2 \\
& + 9 a^4 b^3 c^3 d^2 g^2 j^2 l^2 + 9 a^3 b^2 c^3 f^2 g^2 h^3 l + 9 a^3 b^2 c^3 e^2 g^2 h^3 m + 9 a^3 b^2 c^4 f^2 g^2 h^2 l + 9 a^3 b^2 c^4 e^2 g^2 j^2 k \\
& + 9 a^3 b^2 c^4 e^2 f^2 j^2 l - 9 a^2 b^3 c^3 d^2 g^3 j^2 l + 9 a^2 b^3 c^3 d^2 g^3 h^2 l^3 - 3 a^4 b^2 c^2 f^2 g^2 h^2 l^3 - 3 a^3 b^3 c^2 e^2 g^2 j^2 k^3 \\
& - 3 a^3 b^3 c^2 d^2 h^2 j^2 k^3 - 3 a^3 b^3 c^2 d^2 f^2 k^3 l - 3 a^3 b^3 c^2 d^2 e^2 k^3 m - 3 a^2 b^2 c^4 e^3 g^2 h^2 m - 33 a^3 b^2 c^3 d^2 e^2 j^3 m - 27 a^4 \\
& b^3 c^3 e^2 f^2 h^2 m^2 - 27 a^3 b^3 c^4 d^2 e^2 k^2 l^2 - 18 a^4 b^3 c^3 d^2 e^2 j^2 m^2 - 18 a^3 b^3 c^4 e^2 f^2 j^2 k - 18 a^3 b^3 c^4 d^2 f^2 j^2 l - 9 a^4 b^2 c^2 d^2 e^2 \\
& j^2 m^3 + 9 a^4 b^3 c^3 d^2 g^2 h^2 m^2 + 9 a^4 b^3 c^3 d^2 e^2 k^2 l^2 + 9 a^3 b^3 c^4 f^2 g^2 h^2 k + 9 a^3 b^3 c^4 e^2 f^2 j^2 k^2 + 9 a^3 b^3 c^4 d^2 f^2 j^2 l^2 \\
& + 9 a^3 b^3 c^4 e^2 f^2 h^2 m + 9 a^3 b^3 c^4 d^2 e^2 k^2 l - 9 a^2 b^5 c^2 d^2 e^2 j^2 m^2 + 9 a^2 b^4 c^2 d^2 e^2 j^3 m - 9 a^2 b^3 c^3 d^2 g^3 h^2 m \\
& + 9 a^2 b^3 c^5 d^2 e^2 k^2 l + 9 a^2 b^3 c^5 d^2 e^2 j^2 m + 9 a^2 b^4 c^3 d^2 g^2 h^2 m - 6 a^3 b^2 c^3 d^2 g^2 j^3 k - 3 a^3 b^3 c^2 f^2 g^2 h^2 k^3 \\
& + 3 a^3 b^2 c^3 e^2 f^2 j^3 k + 3 a^3 b^2 c^3 d^2 f^2 j^3 l + 3 a^2 b^2 c^4 e^2 f^3 j^2 k + 3 a^2 b^2 c^4 d^2 f^3 j^2 l + 45 a^3 b^3 c^4 d^2 g^2 h^2 l^3
\end{aligned}$$

$$\begin{aligned}
& 2 + 36a^4b^2c^2efg^3m^3 + 36a^4b^2c^2d^2f^2hg^3m^3 - 27a^3b^3c^4e^2g^2hk^2 - 27a^3b^3c^4d^2g^2h^2*1 - 18a^3b^3c^4f^2g^2h^2j^2 + 18a^3b^3c^4d^2e^2j^2*1^2 + 15a^3b^3c^4d^2e^2j^2*1^3 + 12a^2b^2c^4e^2f^3g^3m + 12a^2b^2c^4d^2f^3hg^3m + 9a^3b^3c^4f^2g^2h^2j^2 + 9a^3b^3c^4e^2g^2h^2k^2 + 9a^3b^3c^4d^2f^2j^2k^2 + 9a^2b^3c^5d^2f^2j^2k + 9a^2b^5c^2d^2g^2h^2*1^2 - 9a^2b^4c^3d^2g^2h^2*1 - 6a^2b^2c^4e^2f^3hg^3m + 3a^3b^2c^3f^2g^2h^2j^3 + 3a^2b^2c^4f^3g^2h^2j + 45a^3b^3c^4d^2f^2g^2m^2 - 27a^2b^3c^5d^2f^2g^2m + 18a^3b^3c^4e^2f^2g^2*1^2 + 15a^3b^3c^4e^2f^2g^2*1^3 - 12a^3b^2c^3d^2e^2j^2k^3 + 9a^3b^3c^4d^2e^2hg^3m^2 + 9a^3b^3c^4e^2g^2h^2j^2 + 9a^3b^3c^4e^2f^2hg^3m^2 - 9a^2b^3c^3d^2f^2hg^3*1 + 9a^2b^3c^5d^2f^2hg^3*1 + 9a^2b^5c^2d^2f^2g^2m^2 + 9a^2b^3c^4d^2f^2g^2m + 6a^3b^3c^2d^2f^2hg^3*1^3 + 3a^2b^4c^2d^2e^2j^2k^3 + 18a^3b^3c^4e^2f^2g^2k^2 + 18a^2b^3c^5d^2g^2h^2j + 18a^2b^3c^5d^2f^2g^2*1 + 18a^2b^3c^5d^2e^2g^2m - 12a^3b^2c^3d^2f^2hg^3k^3 + 9a^3b^3c^4e^2f^2hg^3j^2 + 9a^3b^3c^4d^2f^2g^2*1^2 + 9a^3b^3c^4d^2e^2g^2m^2 + 9a^3b^3c^4d^2g^2h^2j^2 + 9a^2b^2c^4e^2f^2g^3k + 9a^2b^2c^4d^2g^3hg^3j + 9a^2b^2c^4d^2f^2g^3*1 + 9a^2b^2c^4d^2e^2g^3m + 9a^2b^3c^5e^2f^2hg^3j + 9a^2b^3c^5e^2f^2g^2k - 9a^2b^3c^4d^2g^2hg^3j - 9a^2b^3c^4d^2f^2g^2*1 - 9a^2b^3c^4d^2e^2g^2m - 3a^3b^2c^3e^2f^2g^2k^3 + 3a^2b^4c^2e^2f^2g^2k^3 + 3a^2b^4c^2d^2f^2hg^3k^3 - 54a^3b^3c^4d^2e^2f^2m^2 - 51a^3b^3c^2d^2e^2f^2m^3 - 27a^3b^3c^4d^2e^2hg^3*1^2 + 9a^3b^3c^4d^2e^2hg^3*2k^2 + 9a^2b^3c^5e^2f^2g^2j + 9a^2b^3c^5d^2f^2hg^3j + 9a^2b^3c^5d^2e^2hg^3*2k + 9a^2b^3c^5d^2e^2g^2*1 - 9a^2b^5c^2d^2e^2f^2m^2 - 9a^2b^4c^3d^2e^2g^2*1^2 - 9a^2b^2c^5d^2e^2g^2*1 - 9a^2b^2c^5d^2e^2f^2m - 3a^2b^3c^3e^2f^2g^2j^3 - 3a^2b^3c^3d^2f^2hg^3j^3 + 36a^3b^2c^3d^2e^2f^2*1^3 - 27a^2b^3c^5d^2f^2g^2j^2 - 18a^2b^4c^2d^2e^2f^2*1^3 - 18a^2b^3c^5d^2e^2hg^3j + 9a^2b^3c^5d^2e^2hg^3j^2 + 9a^2b^3c^5d^2f^2g^2j + 9a^2b^4c^3d^2e^2f^2*1^2 + 9a^2b^3c^4d^2f^2g^2j^2 - 9a^2b^2c^5d^2f^2g^2j - 9a^2b^2c^5d^2e^2f^2*1 + 3a^2b^2c^4d^2e^2hg^3j - 18a^2b^3c^5e^2f^2g^2hg^3 + 18a^2b^3c^5d^2e^2f^2k^2 + 15a^2b^3c^3d^2e^2f^2k^3 + 9a^2b^3c^5e^2f^2g^2hg^3 + 9a^2b^3c^5d^2e^2g^2j^2 - 9a^2b^3c^4d^2e^2f^2k^2 + 9a^2b^2c^5d^2e^2g^2j - 9a^2b^2c^5d^2e^2f^2k + 3a^2b^2c^4e^2f^2g^2hg^3 + 18a^2b^3c^5d^2e^2f^2j^2 + 9a^2b^3c^5d^2f^2g^2hg^3 - 9a^2b^3c^4d^2e^2f^2j^2 + 9a^2b^2c^5d^2f^2g^2hg^3 - 3a^2b^2c^4d^2e^2f^2j^3 + 9a^2b^3c^5d^2e^2g^2hg^3 - 9a^2b^2c^5d^2e^2g^2hg^3 + 9a^2b^2c^5d^2e^2f^2hg^3 - 36a^6c^2f^2j^2k^2*1^2m + 36a^5c^3f^2j^2k^2*1^2m - 36a^5c^3f^2hg^3*1^2m + 36a^5c^3d^2g^2k^2*1^2m - 36a^4c^4d^2g^2k^2*1^2m - 36a^5c^3e^2hg^3j^2k^2*1^2m - 36a^5c^3e^2f^2j^2*1^2m - 36a^5c^3d^2f^2k^2*1^2m + 36a^4c^4e^2hg^3j^2k^2*1^2m + 36a^4c^4e^2f^2j^2*1^2m + 9a^6b^3c^2hg^3k^2*1^2m^2 - 3a^4b^3c^2hg^3k^2*1^2m - 36a^5c^3e^2g^2hg^3*1^2m + 36a^5c^3e^2f^2j^2k^2*1^2m - 36a^5c^3d^2g^2j^2k^2*1^2m + 36a^5c^3d^2f^2j^2*1^2m - 36a^5c^3d^2e^2k^2*1^2m + 36a^4c^4e^2g^2hg^3*1^2m - 36a^4c^4e^2f^2j^2k^2*1^2m + 9a^6b^3c^2hg^3j^2*1^2m^2 + 9a^6b^3c^2g^2k^2*1^2m^2 + 9a^5b^2c^2g^2k^3*1^2m + 3a^3b^4c^2g^3k^2*1^2m + 36a^5c^3f^2g^2hg^3j^2*1^2m + 36a^5c^3e^2f^2hg^3*1^2m - 36a^4c^4f^2g^2hg^3j^2*1^2m - 36a^4c^4e^2f^2hg^3*1^2m - 24a^4b^3c^3f^3k^2*1^2m - 12a
\end{aligned}$$

$$\begin{aligned}
& ^5b^2c^2h^3j^3k^m - 12a^5b^2c^2g^2j^3l^m - 3a^2b^5c^2f^3k^l^m - 36a^4c^4e^2g^2h^k^l - 36a^4c^4e^2f^2g^2l^m + 12a^5b^2c^2e^2k^l^3m - 6a^5b^2c^2f^2j^l^3m + 3a^5b^2c^2h^2j^k^l^3 + 48a^3b^3c^4d^3k^l^m + 36a^4c^4e^2f^2h^2j^m + 36a^4c^4d^2g^2h^2k^l - 36a^4c^4d^2f^2h^2k^m - 36a^4c^4d^2e^2j^2k^l + 24a^5b^2c^2d^2k^3l^m + 21a^2b^5c^2d^3k^l^m - 12a^5b^2c^2g^2j^k^3l - 9a^4b^3c^2d^2k^3l^m + 6a^5b^2c^2f^2j^k^3m + 3a^5b^2c^2g^2h^l^3m - 36a^4c^4e^2f^2h^2j^2l - 12a^5b^2c^2g^2h^k^3m - 3a^5b^2c^2e^2j^k^m^3 - 3a^5b^2c^2d^2j^l^m^3 - 36a^4c^4d^2g^2h^j^k^2 - 36a^4c^4d^2f^2g^2k^2l - 36a^4c^4d^2e^2h^k^2l - 36a^4c^4d^2e^2g^2k^2m + 36a^3c^5d^2g^2h^j^k + 36a^3c^5d^2f^2g^2k^l - 36a^3c^5d^2f^2g^2j^m + 36a^3c^5d^2e^2h^k^l + 36a^3c^5d^2e^2g^2k^m - 36a^3c^5d^2e^2f^2l^m + 24a^5b^2c^2e^2h^l^m^3 - 24a^3b^3c^4e^3j^k^l - 12a^5b^2c^2f^2h^k^m^3 - 12a^5b^2c^2f^2g^l^m^3 - 3a^5b^2c^2g^2h^j^m^3 - 3a^4b^3c^2e^2j^k^l^3 - 3a^2b^5c^2e^2j^3k^l + 36a^4c^4d^2e^2h^j^l^2 + 36a^4c^4d^2e^2g^2k^l^2 - 36a^3c^5d^2e^2h^j^l - 36a^3c^5d^2e^2g^2k^l - 36a^3c^5d^2e^2f^2k^m + 24a^4b^3c^3e^2h^3k^m - 24a^3b^3c^4e^3g^l^m - 18a^2b^4c^3d^3j^k^l - 12a^4b^3c^3g^2h^3j^l - 12a^4b^3c^3f^2h^3k^l - 12a^4b^3c^3d^2h^3l^m + 12a^3b^3c^4e^3h^k^m + 6a^4b^3c^3f^2h^3j^m - 3a^4b^3c^3g^2h^j^l^3 - 3a^4b^3c^3f^2h^k^l^3 - 3a^4b^3c^3e^2g^l^3m - 3a^4b^3c^3d^2h^l^3m - 3a^2b^5c^2e^3h^k^m - 3a^2b^5c^2e^3g^l^m + 36a^4c^4e^2f^2g^2h^l^2 - 36a^4c^4d^2e^2f^2j^m^2 - 36a^3c^5e^2f^2g^2h^l - 36a^3c^5d^2f^2g^2j^k - 36a^3c^5d^2e^2f^2k^l + 36a^3c^5d^2e^2f^2j^m - 18a^2b^4c^3d^3h^k^m - 9a^2b^4c^3d^3g^l^m + 30a^5b^2c^2d^2g^2k^m^3 - 30a^4b^3c^2d^2g^2k^m^3 - 24a^5b^2c^2e^2f^2k^m^3 - 24a^5b^2c^2d^2f^2l^m^3 + 24a^4b^3c^3e^2g^2j^3m + 24a^4b^3c^3d^2h^j^3m + 15a^4b^3c^3e^2f^2k^m^3 + 15a^4b^3c^3d^2f^2l^m^3 + 12a^5b^2c^2e^2g^2j^m^3 + 12a^5b^2c^2d^2h^j^m^3 - 12a^4b^3c^3f^2h^j^3k - 12a^4b^3c^3f^2g^2j^3l + 6a^4b^3c^3e^2g^2j^m^3 + 6a^4b^3c^3d^2h^j^m^3 + 6a^4b^3c^3e^2h^j^3l + 36a^3c^5d^2e^2g^2h^l - 24a^5b^2c^2f^2g^2h^m^3 + 15a^4b^3c^3f^2g^2h^m^3 - 9a^2b^6c^2d^2g^2j^m^2 - 6a^3b^4c^3d^2g^2k^l^3 - 6a^2b^4c^3e^3f^2j^m + 3a^3b^4c^3e^2g^2j^l^3 + 3a^3b^4c^3e^2f^2k^l^3 + 3a^3b^4c^3d^2h^j^l^3 + 3a^3b^4c^3d^2e^2l^3m + 3a^2b^4c^3e^3h^j^k + 3a^2b^4c^3e^3g^2j^l + 3a^2b^4c^3e^3f^2k^l + 3a^2b^4c^3d^2e^3l^m - 36a^3c^5d^2e^2g^2h^2k + 30a^2b^3c^5d^3f^2j^m - 30a^2b^3c^4d^3f^2j^m + 24a^3b^3c^4d^2g^3j^l - 24a^2b^3c^5d^3h^j^k - 24a^2b^3c^5d^3f^2k^l - 24a^2b^3c^5d^3e^2k^m + 15a^2b^3c^4d^3h^j^k + 15a^2b^3c^4d^3f^2k^l + 15a^2b^3c^4d^3e^2k^m - 12a^3b^3c^4e^2g^3j^k + 12a^2b^3c^5d^3g^2j^l + 6a^2b^3c^4d^3g^2j^l + 3a^3b^4c^3f^2g^2h^l^3 + 3a^2b^4c^3e^3g^2h^m + 24a^3b^3c^4d^2g^3h^m - 12a^3b^3c^4f^2g^3h^k + 12a^2b^3c^5d^3g^2h^m - 9a^3b^4c^3d^2e^2j^m^3 + 6a^3b^3c^4e^2g^3h^l + 6a^2b^3c^4d^3g^2h^m + 36a^3c^5d^2e^2f^2g^2k^2 - 36a^2c^6d^2e^2f^2g^2k - 24a^4b^3c^3d^2e^2j^l^3 - 18a^3b^4c^3e^2f^2g^2m^3 - 18a^3b^4c^3d^2f^2h^m^3 - 3a^2b^5c^2d^2e^2j^l^3 - 3a^2b^3c^4d^2e^3j^l - 24a^4b^3c^3e^2f^2g^l^3 + 24a^3b^3c^4d^2f^2h^3l + 12a^4b^3c^3d^2f^2h^l^3 - 12a^3b^3c^4e^2g^2h^3j - 12a^3b^3c^4e^2f^2h^3k - 12a^3b^3c^4d^2e^2h^3m - 12a^2b^2c^5d^3e^2j^k + 6a^3b^3c^4d^2g^2h^3k - 3a^2b^5c^2e^2f^2g^l^3 - 3a^2b^5c^2d^2f^2h^l^3 - 3a^2b^3c^4e^3g^2h^j - 3a^2b^3c^4e^3f^2h^k - 3a^2b^3c^4e^3f^2g^l - 3
\end{aligned}$$

$$\begin{aligned}
& *a*b^3*c^4*d*e^3*h*m + 24*a*b^2*c^5*d^3*e*h*1 - 12*a*b^2*c^5*d^3*f*h*k - 3* \\
& a*b^2*c^5*d^3*g*h*j - 3*a*b^2*c^5*d^3*f*g*1 - 3*a*b^2*c^5*d^3*e*g*m + 48*a^4 \\
& *b*c^3*d*e*f*m^3 + 24*a^2*b*c^5*d*e*f^3*m + 21*a^2*b^5*c*d*e*f*m^3 - 12*a^2 \\
& *b*c^5*e*f^3*g*j - 12*a^2*b*c^5*d*f^3*h*j - 9*a*b^3*c^4*d*e*f^3*m + 6*a^2* \\
& b*c^5*d*f^3*g*k + 12*a*b^2*c^5*d*e^3*f*1 - 6*a*b^2*c^5*d*e^3*g*k + 3*a*b^2* \\
& c^5*d*e^3*h*j - 24*a^3*b*c^4*d*e*f*k^3 - 12*a^2*b*c^5*d*e*g^3*j - 3*a*b^5*c \\
& ^2*d*e*f*k^3 + 3*a*b^2*c^5*e^3*f*g*h - 12*a^2*b*c^5*d*f*g^3*h + 9*a*b^2*c^5 \\
& *d*e*f^3*j + 9*a*b*c^6*d^2*e^2*f*j + 3*a*b^4*c^3*d*e*f*j^3 + 9*a*b*c^6*d^2* \\
& e^2*g*h + 9*a*b*c^6*d^2*e*f^2*h - 3*a*b^3*c^4*d*e*f*h^3 - 18*a*b*c^6*d^2*e* \\
& f*g^2 + 9*a*b*c^6*d*e^2*f^2*g + 3*a*b^2*c^5*d*e*f*g^3 - 36*a^4*b^2*c^2*e^2* \\
& k*1^2*m - 9*a^4*b^2*c^2*g^2*j^2*k*m + 45*a^3*b^3*c^2*d^2*k^2*1*m + 36*a^4*b \\
& ^2*c^2*e^2*j*1*m^2 + 9*a^4*b^2*c^2*g^2*j*k^2*1 + 9*a^3*b^3*c^2*e^2*j^2*1*m \\
& + 9*a^4*b^2*c^2*g^2*h*k^2*m - 9*a^4*b^2*c^2*f^2*h*1^2*m - 9*a^3*b^3*c^2*f^2 \\
& *j^2*k*1 - 45*a^3*b^3*c^2*d^2*j*k*m^2 + 36*a^3*b^2*c^3*d^2*j^2*k*m + 18*a^4 \\
& *b^2*c^2*f^2*h*k*m^2 + 18*a^4*b^2*c^2*f^2*g*1*m^2 - 9*a^4*b^2*c^2*g^2*h*k*1 \\
& ^2 - 9*a^4*b^2*c^2*f*h^2*k^2*m - 9*a^4*b^2*c^2*f*g^2*1^2*m - 9*a^4*b^2*c^2* \\
& e*j^2*k^2*1 - 9*a^4*b^2*c^2*d*j^2*k^2*m - 9*a^3*b^3*c^2*e^2*j*k*1^2 - 9*a^2 \\
& *b^4*c^2*d^2*j^2*k*m - 36*a^3*b^2*c^3*d^2*j*k^2*1 - 27*a^3*b^2*c^3*e^2*h^2* \\
& k*m + 9*a^4*b^2*c^2*g*h^2*j*1^2 + 9*a^4*b^2*c^2*f*h^2*k*1^2 - 9*a^4*b^2*c^2 \\
& *f*g^2*k*m^2 - 9*a^4*b^2*c^2*e*g^2*1*m^2 - 9*a^4*b^2*c^2*d*j^2*k*1^2 + 9*a^ \\
& 4*b^2*c^2*d*h^2*1^2*m - 9*a^3*b^3*c^2*e^2*g*1^2*m + 9*a^2*b^4*c^2*e^2*h^2*k \\
& *m + 9*a^2*b^4*c^2*d^2*j*k^2*1 - 45*a^3*b^3*c^2*e^2*h*j*m^2 + 36*a^4*b^2*c^ \\
& 2*e*h^2*j*m^2 + 36*a^3*b^2*c^3*e^2*h*j^2*m - 36*a^3*b^2*c^3*d^2*h*k^2*m + 3 \\
& 6*a^2*b^3*c^3*d^2*g^2*1*m - 9*a^4*b^2*c^2*f*h*j^2*1^2 - 9*a^4*b^2*c^2*d*h^2 \\
& *k*m^2 + 9*a^3*b^3*c^2*f^2*h*j*1^2 + 9*a^3*b^3*c^2*e^2*f*1*m^2 + 9*a^3*b^3* \\
& c^2*e*h^2*j^2*m - 9*a^3*b^2*c^3*f^2*h^2*j*1 - 9*a^2*b^4*c^2*e^2*h*j^2*m + 9 \\
& *a^2*b^4*c^2*d^2*h*k^2*m + 36*a^3*b^2*c^3*d^2*h*k*1^2 - 27*a^4*b^2*c^2*e*g* \\
& j^2*m^2 - 27*a^4*b^2*c^2*d*h*j^2*m^2 - 9*a^4*b^2*c^2*d*h*k^2*1^2 - 9*a^3*b^ \\
& 3*c^2*e*f^2*k*m^2 - 9*a^3*b^3*c^2*d*f^2*1*m^2 + 9*a^3*b^2*c^3*f^2*h*j^2*k + \\
& 9*a^3*b^2*c^3*f^2*g*j^2*1 - 9*a^3*b^2*c^3*e^2*g*k^2*1 - 9*a^3*b^2*c^3*e^2* \\
& f*k^2*m - 9*a^3*b^2*c^3*d^2*f*1^2*m - 9*a^2*b^4*c^2*d^2*h*k*1^2 + 9*a^2*b^3 \\
& *c^3*d^2*h^2*k*1 - 81*a^3*b^2*c^3*d^2*g*j*m^2 + 54*a^2*b^4*c^2*d^2*g*j*m^2 \\
& - 45*a^3*b^3*c^2*d*g^2*j*m^2 - 45*a^2*b^3*c^3*d^2*g*j^2*m + 36*a^3*b^2*c^3* \\
& d^2*f*k*m^2 + 36*a^3*b^2*c^3*d*g^2*j^2*m + 18*a^3*b^2*c^3*e^2*g*j*1^2 + 18* \\
& a^3*b^2*c^3*e^2*f*k*1^2 + 18*a^3*b^2*c^3*d*e^2*1^2*m - 9*a^4*b^2*c^2*d*f*k^ \\
& 2*m^2 - 9*a^3*b^3*c^2*f^2*g*h*m^2 - 9*a^3*b^3*c^2*d*h^2*j*1^2 - 9*a^3*b^2*c \\
& ^3*f^2*g*j*k^2 - 9*a^3*b^2*c^3*d^2*e*1*m^2 - 9*a^3*b^2*c^3*f*g^2*h^2*m - 9* \\
& a^3*b^2*c^3*e*g^2*j^2*1 - 9*a^3*b^2*c^3*e*f^2*k^2*1 - 9*a^2*b^4*c^2*d^2*f*k \\
& *m^2 - 9*a^2*b^4*c^2*d*g^2*j^2*m - 9*a^2*b^3*c^3*e^2*h^2*j*k - 9*a^2*b^2*c^ \\
& 4*d^2*f^2*k*m - 27*a^2*b^2*c^4*d^2*g^2*j*1 - 9*a^3*b^3*c^2*f*g*h^2*1^2 + 9* \\
& a^3*b^2*c^3*e*g^2*j*k^2 - 9*a^3*b^2*c^3*e*f^2*j*1^2 - 9*a^3*b^2*c^3*d*h^2*j \\
& ^2*k - 9*a^3*b^2*c^3*d*f^2*k*1^2 - 9*a^3*b^2*c^3*d*e^2*k*m^2 - 9*a^2*b^3*c^ \\
& 3*e^2*g*h^2*m - 9*a^2*b^3*c^3*d^2*h*j*k^2 - 9*a^2*b^3*c^3*d^2*f*k^2*1 - 9*a \\
& ^2*b^3*c^3*d^2*e*k^2*m + 36*a^3*b^3*c^2*d*e*j^2*m^2 + 36*a^3*b^2*c^3*e^2*f* \\
& h*m^2 - 27*a^2*b^2*c^4*d^2*g^2*h*m + 9*a^3*b^3*c^2*e*f*h^2*m^2 + 9*a^3*b^2*
\end{aligned}$$

$$\begin{aligned}
& c^3 f g^2 h k^2 - 9 a^2 b^4 c^2 e^2 f h m^2 + 9 a^2 b^3 c^3 d^2 e k l^2 - 9 \\
& a^2 b^2 c^4 e^2 f^2 h m - 45 a^2 b^3 c^3 d^2 g h l^2 - 36 a^3 b^2 c^3 e f^2 \\
& 2 g m^2 + 36 a^3 b^2 c^3 d g^2 h l^2 - 36 a^3 b^2 c^3 d f^2 h m^2 + 36 a^2 b^2 \\
& b^2 c^4 d^2 g h^2 l - 9 a^3 b^2 c^3 e g h^2 k^2 + 9 a^2 b^4 c^2 e f^2 g m^2 \\
& - 9 a^2 b^4 c^2 d g^2 h l^2 + 9 a^2 b^4 c^2 d f^2 h m^2 + 9 a^2 b^3 c^3 e^2 \\
& 2 g h k^2 + 9 a^2 b^3 c^3 d g^2 h^2 l - 9 a^2 b^3 c^3 d e^2 j l^2 - 9 a^2 b \\
& ^2 c^4 e^2 g^2 h k - 9 a^2 b^2 c^4 e^2 f g^2 m - 9 a^2 b^2 c^4 d^2 f j^2 k \\
& - 9 a^2 b^2 c^4 d^2 f h^2 m - 9 a^2 b^2 c^4 d^2 e j^2 l - 45 a^2 b^3 c^3 d^2 \\
& 2 f g m^2 + 36 a^3 b^2 c^3 d f g^2 m^2 - 27 a^3 b^2 c^3 d f h^2 l^2 + 18 a^2 \\
& 2 b^2 c^4 d^2 e j k^2 + 9 a^2 b^4 c^2 d f h^2 l^2 - 9 a^2 b^4 c^2 d f g^2 m \\
& ^2 - 9 a^2 b^3 c^3 e^2 f g l^2 + 9 a^2 b^2 c^4 e^2 g h^2 j + 9 a^2 b^2 c^4 e \\
& ^2 f h^2 k - 9 a^2 b^2 c^4 e f^2 g^2 l - 9 a^2 b^2 c^4 d f^2 g^2 m - 9 a^2 \\
& b^2 c^4 d e^2 j^2 k + 9 a^2 b^2 c^4 d e^2 h^2 m + 18 a^4 b^2 c^2 f^2 j^2 m \\
& ^2 + 18 a^3 b^2 c^3 e^2 h^2 l^2 - 9 a^2 b^4 c^2 e^2 h^2 l^2 + 18 a^2 b^2 c^4 \\
& 4 d^2 g^2 k^2 + 12 a^6 c^2 j^3 k l m + 3 a^6 b^2 j k l m^3 - 12 a^6 c^2 g k \\
& ^3 l m - 12 a^5 c^3 g^3 k l m - 24 a^6 c^2 e k l^3 m - 24 a^4 c^4 e^3 k l m \\
& + 12 a^6 c^2 h j k l^3 + 12 a^6 c^2 f j l^3 m + 12 a^5 c^3 h^3 j k l - 3 a \\
& ^5 b^3 h j k m^3 - 3 a^5 b^3 g j l m^3 - 3 a^5 b^3 f k l m^3 + 12 a^6 c^2 g \\
& * h l^3 m + 12 a^5 c^3 g h^3 l m - 12 a^6 c^2 e j k m^3 - 12 a^6 c^2 d j l m \\
& ^3 - 12 a^5 c^3 f j^3 k l - 12 a^5 c^3 e j^3 k m - 12 a^5 c^3 d j^3 l m - 1 \\
& 2 a^4 c^4 f^3 j k l + 24 a^6 c^2 f h k m^3 + 24 a^6 c^2 f g l m^3 + 24 a^4 c \\
& ^4 f^3 h k m + 24 a^4 c^4 f^3 g l m - 12 a^6 c^2 g h j m^3 - 12 a^6 c^2 e \\
& h l m^3 - 12 a^5 c^3 g h j^3 m + 3 b^6 c^2 d^3 j k l + 3 a^4 b^4 e j k m^3 \\
& + 3 a^4 b^4 d j l m^3 - 24 a^5 c^3 d j k^3 l - 24 a^3 c^5 d^3 j k l - 6 a^4 \\
& b^4 e h l m^3 + 3 b^6 c^2 d^3 h k m + 3 b^6 c^2 d^3 g l m + 3 a^6 b c j^2 \\
& l^3 m + 3 a^4 b^4 g h j m^3 + 3 a^4 b^4 f h k m^3 + 3 a^4 b^4 f g l m^3 - 2 \\
& 4 a^5 c^3 d h k^3 m - 24 a^3 c^5 d^3 h k m + 12 a^5 c^3 g h j k^3 + 12 a^5 c \\
& ^3 f g k^3 l + 12 a^5 c^3 e h k^3 l + 12 a^5 c^3 e g k^3 m + 12 a^4 c^4 g^3 \\
& h j k + 12 a^4 c^4 f g^3 k l + 12 a^4 c^4 f g^3 j m + 12 a^4 c^4 e g^3 k m \\
& + 12 a^4 c^4 d g^3 l m + 12 a^3 c^5 d^3 g l m + 3 a^6 b c j k^3 m^2 - 9 a \\
& ^6 b c h^2 l m^3 - 3 a^5 b c^2 j^4 k l + 24 a^5 c^3 e g j l^3 + 24 a^5 c^3 e \\
& f k l^3 + 24 a^5 c^3 d e l^3 m + 24 a^3 c^5 e^3 g j l + 24 a^3 c^5 e^3 f \\
& k l + 24 a^3 c^5 d e^3 l m - 12 a^5 c^3 d h j l^3 - 12 a^5 c^3 d g k l^3 - \\
& 12 a^4 c^4 e h^3 j k - 12 a^4 c^4 d h^3 j l - 12 a^3 c^5 e^3 h j k - 12 a^3 \\
& c^5 e^3 f j m + 9 a^4 b c^3 g^4 l m + 6 b^5 c^3 d^3 f j m + 6 a^3 b^5 d g \\
& k m^3 - 3 b^5 c^3 d^3 h j k - 3 b^5 c^3 d^3 g j l - 3 b^5 c^3 d^3 f k l - 3 \\
& b^5 c^3 d^3 e k m - 3 a^3 b^5 e g j m^3 - 3 a^3 b^5 e f k m^3 - 3 a^3 b^5 \\
& d h j m^3 - 3 a^3 b^5 d f l m^3 - 12 a^5 c^3 f g h l^3 - 12 a^4 c^4 f g h^3 \\
& l - 12 a^4 c^4 e g h^3 m - 12 a^3 c^5 e^3 g h m - 9 a^6 b c g k^2 m^3 - 3 \\
& b^5 c^3 d^3 g h m + 3 a^6 b c f l^3 m^2 - 3 a^3 b^5 f g h m^3 + 12 a^5 c^3 \\
& d e j m^3 + 12 a^4 c^4 e f j^3 k + 12 a^4 c^4 d g j^3 k + 12 a^4 c^4 d f j^3 \\
& l + 12 a^4 c^4 d e j^3 m + 12 a^3 c^5 e f^3 j k + 12 a^3 c^5 d f^3 j l - \\
& 9 a^6 b c e l^2 m^3 - 24 a^5 c^3 e f g m^3 - 24 a^5 c^3 d f h m^3 - 24 a^3 c \\
& ^5 e f^3 g m - 24 a^3 c^5 d f^3 h m - 15 a^2 b c^5 d^4 l m + 15 a b^3 c^4 \\
& d^4 l m + 12 a^4 c^4 f g h j^3 + 12 a^3 c^5 f^3 g h j + 12 a^3 c^5 e f^3 h
\end{aligned}$$

$$\begin{aligned}
& 1 + 9a^3b^4c^4f^4k^1 - 9a^3b^4c^4f^4j^1m + 3b^4c^4d^3e^1j^1k + 3a^5 \\
& b^2c^4g^1j^1l^4 + 3a^5b^2c^4f^1k^1l^4 + 3a^5b^2c^4d^1l^4m - 3a^5b^2c^4h^1 \\
& j^1k^4 - 3a^5b^2c^4f^1k^4l^1 - 3a^5b^2c^4e^1k^4m - 3a^4b^3c^3h^4j^1k + 3 \\
& a^2b^6d^4e^1j^1m^3 + 3a^4b^4c^3e^4k^1m + 24a^4c^4d^4e^1j^1k^3 + 24a^2c^4 \\
& 6d^3e^1j^1k - 6b^4c^4d^3e^1h^1l + 3b^4c^4d^3g^1h^1j + 3b^4c^4d^3f^1h^1 \\
& k + 3b^4c^4d^3f^1g^1l + 3b^4c^4d^3e^1g^1m - 3a^4b^3c^3g^1h^4m + 3a^4 \\
& 2b^6e^1f^1g^1m^3 + 3a^2b^6d^4f^1h^1m^3 - 3a^4b^6c^3e^1j^1m^2 + 24a^4c^4d^4 \\
& f^1h^1k^3 + 24a^2c^6d^3f^1h^1k - 12a^4c^4e^1f^1g^1k^3 - 12a^3c^5e^1f^1g^3k \\
& k - 12a^3c^5d^1g^3h^1j - 12a^3c^5d^1f^1g^3l^1 - 12a^3c^5d^1e^1g^3m - 12 \\
& a^2c^6d^3g^1h^1j - 12a^2c^6d^3f^1g^1l - 12a^2c^6d^3e^1h^1l - 12a^2c^6 \\
& d^3e^1g^1m - 12a^2b^2c^5d^4j^1l + 9a^5b^2c^4d^1j^1l^4 + 9a^2b^2c^5e^4 \\
& j^1k - 3a^4b^3c^4d^1j^1l^4 - 3a^4b^3c^4e^1j^4k - 3a^4b^3c^4d^1j^4l - 3a \\
& a^3b^3c^4e^4j^1k - 24a^4c^4d^4e^1f^1l^3 - 24a^2c^6d^4e^3f^1l - 12a^5b^2 \\
& 2c^4e^1g^1m^4 - 12a^5b^2c^4d^1h^1m^4 + 12a^3c^5d^4e^1h^3j + 12a^2c^6d^4e^1 \\
& 3h^1j + 12a^2c^6d^4e^3g^1k - 12a^2b^2c^5d^4h^1m + 9a^5b^2c^4f^1g^1l^4 - \\
& 9a^5b^2c^4e^1h^1l^4 - 9a^2b^2c^5e^4h^1l + 9a^2b^2c^5e^4g^1m + 6a^4b^3 \\
& 3c^4e^1h^1l^4 + 6a^4b^3c^4e^4h^1l - 3b^3c^5d^3e^1g^1j - 3b^3c^5d^3e^1f^1 \\
& k - 3a^4b^3c^4f^1g^1l^4 - 3a^4b^3c^4g^1h^1j^4 - 3a^3b^3c^4g^4h^1j - 3a^3 \\
& 3b^3c^4f^1g^4l^1 - 3a^3b^3c^4e^1g^4m - 3a^3b^3c^4e^4g^1m + 12a^3c^5e^1 \\
& f^1g^1h^3 + 12a^2c^6e^3f^1g^1h - 3b^3c^5d^3f^1g^1h - 12a^3c^5d^4e^1f^1j^3 \\
& - 12a^2c^6d^4e^1f^3j - 3a^4b^6c^4d^2g^1l^3 - 15a^5b^2c^4d^1e^1m^4 + 15a^4 \\
& b^3c^4d^1e^1m^4 + 9a^4b^3c^4e^1f^1k^4 - 9a^4b^3c^4d^1g^1k^4 + 3a^3b^4c^4 \\
& d^1f^1l^4 - 3a^3b^3c^4d^1h^4j - 3a^2b^3c^5e^1f^4k - 3a^2b^3c^5d^1f^4l + \\
& 3a^2b^2c^5e^4g^1j + 3a^2b^2c^5e^4f^1k + 3a^2b^2c^5d^4e^1m - 9a^2b^3c^6 \\
& d^3e^2l^1 + 3b^2c^6d^3e^1f^1g - 3a^3b^3c^4f^1g^1h^4 - 3a^2b^3c^5f^4g^1 \\
& h + 12a^2c^6d^4e^1f^1g^3 - 9a^2b^3c^6d^3f^2j + 3a^2b^3c^6d^2e^3k + 9a^3 \\
& b^3c^4d^1e^1j^4 - 3a^2b^3c^5e^1f^1g^4 - 9a^2b^3c^6d^3e^1h^2 + 3a^2b^3c^6d^2 \\
& 2f^3g + 3a^2b^3c^6d^4e^3g^2 - 3a^4b^2c^2h^3j^2m + 12a^4b^2c^2g^3 \\
& 3j^1m^2 - 3a^4b^2c^2f^2k^3m + 3a^3b^3c^2g^3j^2m - 9a^3b^4c^4f^2 \\
& j^2m^2 + 9a^3b^3c^2f^2j^3m - 6a^3b^3c^2f^3j^1m^2 - 6a^3b^2c^3 \\
& f^3j^2m - 3a^2b^4c^2f^3j^2m - 27a^4b^2c^2d^2k^1m^3 - 27a^3 \\
& b^2c^3e^3j^1m^2 + 18a^2b^4c^2e^3j^1m^2 - 15a^2b^3c^3e^3j^2m + \\
& 12a^4b^2c^2f^2j^1l^3 + 3a^3b^3c^2e^2k^3l + 42a^2b^3c^3d^3j^1m^2 - \\
& 27a^2b^2c^4d^3j^2m - 15a^3b^3c^2d^2k^1l^3 - 3a^4b^2c^2f^1 \\
& j^2k^3 - 3a^4b^2c^2f^1h^3m^2 + 3a^3b^3c^2g^3h^1l^2 + 3a^3b^3c^2 \\
& f^2j^1k^3 - 3a^3b^2c^3g^3h^2l^1 - 3a^3b^2c^3e^2j^3l^1 - 27a^4b^2 \\
& c^2e^2h^1m^3 + 12a^3b^2c^3f^3h^1l^2 + 3a^3b^3c^2f^1g^3m^2 - 3a^2 \\
& b^4c^2f^3h^1l^2 + 3a^2b^3c^3f^3h^2l^1 + 9a^3b^3c^2e^1h^3l^2 + 9a^2 \\
& b^3c^3e^2h^3l^1 - 6a^4b^2c^2e^1h^2l^3 - 6a^3b^3c^2e^2h^1l^3 - \\
& 6a^2b^3c^3e^3h^1l^2 - 6a^2b^2c^4e^3h^2l^1 + 3a^2b^3c^3d^2j^3k \\
& k + 42a^3b^3c^2d^2g^1m^3 - 27a^4b^2c^2d^1g^2m^3 - 27a^2b^2c^4d^3 \\
& 3h^1l^2 - 15a^2b^3c^3e^3f^1m^2 + 12a^3b^2c^3e^2h^1k^3 + 3a^3b^3c^2 \\
& e^1h^2k^3 - 3a^3b^2c^3e^1g^3l^2 - 3a^2b^4c^2e^2h^1k^3 + 3a^2b^3 \\
& c^3f^3g^1k^2 - 3a^2b^2c^4f^3g^2k - 27a^3b^2c^3d^2g^1l^3 - 27a^2 \\
& b^2c^4d^3f^1m^2 + 18a^2b^4c^2d^2g^1l^3 - 15a^3b^3c^2d^1g^2l^3
\end{aligned}$$



$$\begin{aligned}
& + 12a^2b^2c^4e^3g^2k^2 - 3a^3b^2c^3e^2h^2j^3 + 3a^2b^3c^3e^2h^2j^3 + 3a^2b^3c^3e^2f^3l^2 - 3a^2b^2c^4d^2h^3k + 9a^2b^3c^3d^2g^3k^2 - 9a^2b^4c^3d^2g^2k^2 - 6a^3b^2c^3d^2g^2k^3 - 6a^2b^3c^3d^2g^2k^3 - 3a^2b^4c^2d^2g^2k^3 + 12a^2b^2c^4d^2g^2j^3 + 3a^2b^3c^3d^2g^2j^3 - 3a^2b^2c^4d^2f^3k^2 - 3a^2b^2c^4d^2g^2h^3 + 12a^7c^2j^2k^2l^3 - 3b^7c^2d^3k^2l^3 - 3a^6b^2c^4k^2l^3 - 3a^6b^2c^4j^2k^2l^3 - 3a^6b^2c^4g^2l^3 - 9a^6b^2c^4f^2j^2l^3 + 9a^6b^2c^4e^2k^2l^3 + 9a^6b^2c^4d^2l^3 + 9a^6b^2c^4g^2h^2l^3 - 3a^6b^2c^4d^2e^2f^2l^3 + 9a^6b^2c^4d^2h^2j^2l^3 - 9a^6b^2c^4d^2g^2k^2l^3 + 9a^6b^2c^4d^2f^2k^2l^3 + 9a^6b^2c^4d^2e^2k^2l^3 + 12a^6c^2d^3e^2f^2g^2 - 3a^6b^2c^4d^2e^2f^2j^2 - 3a^6b^2c^4d^2e^2f^2g^2 - 3a^6b^2c^4d^2e^2f^2h^2 + 18a^6c^2d^2h^2j^2l^3 - 18a^6c^2d^2h^2j^2k^2l^3 + 18a^6c^2d^2f^2k^2l^3 + 36a^5c^3e^2k^2l^3 + 18a^6c^2d^2g^2j^2k^2l^3 + 18a^6c^2d^2e^2k^2l^3 + 18a^5c^3g^2j^2k^2l^3 + 18a^6c^2d^2e^2j^2l^3 + 18a^6c^2d^2k^2l^3 - 18a^5c^3e^2j^2l^3 - 18a^6c^2d^2f^2h^2l^3 + 18a^5c^3f^2h^2l^3 - 36a^5c^3f^2h^2k^2l^3 - 36a^5c^3f^2g^2l^3 + 18a^5c^3g^2h^2k^2l^3 - 18a^5c^3g^2h^2k^2l^3 + 18a^5c^3f^2h^2k^2l^3 + 18a^5c^3f^2g^2l^3 + 18a^5c^3e^2j^2k^2l^3 + 18a^5c^3d^2j^2k^2l^3 - 18a^4c^4d^2j^2k^2l^3 + 36a^4c^4d^2j^2k^2l^3 + 18a^5c^3f^2g^2k^2l^3 + 18a^5c^3e^2g^2l^3 + 18a^5c^3d^2j^2k^2l^3 - 18a^4c^4f^2g^2k^2l^3 + 36a^4c^4d^2h^2k^2l^3 + 18a^5c^3f^2h^2j^2l^3 - 18a^5c^3e^2h^2j^2l^3 + 18a^4c^4f^2h^2j^2l^3 - 18a^4c^4e^2h^2j^2l^3 - 18a^5c^3e^2g^2k^2l^3 + 18a^5c^3d^2h^2k^2l^3 - 18a^4c^4e^2g^2k^2l^3 + 18a^4c^4e^2f^2k^2l^3 - 18a^4c^4d^2h^2k^2l^3 + 18a^4c^4d^2f^2l^3 - 36a^4c^4e^2g^2j^2l^3 - 36a^4c^4e^2f^2k^2l^3 - 36a^4c^4d^2e^2l^3 + 18a^5c^3d^2f^2k^2l^3 + 18a^4c^4f^2g^2j^2k^2l^3 + 18a^4c^4d^2g^2j^2k^2l^3 - 18a^4c^4d^2f^2k^2l^3 + 18a^4c^4d^2e^2l^3 - 18a^4c^4f^2g^2j^2k^2l^3 + 18a^4c^4f^2g^2h^2k^2l^3 + 18a^4c^4e^2g^2j^2k^2l^3 + 18a^4c^4e^2f^2k^2l^3 - 18a^4c^4d^2g^2j^2k^2l^3 - 18a^4c^4d^2f^2k^2l^3 + 18a^3c^5d^2f^2k^2l^3 + 3a^4b^2c^2h^4k^2l^3 - 3a^3b^3c^2g^4l^3 + 18a^4c^4e^2f^2j^2l^3 + 18a^4c^4d^2h^2j^2k^2l^3 + 18a^4c^4d^2f^2k^2l^3 + 18a^4c^4d^2e^2k^2l^3 - 18a^3c^5e^2f^2j^2l^3 + 12a^5b^2c^2g^2k^2l^3 - 9a^5b^2c^2h^3j^2l^3 - 9a^5b^2c^2f^2l^3 + 3a^5b^2c^2h^2k^3l^3 + 3a^4b^3c^2h^3j^2l^3 + 3a^4b^3c^2f^2l^3 - 18a^4c^4e^2f^2h^2l^3 + 18a^3c^5e^2f^2h^2l^3 + 15a^5b^2c^2e^2l^3 - 15a^4b^3c^2e^2l^3 - 9a^5b^2c^2g^2k^2l^3 - 9a^4b^3c^3g^3j^2l^3 - 3a^5b^2c^2g^2k^2l^3 + 3a^5b^2c^2h^2j^3l^3 + 3a^4b^3c^2g^2k^2l^3 - 3a^3b^4c^2g^3j^2l^3 + 36a^4c^4e^2f^2g^2l^3 + 36a^4c^4d^2f^2h^2l^3 + 18a^4c^4e^2g^2h^2k^2l^3 - 18a^4c^4d^2g^2h^2l^3 - 18a^4c^4d^2f^2j^2k^2l^3 + 18a^3c^5e^2g^2h^2k^2l^3 + 18a^3c^5e^2f^2g^2l^3 - 18a^3c^5d^2g^2h^2l^3 + 18a^3c^5d^2f^2j^2k^2l^3 + 18a^3c^5d^2f^2h^2l^3 + 18a^3c^5d^2e^2j^2l^3 - 12a^2b^2c^4e^4k^2l^3 + 9a^4b^3c^2f^2j^3l^3 - 9a^4b^2c^2f^2j^4l^3 - 6a^5b^2c^2f^2j^2l^3 + 6a^5b^2c^2f^2j^3l^3 - 6a^4b^3c^2f^2j^3l^3 - 6a^4b^3c^2f^2j^4l^3 + 6a^4b^3c^3f^2j^3l^3 - 6a^4b^3c^3f^2j^4l^3 + 3a^3b^2c^3g^4j^2l^3 + 3a^2b^5c^2f^3j^2l^3 - 3a^2b^3c^3f^4k^2l^3 - 36a^3c^5d^2e^2j^2k^2l^3 - 18a^4c^4d^2f^2g^2l^3 + 18a^3c^5e^2f^2g^2l^3 + 18a^3c^5d^2f^2g^2l^3 + 18a^3c^5d^2e^2j^2k^2l^3 + 18a^3b^4c^2d^2k^2l^3 + 15a^3b^2c^4e^3j^2l^3
\end{aligned}$$

$$\begin{aligned}
& *m + 12a^5b^2c^2dk^2m^3 - 9a^5b^2c^2f^2j^2l^3 - 9a^4b^2c^3e^2k^3l \\
& + 3a^5b^2c^2ek^3l^2 + 3a^4b^3c^2f^2j^2l^3 + 3a^4b^2c^3g^2j^3k - \\
& 3a^3b^4c^2f^2j^2l^3 + 3a^3b^2c^3g^4h^2m + 3a^2b^5c^2e^3j^2m - 36a^3c^5d^2f^2hk^2 \\
& - 21a^3b^2c^4d^3j^2m^2 - 21a^2b^5c^2d^3j^2m^2 + 18a^3c^5e^2f^2hk^2 \\
& - 18a^3c^5e^2f^2h^2j + 18a^3c^5d^2f^2h^2k + 18a^2b^4c^3d^3j^2m + 15a^4b^2c^3d^2k^2l^3 \\
& - 9a^5b^2c^2dk^2l^3 - 9a^4b^2c^3g^3h^2l^2 - 9a^4b^2c^3f^2j^2k^3 + 3a^4b^3c^2dk^2l^3 \\
& + 3a^2b^5c^2d^2k^2l^3 - 18a^3c^5d^2e^2g^2l^2 + 18a^3c^5d^2e^2hk^2 + 18a^3b^4c^2e^2hk^2m^3 \\
& - 18a^2c^6d^2e^2hk^2 + 18a^2c^6d^2e^2g^2l + 18a^2c^6d^2e^2f^2m + 15a^5b^2c^2e^2h^2m^3 \\
& - 15a^4b^3c^2e^2h^2m^3 - 9a^4b^2c^3f^2g^3m^2 - 9a^3b^2c^4f^3h^2l + 3a^4b^2c^2e^2j^2k^4 \\
& + 3a^4b^2c^3g^2h^3k^2 + 3a^3b^2c^4f^2g^3m + 36a^3c^5d^2e^2f^2l^2 + 18a^3c^5d^2f^2g^2j^2 \\
& + 18a^2c^6d^2f^2g^2j + 18a^2c^6d^2e^2f^2l - 9a^3b^2c^3e^2h^4l - 9a^3b^2c^4d^2j^3k \\
& + 6a^4b^2c^3e^2h^4l^3 - 6a^4b^2c^3e^2h^3l^2 + 6a^3b^2c^4e^3h^4l^2 - 6a^3b^2c^4e^2h^3l^2 \\
& + 3a^4b^2c^2f^2hk^4 + 3a^4b^2c^3d^2j^3k^2 - 3a^3b^4c^2e^2h^2l^3 + 3a^2b^5c^2e^2h^2l^3 \\
& + 3a^2b^2c^4f^4hk^2 + 3a^2b^2c^4f^4g^2l + 3a^2b^5c^2e^3h^2l^2 - 3a^2b^4c^3e^3h^2l \\
& - 21a^4b^2c^3d^2g^2m^3 - 21a^2b^5c^2d^2g^2m^3 + 18a^3b^4c^2d^2g^2m^3 + 18a^2c^6d^2e^2f^2k \\
& + 18a^2b^4c^3d^3h^2l^2 + 15a^3b^2c^4e^3f^2m^2 + 15a^2b^2c^5d^3h^2l^2 - 15a^2b^3c^4d^3h^2l \\
& - 9a^4b^2c^3e^2h^2k^3 - 9a^3b^2c^4f^3g^2k^2 - 9a^2b^2c^5e^3f^2m + 3a^3b^2c^4f^2h^3j \\
& + 3a^2b^5c^2e^3f^2m^2 + 3a^2b^3c^4e^3f^2m + 18a^2b^4c^3d^3f^2m^2 + 15a^4b^2c^3d^2g^2l^3 \\
& + 12a^2b^2c^5d^3f^2m - 9a^3b^2c^4e^2h^2j^3 - 9a^3b^2c^4e^2f^3l^2 - 9a^2b^2c^5e^3g^2k \\
& + 3a^3b^2c^4f^2g^3j^2 + 3a^2b^5c^2d^2g^2l^3 + 3a^2b^2c^5e^2f^3l - 3a^2b^4c^3e^3g^2k^2 \\
& + 3a^2b^3c^4e^3g^2k + 18a^2c^6d^2e^2g^2h^2 - 18a^2c^6d^2e^2g^2h - 12a^4b^2c^2d^2f^2l^4 \\
& - 9a^2b^2c^4d^2g^4k + 9a^2b^3c^4d^2g^3k + 6a^3b^3c^2d^2g^2k^4 + 6a^3b^2c^4d^2g^2k^3 \\
& - 6a^3b^2c^4d^2g^3k^2 + 6a^2b^2c^5d^3g^2k^2 - 6a^2b^2c^5d^2g^3k - 6a^2b^3c^4d^3g^2k^2 \\
& - 6a^2b^2c^5d^3g^2k - 3a^3b^3c^2e^2f^2k^4 + 3a^3b^2c^3e^2g^2j^4 + 3a^3b^2c^3d^2h^2j^4 \\
& + 3a^2b^5c^2d^2g^2k^3 + 15a^2b^2c^5d^3e^2l^2 - 15a^2b^3c^4d^3e^2l^2 - 9a^3b^2c^4d^2g^2j^3 \\
& - 9a^2b^2c^5e^3f^2j^2 - 3a^2b^4c^3d^2g^2j^3 + 3a^2b^3c^4e^3f^2j^2 - 3a^2b^2c^5e^3f^2j \\
& + 12a^2b^2c^5d^3f^2j^2 - 9a^2b^2c^5d^2e^3k^2 + 3a^2b^2c^5e^2g^3h + 3a^2b^3c^4d^2e^3k^2 \\
& - 9a^2b^2c^5d^2g^2h^3 - 3a^2b^3c^3d^2e^2j^4 + 3a^2b^2c^5e^2f^3h^2 + 3a^2b^3c^4d^2g^2h^3 \\
& + 3a^2b^2c^4d^2f^2h^4 - 9a^7c^2k^2l^2m^2 - 6a^6c^2j^2k^3m - 3a^6b^2h^2l^2m^3 + 3a^5b^3h^2l^2m^3 \\
& - 6a^6c^2g^2k^2m^3 - 6a^6c^2h^2k^3l^2 + 6a^5c^3h^3j^2m + 6a^6c^2g^2k^2l^3 - 6a^6c^2f^2k^3m^2 \\
& - 6a^5c^3h^2j^3l - 6a^5c^3g^3j^2m^2 + 6a^5c^3f^2k^3m + 3a^5b^3g^2k^2m^3 - 3a^4b^4g^2k^2m^3 \\
& + 12a^6c^2f^2j^2m^3 + 12a^4c^4f^3j^2m + 3a^5b^3e^2l^2m^3 + 3a^3b^5e^2l^2m^3 - 6a^6c^2dk^2m^3 \\
& - 6a^5c^3f^2j^2l^3 + 6a^5c^3d^2k^2m^3 - 6a^5c^3g^2j^3k^2 + 6a^4c^4e^3j^2m^2 - 3b^6c^2d^3j^2m \\
& - 3a^4b^4f^2j^2m^3 + 3a^3b^5f^2j^2m^3 + 6a^5c^3f^2j^2k^3 + 6a^5c^3f^2h^3m^2 - 6a^5c^3e^2j^3l^2 \\
& + 6a^4c^4g^3h^2l - 6a^4c^4f^2h^3m + 6a^4c^4
\end{aligned}$$

$$\begin{aligned}
& 4e^{2j^3k^1} + 6a^3c^5d^3j^2m - 3a^4b^4dk^2m^3 - 3a^2b^6d^2km^3 \\
& + 6a^5c^3e^2hm^3 - 6a^4c^4g^2h^3k - 6a^4c^4f^3h^1l^2 + 12a^5c^3e^2h^2l^3 \\
& + 12a^3c^5e^3h^2m^1 - 3b^6c^2d^3h^1l^2 + 3b^5c^3d^3h^2m^1 - 3a^5b^2c^j^4m^2 \\
& + 3a^3b^5e^2hm^3 - 3a^2b^6e^2hm^3 + 6a^5c^3d^2g^2m^3 - 6a^4c^4e^2hk^3 \\
& - 6a^4c^4f^3h^2j^2 + 6a^4c^4eg^3l^2 + 6a^3c^5f^3g^2k - 6a^3c^5e^2g^3l^1 + 6a^3c^5d^3h^1l^2 \\
& - 3b^6c^2d^3f^2m^2 - 3b^4c^4d^3f^2m + 6a^4c^4d^2g^3l^3 + 6a^4c^4e^2h^2j^3 \\
& - 6a^4c^4d^3h^3k^2 - 6a^3c^5f^2g^3j - 6a^3c^5e^3g^3k^2 + 6a^3c^5d^3f^2m^2 \\
& + 6a^3c^5d^2h^3k - 6a^2c^6d^3f^2m + 4a^5b^2c^3h^3m^3 + 3b^5c^3d^3g^3k^2 \\
& - 3b^4c^4d^3g^2k - 3a^2b^6d^2g^2m^3 + a^5b^2c^2j^3k^3 + 12a^4c^4d^2g^2k^3 + 12a^2c^6d^3g^2k^3 \\
& + 6a^5b^2c^2h^3l^3 + 5a^5b^2c^2g^3m^3 - 5a^4b^3c^3g^3m^3 + 3b^5c^3d^3e^1l^2 \\
& + 3b^3c^5d^3e^2m^1 - 3a^5b^2c^3h^2l^4 + a^4b^3c^3h^3l^3 + 12a^5b^2c^2f^2m^4 \\
& - 6a^3c^5d^2g^3j^3 + 6a^3c^5d^2f^3k^2 + 6a^3b^4c^3f^3m^3 + 6a^2c^6e^3f^2j \\
& - 6a^2c^6d^2f^3k - 3b^4c^4d^3f^2j + 3b^3c^5d^3f^2j - 3a^2b^2c^4f^5m - 7a^4b^3c^3e^3m^3 \\
& - 7a^2b^5c^3e^3m^3 + 6a^4b^3c^3g^3k^3 - 6a^3c^5e^3g^3h^2 - 6a^2c^6d^3f^2j^2 \\
& + 5a^4b^3c^3f^3l^3 + a^4b^3c^3h^3j^3 + a^2b^5c^3f^3l^3 + 6a^3c^5d^2g^2h^3 \\
& - 6a^2c^6e^2f^3h - 3a^3b^4c^3e^2l^4 - 3a^3b^4c^3e^4l^2 - 7a^3b^3c^4d^3l^3 \\
& - 7a^3b^5c^2d^3l^3 + 6a^3b^3c^4f^3j^3 + 5a^3b^3c^4e^3k^3 + 3b^3c^5d^3e^2h^2 \\
& - 3b^2c^6d^3e^2h + a^5b^3c^2e^3k^3 + 12a^3b^2c^5d^4k^2 - 6a^2c^6d^2f^3g^2 + 6a^3b^4c^3d^3k^3 \\
& - 3a^4b^2c^2dk^5 + a^3b^3c^4g^3h^3 + 5a^2b^3c^5d^3j^3 - 5a^3b^3c^4d^3j^3 \\
& - 9a^3c^7d^2e^2f^2 + 6a^2b^3c^5e^3h^3 - 3a^3b^2c^5e^4h^2 + a^2b^3c^5f^3g^3 \\
& + a^3b^3c^4e^3h^3 + 4a^3b^2c^5d^3h^3 - 3a^3b^2c^5d^2g^4 - 6a^7c^3j^1l^3m^2 \\
& + 6a^7c^3h^1l^2m^3 + 6a^6c^2j^1k^4l^1 + 6a^6c^2h^1k^4m - 6a^5c^3h^4k^3m \\
& + 3a^6b^2h^1k^3m^4 + 3a^6b^2g^1m^4 - 3b^5c^3d^4l^1m - 6a^6c^2g^3j^1l^4 \\
& - 6a^6c^2f^1k^1l^4 - 6a^6c^2d^1l^4m + 6a^5c^3h^1j^4k + 6a^5c^3g^1j^4l^1 + 6a^5c^3f^1j^4m \\
& - 6a^4c^4g^4j^1l^1 + 6a^3c^5e^4k^3m + 6a^5b^3f^1j^1m^4 - 6a^4c^4g^4h^1m \\
& + 3b^7c^3d^3j^1m^2 - 3a^5b^3e^1k^3m^4 - 3a^5b^3d^1l^1m^4 + 3b^4c^4d^4j^1l^1 \\
& - 3a^5b^3g^1h^1m^4 - 6a^5c^3e^1j^1k^4 + 6a^2c^6d^4j^1l^1 + 3b^4c^4d^4h^1m \\
& + 6a^6c^2e^1g^1m^4 + 6a^6c^2d^1h^1m^4 + 6a^6b^3c^2j^3m^3 - 6a^5c^3f^1h^1k^4 \\
& + 6a^4c^4g^1h^4j^1 + 6a^4c^4f^1h^4k + 6a^4c^4e^1h^4l^1 + 6a^4c^4d^1h^4m \\
& - 6a^3c^5f^4h^1k - 6a^3c^5f^4g^1l^1 + 6a^2c^6d^4h^1m + 3a^5b^3c^2j^5m \\
& + a^6b^3c^3k^3l^3 + 3a^4b^4e^1g^1m^4 + 3a^4b^4d^1h^1m^4 + 6b^3c^5d^4g^1k \\
& - 3b^3c^5d^4h^1j - 3b^3c^5d^4f^1l - 3b^3c^5d^4e^1m + 3a^3b^7d^2g^1m^3 \\
& + 6a^5c^3d^1f^1l^4 - 6a^4c^4e^1g^1j^4 - 6a^4c^4d^1h^1j^4 + 6a^3c^5e^1g^4j^1 \\
& + 6a^3c^5d^1g^4k - 6a^2c^6e^1g^4j - 6a^2c^6e^4f^1k - 6a^2c^6d^1e^4m \\
& + 3a^4b^3c^3h^5l^1 + 6a^3c^5f^1g^4h^1 - 3a^3b^5d^1e^1m^4 + 3b^2c^6d^4e^1j \\
& + 3a^5b^3c^2g^1k^5 + 3a^3b^3c^4g^5k + 8a^3b^6c^3d^3m^3 + 3b^2c^6d^4f^1h \\
& - 3a^5b^2c^3e^1l^5 - 3a^3b^2c^5e^5l - 6a^3c^5d^1f^1h^4 + 6a^2c^6e^1f^4g^1 \\
& + 6a^2c^6d^1f^4h + 3a^4b^3c^3f^1j^5 + 3a^2b^3c^5f^5j + 6a^3c^7d^3e^2h \\
& - 6a^3c^7d^2e^3g + 3a^3b^3c^4e^1h^5 + 6a^3b^3c^6d^3g^3 + 3a^2b^3c^5d^1g^5 + a
\end{aligned}$$

$$\begin{aligned}
& *b*c^6*e^3*f^3 - 9*a^6*c^2*j^2*k^2*l^2 - 9*a^6*c^2*h^2*k^2*m^2 - 9*a^6*c^2*g^2*l^2*m^2 - 18*a^5*c^3*f^2*j^2*m^2 - 9*a^5*c^3*h^2*j^2*k^2 - 9*a^5*c^3*g^2*j^2*l^2 - 9*a^5*c^3*f^2*k^2*l^2 - 9*a^5*c^3*e^2*k^2*m^2 - 9*a^5*c^3*d^2*l^2*m^2 - 9*a^5*c^3*g^2*h^2*m^2 - 9*a^4*c^4*e^2*j^2*k^2 - 9*a^4*c^4*d^2*j^2*l^2 - 18*a^4*c^4*e^2*h^2*l^2 - 9*a^4*c^4*g^2*h^2*j^2 - 9*a^4*c^4*f^2*h^2*k^2 - 9*a^4*c^4*f^2*g^2*l^2 - 9*a^4*c^4*e^2*g^2*m^2 - 9*a^4*c^4*d^2*h^2*m^2 - 18*a^3*c^5*d^2*g^2*k^2 - 9*a^3*c^5*e^2*g^2*j^2 - 9*a^3*c^5*e^2*f^2*k^2 - 9*a^3*c^5*d^2*h^2*j^2 - 9*a^3*c^5*d^2*f^2*l^2 - 9*a^3*c^5*d^2*e^2*m^2 - 3*a^4*b^2*c^2*h^4*l^2 - 18*a^4*b^2*c^2*f^3*m^3 + 12*a^3*b^2*c^3*f^4*m^2 - 9*a^3*c^5*f^2*g^2*h^2 + 4*a^4*b^2*c^2*g^3*l^3 - 3*a^2*b^4*c^2*f^4*m^2 + 14*a^3*b^3*c^2*e^3*m^3 - 5*a^3*b^3*c^2*f^3*l^3 - 3*a^4*b^2*c^2*g^2*k^4 - 3*a^3*b^2*c^3*g^4*k^2 + a^3*b^3*c^2*g^3*k^3 - 20*a^2*b^4*c^2*d^3*m^3 - 18*a^3*b^2*c^3*e^3*l^3 + 16*a^3*b^2*c^3*d^3*m^3 + 12*a^4*b^2*c^2*e^2*l^4 + 12*a^2*b^2*c^4*e^4*l^2 - 9*a^2*c^6*d^2*e^2*j^2 + 6*a^2*b^4*c^2*e^3*l^3 + 4*a^3*b^2*c^3*f^3*k^3 + 14*a^2*b^3*c^3*d^3*l^3 - 9*a^2*c^6*e^2*f^2*g^2 - 9*a^2*c^6*d^2*f^2*h^2 - 5*a^2*b^3*c^3*e^3*k^3 - 3*a^3*b^2*c^3*f^2*j^4 - 3*a^2*b^2*c^4*f^4*j^2 + a^2*b^3*c^3*f^3*j^3 - 18*a^2*b^2*c^4*d^3*k^3 + 12*a^3*b^2*c^3*d^2*k^4 + 4*a^2*b^2*c^4*e^3*j^3 - 3*a^2*b^4*c^2*d^2*k^4 - 3*a^2*b^2*c^4*e^2*h^4 + 6*a^7*c*k*l^4*m - 3*a^7*b*k*l*m^4 - 6*a^7*c*h*k*m^4 - 6*a^7*c*g*l*m^4 + 3*a^6*b*c*h*l^5 - 6*a*c^7*d^4*e*j - 6*a*c^7*d^4*f*h - 3*b*c^7*d^4*e*f + 6*a*c^7*d^4*e*f + 3*a*b*c^6*e^5*h - a^5*b^2*c*j^3*l^3 - a^3*b^4*c*g^3*l^3 - a*b^4*c^3*e^3*j^3 - a*b^2*c^5*e^3*g^3 + 3*a^7*b*j*m^5 + 6*a^7*c*f*m^5 + 6*a*c^7*d^5*k + 3*b*c^7*d^5*g - 3*a^6*c^2*j^4*m^2 - 3*a^6*b^2*j^2*m^4 + 2*a^6*c^2*j^3*l^3 + a^5*b^3*j^3*m^3 - 2*a^6*c^2*h^3*m^3 - 3*a^6*c^2*h^2*l^4 - 3*a^5*c^3*h^4*l^2 - a*b^6*c*e^3*l^3 + 20*a^5*c^3*f^3*m^3 - 15*a^6*c^2*f^2*m^4 - 15*a^4*c^4*f^4*m^2 + 2*a^5*c^3*h^3*k^3 - 2*a^5*c^3*g^3*l^3 + a^3*b^5*g^3*m^3 - 3*a^5*c^3*g^2*k^4 - 3*a^4*c^4*g^4*k^2 - 3*a^4*b^4*f^2*m^4 + 20*a^4*c^4*e^3*l^3 - 15*a^5*c^3*e^2*l^4 - 15*a^3*c^5*e^4*l^2 + 2*a^4*c^4*g^3*j^3 - 2*a^4*c^4*f^3*k^3 - 2*a^4*c^4*d^3*m^3 - 3*b^4*c^4*d^4*k^2 - 3*a^4*c^4*f^2*j^4 - 3*a^3*c^5*f^4*j^2 + 20*a^3*c^5*d^3*k^3 - 15*a^4*c^4*d^2*k^4 - 15*a^2*c^6*d^4*k^2 - 2*a^3*c^5*e^3*j^3 + b^5*c^3*d^3*j^3 + 2*a^3*c^5*f^3*h^3 - 3*a^3*c^5*e^2*h^4 - 3*a^2*c^6*e^4*h^2 - 3*b^2*c^6*d^4*g^2 + 2*a^2*c^6*e^3*g^3 - 2*a^2*c^6*d^3*h^3 + b^3*c^5*d^3*g^3 - 3*a^2*c^6*d^2*g^4 - a^4*b^2*c^2*h^3*k^3 - a^3*b^2*c^3*g^3*j^3 - a^2*b^4*c^2*f^3*k^3 - a^2*b^2*c^4*f^3*h^3 + 2*a^7*c*k^3*m^3 + a^7*b*l^3*m^3 - 3*a^7*c*j^2*m^4 + 6*a^3*c^5*f^5*m - 3*a^6*b^2*f*m^5 + 6*a^6*c^2*e*l^5 + 6*a^2*c^6*e^5*l + b^7*c*d^3*l^3 + a*b^7*e^3*m^3 - 3*b^2*c^6*d^5*k + 6*a^5*c^3*d*k^5 - 3*a*c^7*d^4*g^2 + 2*a*c^7*d^3*f^3 + b*c^7*d^3*e^3 - a^6*b^2*k^3*m^3 - a^4*b^4*h^3*m^3 - a^2*b^6*f^3*m^3 - b^6*c^2*d^3*k^3 - b^4*c^4*d^3*h^3 - b^2*c^6*d^3*f^3 - b^8*d^3*m^3 - a^6*c^2*k^6 - a^5*c^3*j^6 - a^4*c^4*h^6 - a^3*c^5*g^6 - a^2*c^6*f^6 - a^7*c*l^6 - a*c^7*e^6 - a^8*m^6 - c^8*d^6, z, k1), k1, 1, 6) + (k*x)/c + (1*x^2)/(2*c) + (m*x^3)/(3*c)
\end{aligned}$$

### 3.2 $\int \frac{1}{a+bx^n+cx^{2n}} dx$

Optimal result	213
Rubi [A] (verified)	213
Mathematica [B] (verified)	214
Maple [F]	215
Fricas [F]	215
Sympy [F]	215
Maxima [F]	215
Giac [F]	216
Mupad [F(-1)]	216

#### Optimal result

Integrand size = 16, antiderivative size = 124

$$\int \frac{1}{a+bx^n+cx^{2n}} dx = -\frac{2cx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{2cx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}}$$

[Out]  $-2*c*x*\operatorname{hypergeom}([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^{(1/2)}))/(b^2-4*a*c-b*(-4*a*c+b^2)^{(1/2)})-2*c*x*\operatorname{hypergeom}([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^{(1/2)}))/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)})$

#### Rubi [A] (verified)

Time = 0.05 (sec) , antiderivative size = 124, normalized size of antiderivative = 1.00, number of steps used = 3, number of rules used = 2,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.125$ , Rules used = {1361, 251}

$$\int \frac{1}{a+bx^n+cx^{2n}} dx = -\frac{2cx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{-b\sqrt{b^2-4ac}-4ac+b^2} - \frac{2cx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b\sqrt{b^2-4ac}-4ac+b^2}$$

[In]  $\operatorname{Int}[(a + b*x^n + c*x^{(2*n)})^{-1}, x]$

[Out]  $(-2*c*x*\operatorname{Hypergeometric2F1}[1, n^{(-1)}, 1 + n^{(-1)}, (-2*c*x^n)/(b - \operatorname{Sqrt}[b^2 - 4*a*c])])/(b^2 - 4*a*c - b*\operatorname{Sqrt}[b^2 - 4*a*c]) - (2*c*x*\operatorname{Hypergeometric2F1}[1$

,  $n^{(-1)}$ ,  $1 + n^{(-1)}$ ,  $(-2*c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c])]/(b^2 - 4*a*c + b*\text{Sqrt}[b^2 - 4*a*c])$

### Rule 251

```
Int[((a_) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Simp[a^p*x*Hypergeometric2F1[-p, 1/n, 1/n + 1, (-b)*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p, 0] && !IntegerQ[1/n] && !ILtQ[Simplify[1/n + p], 0] && (IntegerQ[p] || GtQ[a, 0])
```

### Rule 1361

```
Int[((a_) + (b_.)*(x_)^(n_) + (c_.)*(x_)^(n2_))^(p_), x_Symbol] := With[{q = Rt[b^2 - 4*a*c, 2]}, Dist[c/q, Int[1/(b/2 - q/2 + c*x^n), x], x] - Dist[c/q, Int[1/(b/2 + q/2 + c*x^n), x], x]] /; FreeQ[{a, b, c}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*a*c, 0]
```

### Rubi steps

$$\begin{aligned} \text{integral} &= \frac{c \int \frac{1}{\frac{b}{2} - \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{\sqrt{b^2 - 4ac}} - \frac{c \int \frac{1}{\frac{b}{2} + \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{\sqrt{b^2 - 4ac}} \\ &= -\frac{2cx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{b^2 - 4ac - b\sqrt{b^2 - 4ac}} - \frac{2cx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{b^2 - 4ac + b\sqrt{b^2 - 4ac}} \end{aligned}$$

### Mathematica [B] (verified)

Leaf count is larger than twice the leaf count of optimal. 261 vs.  $2(124) = 248$ .

Time = 0.30 (sec) , antiderivative size = 261, normalized size of antiderivative = 2.10

$$\begin{aligned} &\int \frac{1}{a + bx^n + cx^{2n}} dx \\ &= -2cx \left( \frac{1 - \left(\frac{x^n}{-\frac{b + \sqrt{b^2 - 4ac}}{2c} + x^n}\right)^{-1/n} \text{Hypergeometric2F1}\left(-\frac{1}{n}, -\frac{1}{n}, \frac{-1+n}{n}, \frac{b - \sqrt{b^2 - 4ac}}{b - \sqrt{b^2 - 4ac} + 2cx^n}\right)}{b^2 - 4ac - b\sqrt{b^2 - 4ac}} \right. \\ &\quad \left. + \frac{1 - 2^{-1/n} \left(\frac{cx^n}{b + \sqrt{b^2 - 4ac} + 2cx^n}\right)^{-1/n} \text{Hypergeometric2F1}\left(-\frac{1}{n}, -\frac{1}{n}, \frac{-1+n}{n}, \frac{b + \sqrt{b^2 - 4ac}}{b + \sqrt{b^2 - 4ac} + 2cx^n}\right)}{\sqrt{b^2 - 4ac} (b + \sqrt{b^2 - 4ac})} \right) \end{aligned}$$

[In] Integrate[(a + b\*x^n + c\*x^(2\*n))^(p\_), x]

[Out]  $-2*c*x*((1 - \text{Hypergeometric2F1}[-n^{(-1)}, -n^{(-1)}, (-1 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])]/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{n^{(-1)}}/(b^2 - 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c]) + (1 - \text{Hypergeometric2F1}[-n^{(-1)}, -n^{(-1)}, (-1 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])]/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(2^{n^{(-1)}}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{n^{(-1)}})/(\text{Sqrt}[b^2 - 4*a*c]*(b + \text{Sqrt}[b^2 - 4*a*c]))$

### Maple [F]

$$\int \frac{1}{a + bx^n + cx^{2n}} dx$$

[In] `int(1/(a+b*x^n+c*x^(2*n)),x)`

[Out] `int(1/(a+b*x^n+c*x^(2*n)),x)`

### Fricas [F]

$$\int \frac{1}{a + bx^n + cx^{2n}} dx = \int \frac{1}{cx^{2n} + bx^n + a} dx$$

[In] `integrate(1/(a+b*x^n+c*x^(2*n)),x, algorithm="fricas")`

[Out] `integral(1/(c*x^(2*n) + b*x^n + a), x)`

### Sympy [F]

$$\int \frac{1}{a + bx^n + cx^{2n}} dx = \int \frac{1}{a + bx^n + cx^{2n}} dx$$

[In] `integrate(1/(a+b*x**n+c*x**(2*n)),x)`

[Out] `Integral(1/(a + b*x**n + c*x**(2*n)), x)`

### Maxima [F]

$$\int \frac{1}{a + bx^n + cx^{2n}} dx = \int \frac{1}{cx^{2n} + bx^n + a} dx$$

[In] `integrate(1/(a+b*x^n+c*x^(2*n)),x, algorithm="maxima")`

[Out] `integrate(1/(c*x^(2*n) + b*x^n + a), x)`

**Giac [F]**

$$\int \frac{1}{a + bx^n + cx^{2n}} dx = \int \frac{1}{cx^{2n} + bx^n + a} dx$$

[In] integrate(1/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="giac")

[Out] integrate(1/(c\*x^(2\*n) + b\*x^n + a), x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{1}{a + bx^n + cx^{2n}} dx = \int \frac{1}{a + b x^n + c x^{2n}} dx$$

[In] int(1/(a + b\*x^n + c\*x^(2\*n)),x)

[Out] int(1/(a + b\*x^n + c\*x^(2\*n)), x)



### 3.3 $\int \frac{d+ex}{a+bx^n+cx^{2n}} dx$

Optimal result	217
Rubi [A] (verified)	218
Mathematica [A] (verified)	219
Maple [F]	220
Fricas [F]	220
Sympy [F]	220
Maxima [F]	221
Giac [F]	221
Mupad [F(-1)]	221

#### Optimal result

Integrand size = 22, antiderivative size = 263

$$\int \frac{d+ex}{a+bx^n+cx^{2n}} dx = -\frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} - \frac{ce x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{ce x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}}$$

```
[Out] -2*c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-c*e*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-2*c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))-c*e*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))
```

**Rubi [A] (verified)**

Time = 0.17 (sec) , antiderivative size = 263, normalized size of antiderivative = 1.00, number of steps used = 9, number of rules used = 4,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.182$ , Rules used = {1807, 1907, 251, 371}

$$\int \frac{d + ex}{a + bx^n + cx^{2n}} dx = -\frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{-b\sqrt{b^2 - 4ac} - 4ac + b^2} - \frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{b\sqrt{b^2 - 4ac} - 4ac + b^2} - \frac{ce x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{-b\sqrt{b^2 - 4ac} - 4ac + b^2} - \frac{ce x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{b\sqrt{b^2 - 4ac} - 4ac + b^2}$$

[In] Int[(d + e\*x)/(a + b\*x^n + c\*x^(2\*n)),x]

[Out] (-2\*c\*d\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c]) - (2\*c\*d\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c]) - (c\*e\*x^2\*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c]) - (c\*e\*x^2\*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])

Rule 251

Int[((a\_) + (b\_.)\*(x\_)^(n\_))^(p\_), x\_Symbol] := Simp[a^p\*x\*Hypergeometric2F1[-p, 1/n, 1/n + 1, (-b)\*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p, 0] && !IntegerQ[1/n] && !ILtQ[Simplify[1/n + p], 0] && (IntegerQ[p] || GtQ[a, 0])

Rule 371

Int[((c\_.)\*(x\_))^(m\_.)\*((a\_) + (b\_.)\*(x\_)^(n\_))^(p\_), x\_Symbol] := Simp[a^p\*((c\*x)^(m + 1)/(c\*(m + 1)))\*Hypergeometric2F1[-p, (m + 1)/n, (m + 1)/n + 1, (-b)\*(x^n/a)], x] /; FreeQ[{a, b, c, m, n, p}, x] && !IGtQ[p, 0] && (ILtQ[p, 0] || GtQ[a, 0])

Rule 1807

Int[(Pq\_)/((a\_) + (b\_.)\*(x\_)^(n\_.) + (c\_.)\*(x\_)^(n2\_.)), x\_Symbol] := With[{q = Rt[b^2 - 4\*a\*c, 2]}, Dist[2\*(c/q), Int[Pq/(b - q + 2\*c\*x^n), x], x] - Dist[2\*(c/q), Int[Pq/(b + q + 2\*c\*x^n), x], x]] /; FreeQ[{a, b, c, n}, x] &

& EqQ[n2, 2\*n] && PolyQ[Pq, x] && NeQ[b^2 - 4\*a\*c, 0]

Rule 1907

Int[(Pq\_)\*((a\_) + (b\_)\*(x\_)^(n\_))^(p\_), x\_Symbol] :> Int[ExpandIntegrand[Pq\*(a + b\*x^n)^p, x], x] /; FreeQ[{a, b, n, p}, x] && (PolyQ[Pq, x] || PolyQ[Pq, x^n])

Rubi steps

$$\begin{aligned}
 \text{integral} &= \frac{(2c) \int \frac{d+ex}{b-\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2c) \int \frac{d+ex}{b+\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} \\
 &= \frac{(2c) \int \left( -\frac{d}{-b+\sqrt{b^2-4ac-2cx^n}} - \frac{ex}{-b+\sqrt{b^2-4ac-2cx^n}} \right) dx}{\sqrt{b^2-4ac}} \\
 &\quad - \frac{(2c) \int \left( \frac{d}{b+\sqrt{b^2-4ac+2cx^n}} + \frac{ex}{b+\sqrt{b^2-4ac+2cx^n}} \right) dx}{\sqrt{b^2-4ac}} \\
 &= -\frac{(2cd) \int \frac{1}{-b+\sqrt{b^2-4ac-2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2cd) \int \frac{1}{b+\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} \\
 &\quad - \frac{(2ce) \int \frac{x}{-b+\sqrt{b^2-4ac-2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2ce) \int \frac{x}{b+\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} \\
 &= -\frac{2cdx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{2cdx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} \\
 &\quad - \frac{cex^2 {}_2F_1\left(1, \frac{2}{n}, \frac{2+n}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{cex^2 {}_2F_1\left(1, \frac{2}{n}, \frac{2+n}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}}
 \end{aligned}$$

Mathematica [A] (verified)

Time = 1.11 (sec) , antiderivative size = 525, normalized size of antiderivative = 2.00

$$\begin{aligned}
 &\int \frac{d+ex}{a+bx^n+cx^{2n}} dx \\
 &= cx \left( -ex \left( \frac{1 - \left( \frac{x^n}{-b+\sqrt{b^2-4ac}+x^n} \right)^{-2/n} \text{Hypergeometric2F1}\left(-\frac{2}{n}, -\frac{2}{n}, \frac{-2+n}{n}, \frac{b-\sqrt{b^2-4ac}}{b-\sqrt{b^2-4ac}+2cx^n}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} \right. \right. \\
 &\quad \left. \left. + \frac{1 - 4^{-1/n} \left( \frac{cx^n}{b+\sqrt{b^2-4ac}+2cx^n} \right)^{-2/n} \text{Hypergeometric2F1}\left(-\frac{2}{n}, -\frac{2}{n}, \frac{-2+n}{n}, \frac{b+\sqrt{b^2-4ac}}{b+\sqrt{b^2-4ac}+2cx^n}\right)}{\sqrt{b^2-4ac}(b+\sqrt{b^2-4ac})} \right) - 2d \left( \frac{1 - \left( \frac{x^n}{-b+\sqrt{b^2-4ac}+x^n} \right)^{-2/n} \text{Hypergeometric2F1}\left(-\frac{2}{n}, -\frac{2}{n}, \frac{-2+n}{n}, \frac{b-\sqrt{b^2-4ac}}{b-\sqrt{b^2-4ac}+2cx^n}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} \right. \right. \\
 &\quad \left. \left. + \frac{1 - 4^{-1/n} \left( \frac{cx^n}{b+\sqrt{b^2-4ac}+2cx^n} \right)^{-2/n} \text{Hypergeometric2F1}\left(-\frac{2}{n}, -\frac{2}{n}, \frac{-2+n}{n}, \frac{b+\sqrt{b^2-4ac}}{b+\sqrt{b^2-4ac}+2cx^n}\right)}{\sqrt{b^2-4ac}(b+\sqrt{b^2-4ac})} \right) \right)
 \end{aligned}$$

[In] Integrate[(d + e\*x)/(a + b\*x^n + c\*x^(2\*n)),x]

[Out]  $c*x*(-(e*x*((1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c]))/c + x^n))^{(2/n)})/(b^2 - 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c]) + (1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(4^n^{(-1)}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{(2/n)})/(\text{Sqrt}[b^2 - 4*a*c]*(b + \text{Sqrt}[b^2 - 4*a*c]))) - 2*d*((1 - \text{Hypergeometric2F1}[-n^{(-1)}, -n^{(-1)}, (-1 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c]))/c + x^n))^{n^{(-1)}}/(b^2 - 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c]) + (1 - \text{Hypergeometric2F1}[-n^{(-1)}, -n^{(-1)}, (-1 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(2^n^{(-1)}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{n^{(-1)}})/(\text{Sqrt}[b^2 - 4*a*c]*(b + \text{Sqrt}[b^2 - 4*a*c])))$

## Maple [F]

$$\int \frac{ex + d}{a + bx^n + cx^{2n}} dx$$

[In] int((e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x)

[Out] int((e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x)

## Fricas [F]

$$\int \frac{d + ex}{a + bx^n + cx^{2n}} dx = \int \frac{ex + d}{cx^{2n} + bx^n + a} dx$$

[In] integrate((e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="fricas")

[Out] integral((e\*x + d)/(c\*x^(2\*n) + b\*x^n + a), x)

## Sympy [F]

$$\int \frac{d + ex}{a + bx^n + cx^{2n}} dx = \int \frac{d + ex}{a + bx^n + cx^{2n}} dx$$

[In] integrate((e\*x+d)/(a+b\*x\*\*n+c\*x\*\*(2\*n)),x)

[Out] Integral((d + e\*x)/(a + b\*x\*\*n + c\*x\*\*(2\*n)), x)

**Maxima [F]**

$$\int \frac{d + ex}{a + bx^n + cx^{2n}} dx = \int \frac{ex + d}{cx^{2n} + bx^n + a} dx$$

[In] integrate((e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="maxima")

[Out] integrate((e\*x + d)/(c\*x^(2\*n) + b\*x^n + a), x)

**Giac [F]**

$$\int \frac{d + ex}{a + bx^n + cx^{2n}} dx = \int \frac{ex + d}{cx^{2n} + bx^n + a} dx$$

[In] integrate((e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="giac")

[Out] integrate((e\*x + d)/(c\*x^(2\*n) + b\*x^n + a), x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{d + ex}{a + bx^n + cx^{2n}} dx = \int \frac{d + ex}{a + bx^n + cx^{2n}} dx$$

[In] int((d + e\*x)/(a + b\*x^n + c\*x^(2\*n)),x)

[Out] int((d + e\*x)/(a + b\*x^n + c\*x^(2\*n)), x)

### 3.4 $\int \frac{d+ex+fx^2}{a+bx^n+cx^{2n}} dx$

Optimal result	222
Rubi [A] (verified)	223
Mathematica [B] (verified)	225
Maple [F]	225
Fricas [F]	226
Sympy [F]	226
Maxima [F]	226
Giac [F]	226
Mupad [F(-1)]	227

#### Optimal result

Integrand size = 27, antiderivative size = 404

$$\int \frac{d+ex+fx^2}{a+bx^n+cx^{2n}} dx = -\frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} - \frac{cex^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{cex^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} - \frac{2cfx^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{3(b^2-4ac-b\sqrt{b^2-4ac})} - \frac{2cfx^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{3(b^2-4ac+b\sqrt{b^2-4ac})}$$

```
[Out] -2*c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/(b^2-4
*a*c-b*(-4*a*c+b^2)^(1/2))-c*e*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b
-(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-2/3*c*f*x^3*hypergeo
m([1, 3/n], [(3+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c-b*(-4*a*c+
b^2)^(1/2))-2*c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/
2)))/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))-c*e*x^2*hypergeom([1, 2/n], [(2+n)/n],
-2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))-2/3*c*f*x
^3*hypergeom([1, 3/n], [(3+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c
+b*(-4*a*c+b^2)^(1/2))
```

**Rubi [A] (verified)**

Time = 0.19 (sec) , antiderivative size = 404, normalized size of antiderivative = 1.00, number of steps used = 11, number of rules used = 4,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.148$ , Rules used = {1807, 1907, 251, 371}

$$\int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx = -\frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{-b\sqrt{b^2 - 4ac} - 4ac + b^2} - \frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{b\sqrt{b^2 - 4ac} - 4ac + b^2} - \frac{ce x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{-b\sqrt{b^2 - 4ac} - 4ac + b^2} - \frac{ce x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{b\sqrt{b^2 - 4ac} - 4ac + b^2} - \frac{2cf x^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{3(-b\sqrt{b^2 - 4ac} - 4ac + b^2)} - \frac{2cf x^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{3(b\sqrt{b^2 - 4ac} - 4ac + b^2)}$$

[In] Int[(d + e\*x + f\*x^2)/(a + b\*x^n + c\*x^(2\*n)), x]

[Out]  $(-2*c*d*x*\operatorname{Hypergeometric2F1}[1, n^{(-1)}, 1 + n^{(-1)}, (-2*c*x^n)/(b - \operatorname{Sqrt}[b^2 - 4*a*c])])/(b^2 - 4*a*c - b*\operatorname{Sqrt}[b^2 - 4*a*c]) - (2*c*d*x*\operatorname{Hypergeometric2F1}[1, n^{(-1)}, 1 + n^{(-1)}, (-2*c*x^n)/(b + \operatorname{Sqrt}[b^2 - 4*a*c])])/(b^2 - 4*a*c + b*\operatorname{Sqrt}[b^2 - 4*a*c]) - (c*e*x^2*\operatorname{Hypergeometric2F1}[1, 2/n, (2 + n)/n, (-2*c*x^n)/(b - \operatorname{Sqrt}[b^2 - 4*a*c])])/(b^2 - 4*a*c - b*\operatorname{Sqrt}[b^2 - 4*a*c]) - (c*e*x^2*\operatorname{Hypergeometric2F1}[1, 2/n, (2 + n)/n, (-2*c*x^n)/(b + \operatorname{Sqrt}[b^2 - 4*a*c])])/(b^2 - 4*a*c + b*\operatorname{Sqrt}[b^2 - 4*a*c]) - (2*c*f*x^3*\operatorname{Hypergeometric2F1}[1, 3/n, (3 + n)/n, (-2*c*x^n)/(b - \operatorname{Sqrt}[b^2 - 4*a*c])])/(3*(b^2 - 4*a*c - b*\operatorname{Sqrt}[b^2 - 4*a*c])) - (2*c*f*x^3*\operatorname{Hypergeometric2F1}[1, 3/n, (3 + n)/n, (-2*c*x^n)/(b + \operatorname{Sqrt}[b^2 - 4*a*c])])/(3*(b^2 - 4*a*c + b*\operatorname{Sqrt}[b^2 - 4*a*c]))$

Rule 251

Int[((a\_) + (b\_.)\*(x\_)^(n\_))^(p\_), x\_Symbol] := Simp[a^p\*x\*Hypergeometric2F1[-p, 1/n, 1/n + 1, (-b)\*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p, 0] && !IntegerQ[1/n] && !ILtQ[Simplify[1/n + p], 0] && (IntegerQ[p] || GtQ[a, 0])

Rule 371

```
Int[((c_.)*(x_))^(m_.)*((a_) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Simp[a^p
*((c*x)^(m + 1)/(c*(m + 1)))*Hypergeometric2F1[-p, (m + 1)/n, (m + 1)/n + 1
, (-b)*(x^n/a)], x] /; FreeQ[{a, b, c, m, n, p}, x] && !IGtQ[p, 0] && (ILt
Q[p, 0] || GtQ[a, 0])
```

### Rule 1807

```
Int[(Pq_)/((a_) + (b_.)*(x_)^(n_.) + (c_.)*(x_)^(n2_.)), x_Symbol] := With[
{q = Rt[b^2 - 4*a*c, 2]}, Dist[2*(c/q), Int[Pq/(b - q + 2*c*x^n), x], x] -
Dist[2*(c/q), Int[Pq/(b + q + 2*c*x^n), x], x]] /; FreeQ[{a, b, c, n}, x] &&
& EqQ[n2, 2*n] && PolyQ[Pq, x] && NeQ[b^2 - 4*a*c, 0]
```

### Rule 1907

```
Int[(Pq_)*((a_) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Int[ExpandIntegrand[
Pq*(a + b*x^n)^p, x], x] /; FreeQ[{a, b, n, p}, x] && (PolyQ[Pq, x] || Poly
Q[Pq, x^n])
```

### Rubi steps

$$\begin{aligned}
\text{integral} &= \frac{(2c) \int \frac{d+ex+fx^2}{b-\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2c) \int \frac{d+ex+fx^2}{b+\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} \\
&= \frac{(2c) \int \left( -\frac{d}{-b+\sqrt{b^2-4ac-2cx^n}} - \frac{ex}{-b+\sqrt{b^2-4ac-2cx^n}} - \frac{fx^2}{-b+\sqrt{b^2-4ac-2cx^n}} \right) dx}{\sqrt{b^2-4ac}} \\
&\quad - \frac{(2c) \int \left( \frac{d}{b+\sqrt{b^2-4ac+2cx^n}} + \frac{ex}{b+\sqrt{b^2-4ac+2cx^n}} + \frac{fx^2}{b+\sqrt{b^2-4ac+2cx^n}} \right) dx}{\sqrt{b^2-4ac}} \\
&= -\frac{(2cd) \int \frac{1}{-b+\sqrt{b^2-4ac-2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2cd) \int \frac{1}{b+\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2ce) \int \frac{x}{-b+\sqrt{b^2-4ac-2cx^n}} dx}{\sqrt{b^2-4ac}} \\
&\quad - \frac{(2ce) \int \frac{x}{b+\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2cf) \int \frac{x^2}{-b+\sqrt{b^2-4ac-2cx^n}} dx}{\sqrt{b^2-4ac}} - \frac{(2cf) \int \frac{x^2}{b+\sqrt{b^2-4ac+2cx^n}} dx}{\sqrt{b^2-4ac}} \\
&= -\frac{2cdx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{2cdx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} \\
&\quad - \frac{ce x^2 {}_2F_1\left(1, \frac{2}{n}, \frac{2+n}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{ce x^2 {}_2F_1\left(1, \frac{2}{n}, \frac{2+n}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} \\
&\quad - \frac{2cf x^3 {}_2F_1\left(1, \frac{3}{n}, \frac{3+n}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{3(b^2-4ac-b\sqrt{b^2-4ac})} - \frac{2cf x^3 {}_2F_1\left(1, \frac{3}{n}, \frac{3+n}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{3(b^2-4ac+b\sqrt{b^2-4ac})}
\end{aligned}$$



**Mathematica [B] (verified)**

Leaf count is larger than twice the leaf count of optimal. 834 vs.  $2(404) = 808$ .

Time = 0.92 (sec) , antiderivative size = 834, normalized size of antiderivative = 2.06

$$\int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx$$


---


$$x \left( 2fx^2 \left( (-b^2 + 4ac - b\sqrt{b^2 - 4ac}) \left( 1 - \left( \frac{x^n}{-b + \sqrt{b^2 - 4ac} + x^n} \right)^{-3/n} \right) \text{Hypergeometric2F1} \left( -\frac{3}{n}, -\frac{3}{n}, \frac{-3+n}{n}, \frac{-b + \sqrt{b^2 - 4ac}}{-b + \sqrt{b^2 - 4ac} + x^n} \right) \right) \right.$$

[In] Integrate[(d + e\*x + f\*x^2)/(a + b\*x^n + c\*x^(2\*n)),x]

[Out]  $(x*(2*f*x^2*((-b^2 + 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c]))*(1 - \text{Hypergeometric2F1}[-3/n, -3/n, (-3 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(3/n)} + (-b^2 + 4*a*c + b*\text{Sqrt}[b^2 - 4*a*c]))*(1 - \text{Hypergeometric2F1}[-3/n, -3/n, (-3 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(8^n*(-1)*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{(3/n)}))) + 3*e*x*((-b^2 + 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c]))*(1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2/n)} + (-b^2 + 4*a*c + b*\text{Sqrt}[b^2 - 4*a*c]))*(1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(4^n*(-1)*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{(2/n)}))) + 6*d*((-b^2 + 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c]))*(1 - \text{Hypergeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{n^(-1)}) - (\text{Sqrt}[b^2 - 4*a*c]*(-b + \text{Sqrt}[b^2 - 4*a*c]))*(2^n^(-1)*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{n^(-1)} - \text{Hypergeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(2^n^(-1)*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{n^(-1)})))/(12*a*(-b^2 + 4*a*c))$

**Maple [F]**

$$\int \frac{f x^2 + ex + d}{a + b x^n + c x^{2n}} dx$$

[In] int((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x)

[Out] int((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x)

**Fricas [F]**

$$\int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx = \int \frac{fx^2 + ex + d}{cx^{2n} + bx^n + a} dx$$

[In] integrate((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="fricas")

[Out] integral((f\*x^2 + e\*x + d)/(c\*x^(2\*n) + b\*x^n + a), x)

**Sympy [F]**

$$\int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx = \int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx$$

[In] integrate((f\*x\*\*2+e\*x+d)/(a+b\*x\*\*n+c\*x\*\*(2\*n)),x)

[Out] Integral((d + e\*x + f\*x\*\*2)/(a + b\*x\*\*n + c\*x\*\*(2\*n)), x)

**Maxima [F]**

$$\int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx = \int \frac{fx^2 + ex + d}{cx^{2n} + bx^n + a} dx$$

[In] integrate((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="maxima")

[Out] integrate((f\*x^2 + e\*x + d)/(c\*x^(2\*n) + b\*x^n + a), x)

**Giac [F]**

$$\int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx = \int \frac{fx^2 + ex + d}{cx^{2n} + bx^n + a} dx$$

[In] integrate((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="giac")

[Out] integrate((f\*x^2 + e\*x + d)/(c\*x^(2\*n) + b\*x^n + a), x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2}{a + bx^n + cx^{2n}} dx = \int \frac{fx^2 + ex + d}{a + bx^n + cx^{2n}} dx$$

```
[In] int((d + e*x + f*x^2)/(a + b*x^n + c*x^(2*n)), x)
```

```
[Out] int((d + e*x + f*x^2)/(a + b*x^n + c*x^(2*n)), x)
```

### 3.5 $\int \frac{d+ex+fx^2+gx^3}{a+bx^n+cx^{2n}} dx$

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Rubi [A] (verified)	229
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Sympy [F(-1)]	233
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#### Optimal result

Integrand size = 32, antiderivative size = 545

$$\int \frac{d+ex+fx^2+gx^3}{a+bx^n+cx^{2n}} dx = -\frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{2cdx \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} - \frac{cex^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{cex^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} - \frac{2cfx^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{3(b^2-4ac-b\sqrt{b^2-4ac})} - \frac{2cfx^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{3(b^2-4ac+b\sqrt{b^2-4ac})} - \frac{cgx^4 \operatorname{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{4+n}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{2(b^2-4ac-b\sqrt{b^2-4ac})} - \frac{cgx^4 \operatorname{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{4+n}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{2(b^2-4ac+b\sqrt{b^2-4ac})}$$

```
[Out] -2*c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/(b^2-4
*a*c-b*(-4*a*c+b^2)^(1/2))-c*e*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b
-(-4*a*c+b^2)^(1/2)))/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-2/3*c*f*x^3*hypergeo
```

$m\left([1, 3/n], [(3+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^{(1/2)})\right)/(b^2-4*a*c-b*(-4*a*c+b^2)^{(1/2)})-1/2*c*g*x^4*\text{hypergeom}\left([1, 4/n], [(4+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^{(1/2)})\right)/(b^2-4*a*c-b*(-4*a*c+b^2)^{(1/2)})-2*c*d*x*\text{hypergeom}\left([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^{(1/2)})\right)/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)})-c*e*x^2*\text{hypergeom}\left([1, 2/n], [(2+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^{(1/2)})\right)/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)})-2/3*c*f*x^3*\text{hypergeom}\left([1, 3/n], [(3+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^{(1/2)})\right)/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)})-1/2*c*g*x^4*\text{hypergeom}\left([1, 4/n], [(4+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^{(1/2)})\right)/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)})$

### Rubi [A] (verified)

Time = 0.24 (sec) , antiderivative size = 545, normalized size of antiderivative = 1.00, number of steps used = 13, number of rules used = 4,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.125$ , Rules used = {1807, 1907, 251, 371}

$$\int \frac{d + ex + fx^2 + gx^3}{a + bx^n + cx^{2n}} dx = -\frac{2cdx \text{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{-b\sqrt{b^2-4ac}-4ac+b^2} - \frac{2cdx \text{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b\sqrt{b^2-4ac}-4ac+b^2} - \frac{ce x^2 \text{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{-b\sqrt{b^2-4ac}-4ac+b^2} - \frac{ce x^2 \text{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b\sqrt{b^2-4ac}-4ac+b^2} - \frac{2cf x^3 \text{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{3(-b\sqrt{b^2-4ac}-4ac+b^2)} - \frac{2cf x^3 \text{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{3(b\sqrt{b^2-4ac}-4ac+b^2)} - \frac{cg x^4 \text{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{n+4}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{2(-b\sqrt{b^2-4ac}-4ac+b^2)} - \frac{cg x^4 \text{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{n+4}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{2(b\sqrt{b^2-4ac}-4ac+b^2)}$$

[In] Int[(d + e\*x + f\*x^2 + g\*x^3)/(a + b\*x^n + c\*x^(2\*n)),x]

[Out]  $(-2*c*d*x*\text{Hypergeometric2F1}[1, n^{(-1)}, 1 + n^{(-1)}, (-2*c*x^n)/(b - \text{Sqrt}[b^2 - 4*a*c])])/(b^2 - 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c]) - (2*c*d*x*\text{Hypergeometric2F1}[1, n^{(-1)}, 1 + n^{(-1)}, (-2*c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c])])/(b^2 - 4*a*c$

$$\begin{aligned}
& + b\sqrt{b^2 - 4ac}] - (c e^{x^2} \text{Hypergeometric2F1}[1, 2/n, (2+n)/n, (-2 \\
& *c*x^n)/(b - \sqrt{b^2 - 4ac})]) / (b^2 - 4ac - b\sqrt{b^2 - 4ac}) - (c \\
& e^{x^2} \text{Hypergeometric2F1}[1, 2/n, (2+n)/n, (-2*c*x^n)/(b + \sqrt{b^2 - 4ac} \\
& ])] / (b^2 - 4ac + b\sqrt{b^2 - 4ac}) - (2*c*f*x^3 \text{Hypergeometric2F1}[1, \\
& 3/n, (3+n)/n, (-2*c*x^n)/(b - \sqrt{b^2 - 4ac})]) / (3*(b^2 - 4ac - b\sqrt{ \\
& rt[b^2 - 4ac])) - (2*c*f*x^3 \text{Hypergeometric2F1}[1, 3/n, (3+n)/n, (-2*c*x \\
& ^n)/(b + \sqrt{b^2 - 4ac})]) / (3*(b^2 - 4ac + b\sqrt{b^2 - 4ac})) - (c \\
& g*x^4 \text{Hypergeometric2F1}[1, 4/n, (4+n)/n, (-2*c*x^n)/(b - \sqrt{b^2 - 4ac} \\
& ])] / (2*(b^2 - 4ac - b\sqrt{b^2 - 4ac})) - (c*g*x^4 \text{Hypergeometric2F1}[1 \\
& , 4/n, (4+n)/n, (-2*c*x^n)/(b + \sqrt{b^2 - 4ac})]) / (2*(b^2 - 4ac + b \\
& \sqrt{b^2 - 4ac}))
\end{aligned}$$

#### Rule 251

$$\text{Int}[(a_ + (b_ )*(x_ )^{(n_ )})^{(p_ )}, x\_Symbol] := \text{Simp}[a^p*x*\text{Hypergeometric2F} \\
1[-p, 1/n, 1/n + 1, (-b)*(x^n/a)], x] /; \text{FreeQ}\{a, b, n, p\}, x] \&\& !\text{IGtQ}[p \\
, 0] \&\& !\text{IntegerQ}[1/n] \&\& !\text{ILtQ}[\text{Simplify}[1/n + p], 0] \&\& (\text{IntegerQ}[p] || \\
\text{GtQ}[a, 0])$$

#### Rule 371

$$\text{Int}[(c_ )*(x_ )^{(m_ )}*((a_ ) + (b_ )*(x_ )^{(n_ )})^{(p_ )}, x\_Symbol] := \text{Simp}[a^p \\
*((c*x)^{(m+1)}/(c*(m+1)))*\text{Hypergeometric2F1}[-p, (m+1)/n, (m+1)/n + 1 \\
, (-b)*(x^n/a)], x] /; \text{FreeQ}\{a, b, c, m, n, p\}, x] \&\& !\text{IGtQ}[p, 0] \&\& (\text{ILt} \\
\text{Q}[p, 0] || \text{GtQ}[a, 0])$$

#### Rule 1807

$$\text{Int}[(Pq_)/((a_ ) + (b_ )*(x_ )^{(n_ )} + (c_ )*(x_ )^{(n2_ )}), x\_Symbol] := \text{With}[ \\
\{q = \text{Rt}[b^2 - 4ac, 2]\}, \text{Dist}[2*(c/q), \text{Int}[Pq/(b - q + 2*c*x^n), x], x] - \\
\text{Dist}[2*(c/q), \text{Int}[Pq/(b + q + 2*c*x^n), x], x]] /; \text{FreeQ}\{a, b, c, n\}, x] \& \\
\& \text{EqQ}[n2, 2*n] \&\& \text{PolyQ}[Pq, x] \&\& \text{NeQ}[b^2 - 4ac, 0]$$

#### Rule 1907

$$\text{Int}[(Pq_)*((a_ ) + (b_ )*(x_ )^{(n_ )})^{(p_ )}, x\_Symbol] := \text{Int}[\text{ExpandIntegrand}[ \\
Pq*(a + b*x^n)^p, x], x] /; \text{FreeQ}\{a, b, n, p\}, x] \&\& (\text{PolyQ}[Pq, x] || \text{Poly} \\
\text{Q}[Pq, x^n])$$

#### Rubi steps

$$\text{integral} = \frac{(2c) \int \frac{d+ex+fx^2+gx^3}{b-\sqrt{b^2-4ac}+2cx^n} dx}{\sqrt{b^2-4ac}} - \frac{(2c) \int \frac{d+ex+fx^2+gx^3}{b+\sqrt{b^2-4ac}+2cx^n} dx}{\sqrt{b^2-4ac}}$$

$$\begin{aligned}
&= \frac{(2c) \int \left( -\frac{d}{-b+\sqrt{b^2-4ac}-2cx^n} - \frac{ex}{-b+\sqrt{b^2-4ac}-2cx^n} - \frac{fx^2}{-b+\sqrt{b^2-4ac}-2cx^n} - \frac{gx^3}{-b+\sqrt{b^2-4ac}-2cx^n} \right) dx}{\sqrt{b^2-4ac}} \\
&= \frac{(2c) \int \left( \frac{d}{b+\sqrt{b^2-4ac}+2cx^n} + \frac{ex}{b+\sqrt{b^2-4ac}+2cx^n} + \frac{fx^2}{b+\sqrt{b^2-4ac}+2cx^n} + \frac{gx^3}{b+\sqrt{b^2-4ac}+2cx^n} \right) dx}{\sqrt{b^2-4ac}} \\
&= \frac{(2cd) \int \frac{1}{-b+\sqrt{b^2-4ac}-2cx^n} dx}{\sqrt{b^2-4ac}} - \frac{(2cd) \int \frac{1}{b+\sqrt{b^2-4ac}+2cx^n} dx}{\sqrt{b^2-4ac}} \\
&\quad - \frac{(2ce) \int \frac{x}{-b+\sqrt{b^2-4ac}-2cx^n} dx}{\sqrt{b^2-4ac}} - \frac{(2ce) \int \frac{x}{b+\sqrt{b^2-4ac}+2cx^n} dx}{\sqrt{b^2-4ac}} \\
&\quad - \frac{(2cf) \int \frac{x^2}{-b+\sqrt{b^2-4ac}-2cx^n} dx}{\sqrt{b^2-4ac}} - \frac{(2cf) \int \frac{x^2}{b+\sqrt{b^2-4ac}+2cx^n} dx}{\sqrt{b^2-4ac}} \\
&\quad - \frac{(2cg) \int \frac{x^3}{-b+\sqrt{b^2-4ac}-2cx^n} dx}{\sqrt{b^2-4ac}} - \frac{(2cg) \int \frac{x^3}{b+\sqrt{b^2-4ac}+2cx^n} dx}{\sqrt{b^2-4ac}} \\
&= \frac{2cdx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{2cdx {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} \\
&\quad - \frac{ce x^2 {}_2F_1\left(1, \frac{2}{n}; \frac{2+n}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{b^2-4ac-b\sqrt{b^2-4ac}} - \frac{ce x^2 {}_2F_1\left(1, \frac{2}{n}; \frac{2+n}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{b^2-4ac+b\sqrt{b^2-4ac}} \\
&\quad - \frac{2cf x^3 {}_2F_1\left(1, \frac{3}{n}; \frac{3+n}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{3(b^2-4ac-b\sqrt{b^2-4ac})} - \frac{2cf x^3 {}_2F_1\left(1, \frac{3}{n}; \frac{3+n}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{3(b^2-4ac+b\sqrt{b^2-4ac})} \\
&\quad - \frac{cg x^4 {}_2F_1\left(1, \frac{4}{n}; \frac{4+n}{n}; -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{2(b^2-4ac-b\sqrt{b^2-4ac})} - \frac{cg x^4 {}_2F_1\left(1, \frac{4}{n}; \frac{4+n}{n}; -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{2(b^2-4ac+b\sqrt{b^2-4ac})}
\end{aligned}$$

### Mathematica [B] (verified)

Leaf count is larger than twice the leaf count of optimal. 1093 vs.  $2(545) = 1090$ .

Time = 1.28 (sec) , antiderivative size = 1093, normalized size of antiderivative = 2.01

$$\begin{aligned}
&\int \frac{d + ex + fx^2 + gx^3}{a + bx^n + cx^{2n}} dx \\
&= \frac{x \left( 3gx^3 \left( (-b^2 + 4ac - b\sqrt{b^2 - 4ac}) \left( 1 - \left( \frac{x^n}{-\frac{-b+\sqrt{b^2-4ac}}{2c} + x^n} \right)^{-4/n} \right) \text{Hypergeometric2F1} \left( -\frac{4}{n}, -\frac{4}{n}, \frac{-4+n}{n}, \frac{-b-\sqrt{b^2-4ac}}{2c} \right) \right)}{b^2-4ac-b\sqrt{b^2-4ac}} \right. \\
&\quad \left. - \frac{x \left( 3gx^3 \left( (-b^2 + 4ac + b\sqrt{b^2 - 4ac}) \left( 1 - \left( \frac{x^n}{-\frac{-b+\sqrt{b^2-4ac}}{2c} + x^n} \right)^{-4/n} \right) \text{Hypergeometric2F1} \left( -\frac{4}{n}, -\frac{4}{n}, \frac{-4+n}{n}, \frac{-b+\sqrt{b^2-4ac}}{2c} \right) \right)}{b^2-4ac+b\sqrt{b^2-4ac}} \right)}{2} \right)
\end{aligned}$$

[In] Integrate[(d + e\*x + f\*x^2 + g\*x^3)/(a + b\*x^n + c\*x^(2\*n)),x]

[Out] (x\*(3\*g\*x^3\*((-b^2 + 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*(1 - Hypergeometric2F1[-4/n, -4/n, (-4 + n)/n, (b - Sqrt[b^2 - 4\*a\*c])/(b - Sqrt[b^2 - 4\*a\*c] + 2\*c\*

$x^n]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(4/n)} + (-b^2 + 4*a*c + b*\text{Sqrt}[b^2 - 4*a*c])*(1 - \text{Hypergeometric2F1}[-4/n, -4/n, (-4 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(2^{(4/n)}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{(4/n)})) + 4*f*x^2*((-b^2 + 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c])*(1 - \text{Hypergeometric2F1}[-3/n, -3/n, (-3 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(3/n)} + (-b^2 + 4*a*c + b*\text{Sqrt}[b^2 - 4*a*c])*(1 - \text{Hypergeometric2F1}[-3/n, -3/n, (-3 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(8^n^{(-1)}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{(3/n)})) + 6*e*x*((-b^2 + 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c])*(1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2/n)} + (-b^2 + 4*a*c + b*\text{Sqrt}[b^2 - 4*a*c])*(1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(4^n^{(-1)}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{(2/n)})) + 12*d*((-b^2 + 4*a*c - b*\text{Sqrt}[b^2 - 4*a*c])*(1 - \text{Hypergeometric2F1}[-n^{(-1)}, -n^{(-1)}, (-1 + n)/n, (b - \text{Sqrt}[b^2 - 4*a*c])/(b - \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{n^{(-1)}} - (\text{Sqrt}[b^2 - 4*a*c]*(-b + \text{Sqrt}[b^2 - 4*a*c])*(2^n^{(-1)}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{n^{(-1)}} - \text{Hypergeometric2F1}[-n^{(-1)}, -n^{(-1)}, (-1 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)])))/(2^n^{(-1)}*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{n^{(-1)}})))/(24*a*(-b^2 + 4*a*c))$

## Maple [F]

$$\int \frac{g x^3 + f x^2 + e x + d}{a + b x^n + c x^{2n}} dx$$

[In] int((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x)

[Out] int((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x)

## Fricas [F]

$$\int \frac{d + e x + f x^2 + g x^3}{a + b x^n + c x^{2n}} dx = \int \frac{g x^3 + f x^2 + e x + d}{c x^{2n} + b x^n + a} dx$$

[In] integrate((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n)),x, algorithm="fricas")

[Out] integral((g\*x^3 + f\*x^2 + e\*x + d)/(c\*x^(2\*n) + b\*x^n + a), x)



**Sympy [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2 + gx^3}{a + bx^n + cx^{2n}} dx = \text{Timed out}$$

```
[In] integrate((g*x**3+f*x**2+e*x+d)/(a+b*x**n+c*x**(2*n)),x)
```

```
[Out] Timed out
```

**Maxima [F]**

$$\int \frac{d + ex + fx^2 + gx^3}{a + bx^n + cx^{2n}} dx = \int \frac{gx^3 + fx^2 + ex + d}{cx^{2n} + bx^n + a} dx$$

```
[In] integrate((g*x^3+f*x^2+e*x+d)/(a+b*x^n+c*x^(2*n)),x, algorithm="maxima")
```

```
[Out] integrate((g*x^3 + f*x^2 + e*x + d)/(c*x^(2*n) + b*x^n + a), x)
```

**Giac [F]**

$$\int \frac{d + ex + fx^2 + gx^3}{a + bx^n + cx^{2n}} dx = \int \frac{gx^3 + fx^2 + ex + d}{cx^{2n} + bx^n + a} dx$$

```
[In] integrate((g*x^3+f*x^2+e*x+d)/(a+b*x^n+c*x^(2*n)),x, algorithm="giac")
```

```
[Out] integrate((g*x^3 + f*x^2 + e*x + d)/(c*x^(2*n) + b*x^n + a), x)
```

**Mupad [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2 + gx^3}{a + bx^n + cx^{2n}} dx = \int \frac{gx^3 + fx^2 + ex + d}{a + bx^n + cx^{2n}} dx$$

```
[In] int((d + e*x + f*x^2 + g*x^3)/(a + b*x^n + c*x^(2*n)),x)
```

```
[Out] int((d + e*x + f*x^2 + g*x^3)/(a + b*x^n + c*x^(2*n)), x)
```

### 3.6 $\int \frac{1}{(a+bx^n+cx^{2n})^2} dx$

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Mupad [F(-1)]	238

#### Optimal result

Integrand size = 16, antiderivative size = 283

$$\int \frac{1}{(a+bx^n+cx^{2n})^2} dx = \frac{x(b^2-2ac+bcx^n)}{a(b^2-4ac)n(a+bx^n+cx^{2n})}$$

$$\frac{c(4ac(1-2n)-b^2(1-n)-b\sqrt{b^2-4ac}(1-n))x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1+\frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)(b^2-4ac-b\sqrt{b^2-4ac})n}$$

$$\frac{c(4ac(1-2n)-b^2(1-n)+b\sqrt{b^2-4ac}(1-n))x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1+\frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)(b^2-4ac+b\sqrt{b^2-4ac})n}$$

```
[Out] x*(b^2-2*a*c+b*c*x^n)/a/(-4*a*c+b^2)/n/(a+b*x^n+c*x^(2*n))-c*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))*(4*a*c*(1-2*n)-b^2*(1-n)-b*(1-n)*(-4*a*c+b^2)^(1/2))/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-c*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))*(4*a*c*(1-2*n)-b^2*(1-n)+b*(1-n)*(-4*a*c+b^2)^(1/2))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))
```

#### Rubi [A] (verified)

Time = 0.26 (sec) , antiderivative size = 283, normalized size of antiderivative = 1.00, number of steps used = 4, number of rules used = 3,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.188$ , Rules used

= {1359, 1436, 251}

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx =$$

$$\frac{cx(-b(1-n)\sqrt{b^2-4ac} + 4ac(1-2n) - (b^2(1-n))) \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{an(b^2-4ac)(-b\sqrt{b^2-4ac}-4ac+b^2)}$$

$$\frac{cx(b(1-n)\sqrt{b^2-4ac} + 4ac(1-2n) - (b^2(1-n))) \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{an(b^2-4ac)(b\sqrt{b^2-4ac}-4ac+b^2)}$$

$$+ \frac{x(-2ac + b^2 + bcx^n)}{an(b^2-4ac)(a + bx^n + cx^{2n})}$$

[In] Int[(a + b\*x^n + c\*x^(2\*n))^(-2), x]

[Out] (x\*(b^2 - 2\*a\*c + b\*c\*x^n)/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) - (c\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n) - b\*Sqrt[b^2 - 4\*a\*c]\*(1 - n))\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n) + b\*Sqrt[b^2 - 4\*a\*c]\*(1 - n))\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n)

Rule 251

Int[((a\_) + (b\_)\*(x\_)^(n\_))^(p\_), x\_Symbol] := Simp[a^p\*x\*Hypergeometric2F1[-p, 1/n, 1/n + 1, (-b)\*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p, 0] && !IntegerQ[1/n] && !ILtQ[Simplify[1/n + p], 0] && (IntegerQ[p] || GtQ[a, 0])

Rule 1359

Int[((a\_) + (c\_)\*(x\_)^(n2\_)) + (b\_)\*(x\_)^(n\_)]^(p\_), x\_Symbol] := Simp[(-x)\*(b^2 - 2\*a\*c + b\*c\*x^n)\*((a + b\*x^n + c\*x^(2\*n))^(p + 1)/(a\*n\*(p + 1)\*(b^2 - 4\*a\*c))), x] + Dist[1/(a\*n\*(p + 1)\*(b^2 - 4\*a\*c)), Int[(b^2 - 2\*a\*c + n\*(p + 1)\*(b^2 - 4\*a\*c) + b\*c\*(n\*(2\*p + 3) + 1)\*x^n)\*(a + b\*x^n + c\*x^(2\*n))^(p + 1), x], x] /; FreeQ[{a, b, c, n}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0] && ILtQ[p, -1]

Rule 1436

Int[((d\_) + (e\_)\*(x\_)^(n\_))/((a\_) + (b\_)\*(x\_)^(n\_) + (c\_)\*(x\_)^(n2\_)), x\_Symbol] := With[{q = Rt[b^2 - 4\*a\*c, 2]}, Dist[e/2 + (2\*c\*d - b\*e)/(2\*q), Int[1/(b/2 - q/2 + c\*x^n), x], x] + Dist[e/2 - (2\*c\*d - b\*e)/(2\*q), Int[1/(b/2 + q/2 + c\*x^n), x], x]] /; FreeQ[{a, b, c, d, e, n}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0] && NeQ[c\*d^2 - b\*d\*e + a\*e^2, 0] && (PosQ[b^2 - 4\*a

\*c] || !IGtQ[n/2, 0])

Rubi steps

$$\begin{aligned}
 \text{integral} &= \frac{x(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} - \frac{\int \frac{b^2 - 2ac - (b^2 - 4ac)n + bc(1-n)x^n}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} \\
 &= \frac{x(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 &\quad + \frac{(c(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n))) \int \frac{1}{\frac{b}{2} - \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
 &\quad - \frac{(c(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n))) \int \frac{1}{\frac{b}{2} + \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
 &= \frac{x(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 &\quad + \frac{c(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
 &\quad - \frac{c(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n}
 \end{aligned}$$

**Mathematica [A] (verified)**

Time = 2.68 (sec) , antiderivative size = 456, normalized size of antiderivative = 1.61

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx =$$


---


$$x \left( \frac{4a^2cn - b^2(-1+n)x^n(b+cx^n) + a(-b^2n + bc(-3+4n)x^n + 2c^2(-1+2n)x^{2n})}{a + x^n(b+cx^n)} + \frac{2^{-1/n}ac(4ac\sqrt{b^2-4ac}(1-2n) + b^3(-1+n) - 4abc(-1+n) + b^2(-1+n))}{a + x^n(b+cx^n)} \right)$$

[In] Integrate[(a + b\*x^n + c\*x^(2\*n))^(-2), x]

[Out] -((x\*((4\*a^2\*c\*n - b^2\*(-1 + n)\*x^n\*(b + c\*x^n) + a\*(-(b^2\*n) + b\*c\*(-3 + 4\*n)\*x^n + 2\*c^2\*(-1 + 2\*n)\*x^(2\*n)))/(a + x^n\*(b + c\*x^n)) + (a\*c\*(4\*a\*c\*sqrt[b^2 - 4\*a\*c]\*(1 - 2\*n) + b^3\*(-1 + n) - 4\*a\*b\*c\*(-1 + n) + b^2\*sqrt[b^2 - 4\*a\*c]\*(-1 + n))\*Hypergeometric2F1[-n^(-1), -n^(-1), (-1 + n)/n, (b - sqrt[b^2 - 4\*a\*c])/(b - sqrt[b^2 - 4\*a\*c] + 2\*c\*x^n)])/(2^n^(-1)\*sqrt[b^2 - 4\*a\*c]\*(-b^2 + 4\*a\*c + b\*sqrt[b^2 - 4\*a\*c])\*((c\*x^n)/(b - sqrt[b^2 - 4\*a\*c] + 2\*c\*x^n))^n^(-1)) + (a\*c\*(-(b^2\*(-1 + n)) + b\*sqrt[b^2 - 4\*a\*c]\*(-1 + n) +

$4*a*c*(-1 + 2*n))*Hypergeometric2F1[-n^{(-1)}, -n^{(-1)}, (-1 + n)/n, (b + \text{Sqrt}[b^2 - 4*a*c])/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n)]/(2^n^{(-1)}*\text{Sqrt}[b^2 - 4*a*c]*(b + \text{Sqrt}[b^2 - 4*a*c])*((c*x^n)/(b + \text{Sqrt}[b^2 - 4*a*c] + 2*c*x^n))^{n^{(-1)}}))/a^2*(b^2 - 4*a*c)*n)$

### Maple [F]

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx$$

[In] int(1/(a+b\*x^n+c\*x^(2\*n))^2,x)

[Out] int(1/(a+b\*x^n+c\*x^(2\*n))^2,x)

### Fricas [F]

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx = \int \frac{1}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate(1/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="fricas")

[Out] integral(1/(c^2\*x^(4\*n) + b^2\*x^(2\*n) + 2\*a\*b\*x^n + a^2 + 2\*(b\*c\*x^n + a\*c)\*x^(2\*n)), x)

### Sympy [F(-1)]

Timed out.

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx = \text{Timed out}$$

[In] integrate(1/(a+b\*x\*\*n+c\*x\*\*(2\*n))\*\*2,x)

[Out] Timed out

### Maxima [F]

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx = \int \frac{1}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate(1/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="maxima")

[Out] (b\*c\*x\*x^n + (b^2 - 2\*a\*c)\*x)/(a^2\*b^2\*n - 4\*a^3\*c\*n + (a\*b^2\*c\*n - 4\*a^2\*c^2\*n)\*x^(2\*n) + (a\*b^3\*n - 4\*a^2\*b\*c\*n)\*x^n) - integrate(-(b\*c\*(n - 1)\*x^n - 2\*a\*c\*(2\*n - 1) + b^2\*(n - 1))/(a^2\*b^2\*n - 4\*a^3\*c\*n + (a\*b^2\*c\*n - 4\*a^2\*c^2\*n)\*x^(2\*n) + (a\*b^3\*n - 4\*a^2\*b\*c\*n)\*x^n), x)

**Giac [F]**

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx = \int \frac{1}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate(1/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="giac")

[Out] integrate((c\*x^(2\*n) + b\*x^n + a)^(-2), x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{1}{(a + bx^n + cx^{2n})^2} dx = \int \frac{1}{(a + bx^n + cx^{2n})^2} dx$$

[In] int(1/(a + b\*x^n + c\*x^(2\*n))^2,x)

[Out] int(1/(a + b\*x^n + c\*x^(2\*n))^2, x)

### 3.7 $\int \frac{d+ex}{(a+bx^n+cx^{2n})^2} dx$

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#### Optimal result

Integrand size = 22, antiderivative size = 738

$$\int \frac{d+ex}{(a+bx^n+cx^{2n})^2} dx = \frac{dx(b^2-2ac+bcx^n)}{a(b^2-4ac)n(a+bx^n+cx^{2n})} + \frac{ex^2(b^2-2ac+bcx^n)}{a(b^2-4ac)n(a+bx^n+cx^{2n})}$$

$$\frac{cd(4ac(1-2n)-b^2(1-n)-b\sqrt{b^2-4ac}(1-n))x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1+\frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)(b^2-4ac-b\sqrt{b^2-4ac})n}$$

$$\frac{cd(4ac(1-2n)-b^2(1-n)+b\sqrt{b^2-4ac}(1-n))x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1+\frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)(b^2-4ac+b\sqrt{b^2-4ac})n}$$

$$\frac{ce(4ac(1-n)-b^2(2-n))x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)(b^2-4ac-b\sqrt{b^2-4ac})n}$$

$$\frac{ce(4ac(1-n)-b^2(2-n))x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)(b^2-4ac+b\sqrt{b^2-4ac})n}$$

$$\frac{2bc^2e(2-n)x^{2+n} \operatorname{Hypergeometric2F1}\left(1, \frac{2+n}{n}, 2\left(1+\frac{1}{n}\right), -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)^{3/2}(b-\sqrt{b^2-4ac})n(2+n)}$$

$$+ \frac{2bc^2e(2-n)x^{2+n} \operatorname{Hypergeometric2F1}\left(1, \frac{2+n}{n}, 2\left(1+\frac{1}{n}\right), -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{a(b^2-4ac)^{3/2}(b+\sqrt{b^2-4ac})n(2+n)}$$

[Out] d\*x\*(b^2-2\*a\*c+b\*c\*x^n)/a/(-4\*a\*c+b^2)/n/(a+b\*x^n+c\*x^(2\*n))+e\*x^2\*(b^2-2\*a\*c+b\*c\*x^n)/a/(-4\*a\*c+b^2)/n/(a+b\*x^n+c\*x^(2\*n))-2\*b\*c^2\*e\*(2-n)\*x^(2+n)\*hypergeom([1, (2+n)/n], [2+2/n], -2\*c\*x^n/(b-(-4\*a\*c+b^2)^(1/2)))/a/(-4\*a\*c+b^2)^(3/2)/n/(2+n)/(b-(-4\*a\*c+b^2)^(1/2))+2\*b\*c^2\*e\*(2-n)\*x^(2+n)\*hypergeom([1, (2+n)/n], [2+2/n], -2\*c\*x^n/(b+(-4\*a\*c+b^2)^(1/2)))/a/(-4\*a\*c+b^2)^(3/2)/n/(2+n)/(b+(-4\*a\*c+b^2)^(1/2))-c\*e\*(4\*a\*c\*(1-n)-b^2\*(2-n))\*x^2\*hypergeom([1,

$$\begin{aligned} & \frac{2}{n}, [(2+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^{(1/2)}))/a/(-4*a*c+b^2)/n/(b^2-4*a*c \\ & -b*(-4*a*c+b^2)^{(1/2)})-c*e*(4*a*c*(1-n)-b^2*(2-n))*x^2*\text{hypergeom}([1, 2/n], [ \\ & (2+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^{(1/2)}))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4 \\ & *a*c+b^2)^{(1/2)})-c*d*x*\text{hypergeom}([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^{(1/2)})) \\ & *(4*a*c*(1-2*n)-b^2*(1-n)-b*(1-n)*(-4*a*c+b^2)^{(1/2)})/a/(-4*a*c+b^2) \\ & /n/(b^2-4*a*c-b*(-4*a*c+b^2)^{(1/2)})-c*d*x*\text{hypergeom}([1, 1/n], [1+1/n], -2*c*x \\ & ^n/(b+(-4*a*c+b^2)^{(1/2)}))* (4*a*c*(1-2*n)-b^2*(1-n)+b*(1-n)*(-4*a*c+b^2)^{(1/2)}) \\ & /a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)}) \end{aligned}$$

### Rubi [A] (verified)

Time = 0.87 (sec) , antiderivative size = 738, normalized size of antiderivative = 1.00, number of steps used = 15, number of rules used = 8,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.364$ , Rules used = {1810, 1359, 1436, 251, 1398, 1574, 1397, 371}

$$\begin{aligned} & \int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx \\ & = -\frac{2bc^2e(2-n)x^{n+2} \text{Hypergeometric2F1}\left(1, \frac{n+2}{n}, 2\left(1 + \frac{1}{n}\right), -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{an(n+2)(b^2-4ac)^{3/2}(b-\sqrt{b^2-4ac})} \\ & + \frac{2bc^2e(2-n)x^{n+2} \text{Hypergeometric2F1}\left(1, \frac{n+2}{n}, 2\left(1 + \frac{1}{n}\right), -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{an(n+2)(b^2-4ac)^{3/2}(\sqrt{b^2-4ac}+b)} \\ & - \frac{cdx(-b(1-n)\sqrt{b^2-4ac}+4ac(1-2n)-(b^2(1-n))) \text{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{an(b^2-4ac)(-b\sqrt{b^2-4ac}-4ac+b^2)} \\ & - \frac{cdx(b(1-n)\sqrt{b^2-4ac}+4ac(1-2n)-(b^2(1-n))) \text{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{an(b^2-4ac)(b\sqrt{b^2-4ac}-4ac+b^2)} \\ & + \frac{dx(-2ac+b^2+bcx^n)}{an(b^2-4ac)(a+bx^n+cx^{2n})} \\ & - \frac{ce x^2(4ac(1-n)-b^2(2-n)) \text{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right)}{an(b^2-4ac)(-b\sqrt{b^2-4ac}-4ac+b^2)} \\ & - \frac{ce x^2(4ac(1-n)-b^2(2-n)) \text{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right)}{an(b^2-4ac)(b\sqrt{b^2-4ac}-4ac+b^2)} \\ & + \frac{ex^2(-2ac+b^2+bcx^n)}{an(b^2-4ac)(a+bx^n+cx^{2n})} \end{aligned}$$

[In] Int[(d + e\*x)/(a + b\*x^n + c\*x^(2\*n))^2,x]

[Out] (d\*x\*(b^2 - 2\*a\*c + b\*c\*x^n))/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) + (e\*x^2\*(b^2 - 2\*a\*c + b\*c\*x^n))/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n)))



```

) - (c*d*(4*a*c*(1 - 2*n) - b^2*(1 - n) - b*Sqrt[b^2 - 4*a*c]*(1 - n))*x*Hy
pergeometric2F1[1, n^(-1), 1 + n^(-1), (-2*c*x^n)/(b - Sqrt[b^2 - 4*a*c])])
/(a*(b^2 - 4*a*c)*(b^2 - 4*a*c - b*Sqrt[b^2 - 4*a*c])*n) - (c*d*(4*a*c*(1 -
2*n) - b^2*(1 - n) + b*Sqrt[b^2 - 4*a*c]*(1 - n))*x*Hypergeometric2F1[1, n
^(-1), 1 + n^(-1), (-2*c*x^n)/(b + Sqrt[b^2 - 4*a*c])])/(a*(b^2 - 4*a*c)*(b
^2 - 4*a*c + b*Sqrt[b^2 - 4*a*c])*n) - (c*e*(4*a*c*(1 - n) - b^2*(2 - n))*x
^2*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2*c*x^n)/(b - Sqrt[b^2 - 4*a*c])])
)/(a*(b^2 - 4*a*c)*(b^2 - 4*a*c - b*Sqrt[b^2 - 4*a*c])*n) - (c*e*(4*a*c*(1
- n) - b^2*(2 - n))*x^2*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2*c*x^n)/(b
+ Sqrt[b^2 - 4*a*c])])/(a*(b^2 - 4*a*c)*(b^2 - 4*a*c + b*Sqrt[b^2 - 4*a*c])
*n) - (2*b*c^2*e*(2 - n)*x^(2 + n)*Hypergeometric2F1[1, (2 + n)/n, 2*(1 + n
^(-1)), (-2*c*x^n)/(b - Sqrt[b^2 - 4*a*c])])/(a*(b^2 - 4*a*c)^(3/2)*(b - Sq
rt[b^2 - 4*a*c])*n*(2 + n)) + (2*b*c^2*e*(2 - n)*x^(2 + n)*Hypergeometric2F
1[1, (2 + n)/n, 2*(1 + n^(-1)), (-2*c*x^n)/(b + Sqrt[b^2 - 4*a*c])])/(a*(b^
2 - 4*a*c)^(3/2)*(b + Sqrt[b^2 - 4*a*c])*n*(2 + n))

```

#### Rule 251

```

Int[((a_) + (b_)*(x_)^(n_))^(p_), x_Symbol] := Simp[a^p*x*Hypergeometric2F
1[-p, 1/n, 1/n + 1, (-b)*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p
, 0] && !IntegerQ[1/n] && !ILtQ[Simplify[1/n + p], 0] && (IntegerQ[p] ||
GtQ[a, 0])

```

#### Rule 371

```

Int[((c_)*(x_)^(m_))*((a_) + (b_)*(x_)^(n_))^(p_), x_Symbol] := Simp[a^p
*((c*x)^(m + 1)/(c*(m + 1)))*Hypergeometric2F1[-p, (m + 1)/n, (m + 1)/n + 1
, (-b)*(x^n/a)], x] /; FreeQ[{a, b, c, m, n, p}, x] && !IGtQ[p, 0] && (ILt
Q[p, 0] || GtQ[a, 0])

```

#### Rule 1359

```

Int[((a_) + (c_)*(x_)^(n2_) + (b_)*(x_)^(n_))^(p_), x_Symbol] := Simp[(-
x)*(b^2 - 2*a*c + b*c*x^n)*((a + b*x^n + c*x^(2*n))^(p + 1)/(a*n*(p + 1)*(b
^2 - 4*a*c))), x] + Dist[1/(a*n*(p + 1)*(b^2 - 4*a*c)), Int[(b^2 - 2*a*c +
n*(p + 1)*(b^2 - 4*a*c) + b*c*(n*(2*p + 3) + 1)*x^n)*(a + b*x^n + c*x^(2*n)
)^(p + 1), x], x] /; FreeQ[{a, b, c, n}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*
a*c, 0] && ILtQ[p, -1]

```

#### Rule 1397

```

Int[((d_)*(x_)^(m_))/((a_) + (c_)*(x_)^(n2_) + (b_)*(x_)^(n_)), x_Symb
ol] := With[{q = Rt[b^2 - 4*a*c, 2]}, Dist[2*(c/q), Int[(d*x)^m/(b - q + 2*
c*x^n), x], x] - Dist[2*(c/q), Int[(d*x)^m/(b + q + 2*c*x^n), x], x]] /; Fr
eeQ[{a, b, c, d, m, n}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*a*c, 0]

```

#### Rule 1398

```

Int[((d_.)*(x_))^(m_.)*((a_) + (c_.)*(x_)^(n2_.) + (b_.)*(x_)^(n_))^(p_), x
_Symbol] := Simp[(-(d*x)^(m + 1))*(b^2 - 2*a*c + b*c*x^n)*((a + b*x^n + c*x
^(2*n))^(p + 1)/(a*d*n*(p + 1)*(b^2 - 4*a*c))), x] + Dist[1/(a*n*(p + 1)*(b
^2 - 4*a*c)), Int[(d*x)^m*(a + b*x^n + c*x^(2*n))^(p + 1)*Simp[b^2*(n*(p +
1) + m + 1) - 2*a*c*(m + 2*n*(p + 1) + 1) + b*c*(2*n*p + 3*n + m + 1)*x^n,
x], x], x] /; FreeQ[{a, b, c, d, m, n}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*a
*c, 0] && ILtQ[p + 1, 0]

```

#### Rule 1436

```

Int[((d_) + (e_.)*(x_)^(n_))/((a_) + (b_.)*(x_)^(n_) + (c_.)*(x_)^(n2_)), x
_Symbol] := With[{q = Rt[b^2 - 4*a*c, 2]}, Dist[e/2 + (2*c*d - b*e)/(2*q),
Int[1/(b/2 - q/2 + c*x^n), x], x] + Dist[e/2 - (2*c*d - b*e)/(2*q), Int[1/(
b/2 + q/2 + c*x^n), x], x]] /; FreeQ[{a, b, c, d, e, n}, x] && EqQ[n2, 2*n]
&& NeQ[b^2 - 4*a*c, 0] && NeQ[c*d^2 - b*d*e + a*e^2, 0] && (PosQ[b^2 - 4*a
*c] || !IGtQ[n/2, 0])

```

#### Rule 1574

```

Int[((f_.)*(x_))^(m_.)*((a_) + (c_.)*(x_)^(n2_.) + (b_.)*(x_)^(n_))^(p_.)*
(d_) + (e_.)*(x_)^(n_))^(q_.), x_Symbol] := Int[ExpandIntegrand[(f*x)^m*(d
+ e*x^n)^q*(a + b*x^n + c*x^(2*n))^p, x], x] /; FreeQ[{a, b, c, d, e, f, m,
n, p, q}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*a*c, 0] && (IGtQ[p, 0] || IGtQ
[q, 0])

```

#### Rule 1810

```

Int[(Pq)*((a_) + (b_.)*(x_)^(n_.) + (c_.)*(x_)^(n2_.))^(p_), x_Symbol] :=
Int[ExpandIntegrand[Pq*(a + b*x^n + c*x^(2*n))^p, x], x] /; FreeQ[{a, b, c,
n}, x] && EqQ[n2, 2*n] && PolyQ[Pq, x] && ILtQ[p, -1]

```

#### Rubi steps

$$\begin{aligned}
\text{integral} &= \int \left( \frac{d}{(a + bx^n + cx^{2n})^2} + \frac{ex}{(a + bx^n + cx^{2n})^2} \right) dx \\
&= d \int \frac{1}{(a + bx^n + cx^{2n})^2} dx + e \int \frac{x}{(a + bx^n + cx^{2n})^2} dx \\
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad - \frac{d \int \frac{b^2 - 2ac - (b^2 - 4ac)n + bc(1-n)x^n}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{e \int \frac{x(-4ac(1-n) + b^2(2-n) + bc(2-n)x^n)}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n}
\end{aligned}$$

$$\begin{aligned}
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad - \frac{e \int \left( -\frac{b^2 \left(1 - \frac{4ac(-1+n)}{b^2(-2+n)}\right) (-2+n)x}{a+bx^n+cx^{2n}} - \frac{bc(-2+n)x^{1+n}}{a+bx^n+cx^{2n}} \right) dx}{a(b^2 - 4ac)n} \\
&\quad + \frac{(cd(4ac(1-2n) - b^2(1-n) - b\sqrt{b^2 - 4ac}(1-n))) \int \frac{1}{\frac{b}{2} - \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
&\quad - \frac{(cd(4ac(1-2n) - b^2(1-n) + b\sqrt{b^2 - 4ac}(1-n))) \int \frac{1}{\frac{b}{2} + \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad + \frac{cd(4ac(1-2n) - b^2(1-n) - b\sqrt{b^2 - 4ac}(1-n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&\quad - \frac{cd(4ac(1-2n) - b^2(1-n) + b\sqrt{b^2 - 4ac}(1-n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&\quad + \frac{(e(4ac(1-n) - b^2(2-n))) \int \frac{x}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{(bce(2-n)) \int \frac{x^{1+n}}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad + \frac{cd(4ac(1-2n) - b^2(1-n) - b\sqrt{b^2 - 4ac}(1-n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&\quad - \frac{cd(4ac(1-2n) - b^2(1-n) + b\sqrt{b^2 - 4ac}(1-n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&\quad + \frac{(2ce(4ac(1-n) - b^2(2-n))) \int \frac{x}{b - \sqrt{b^2 - 4ac} + 2cx^n} dx}{a(b^2 - 4ac)^{3/2}n} \\
&\quad - \frac{(2ce(4ac(1-n) - b^2(2-n))) \int \frac{x}{b + \sqrt{b^2 - 4ac} + 2cx^n} dx}{a(b^2 - 4ac)^{3/2}n} \\
&\quad - \frac{(2bc^2e(2-n)) \int \frac{x^{1+n}}{b - \sqrt{b^2 - 4ac} + 2cx^n} dx}{a(b^2 - 4ac)^{3/2}n} + \frac{(2bc^2e(2-n)) \int \frac{x^{1+n}}{b + \sqrt{b^2 - 4ac} + 2cx^n} dx}{a(b^2 - 4ac)^{3/2}n}
\end{aligned}$$

$$\begin{aligned}
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&+ \frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 {}_2F_1\left(1, \frac{2}{n}; \frac{2+n}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 {}_2F_1\left(1, \frac{2}{n}; \frac{2+n}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&- \frac{2bc^2e(2 - n)x^{2+n} {}_2F_1\left(1, \frac{2+n}{n}; 2(1 + \frac{1}{n}); -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(2 + n)} \\
&+ \frac{2bc^2e(2 - n)x^{2+n} {}_2F_1\left(1, \frac{2+n}{n}; 2(1 + \frac{1}{n}); -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n(2 + n)}
\end{aligned}$$

### Mathematica [B] (verified)

Leaf count is larger than twice the leaf count of optimal. 4162 vs. 2(738) = 1476.

Time = 6.42 (sec) , antiderivative size = 4162, normalized size of antiderivative = 5.64

$$\int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx = \text{Result too large to show}$$

[In] Integrate[(d + e\*x)/(a + b\*x^n + c\*x^(2\*n))^2,x]

[Out] (x\*(d + e\*x)\*(-b^2 + 2\*a\*c - b\*c\*x^n))/(a\*(-b^2 + 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) - (b\*c\*e\*x^(2 + n)\*(x^n)^(2/n - (2 + n)/n)\*(-Hypergeometric2F1[-2/n, -2/n, (-2 + n)/n, -1/2\*(-b - Sqrt[b^2 - 4\*a\*c])/(c\*(-1/2\*(-b - Sqrt[b^2 - 4\*a\*c]))/c + x^n)]/(Sqrt[b^2 - 4\*a\*c]\*(x^n/(-1/2\*(-b - Sqrt[b^2 - 4\*a\*c]))/c + x^n))^(2/n))) + Hypergeometric2F1[-2/n, -2/n, (-2 + n)/n, -1/2\*(-b + Sqrt[b^2 - 4\*a\*c])/(c\*(-1/2\*(-b + Sqrt[b^2 - 4\*a\*c]))/c + x^n)]/(Sqrt[b^2 - 4\*a\*c]\*(x^n/(-1/2\*(-b + Sqrt[b^2 - 4\*a\*c]))/c + x^n))^(2/n))) / (2\*a\*(-b^2 + 4\*a\*c)) + (b\*c\*e\*x^(2 + n)\*(x^n)^(2/n - (2 + n)/n)\*(-Hypergeometric2F1[-2/n, -2/n, (-2 + n)/n, -1/2\*(-b - Sqrt[b^2 - 4\*a\*c])/(c\*(-1/2\*(-b - Sqrt[b^2 - 4\*a\*c]))/c + x^n)]/(Sqrt[b^2 - 4\*a\*c]\*(x^n/(-1/2\*(-b - Sqrt[b^2 - 4\*a\*c]))/c + x^n))^(2/n))) + Hypergeometric2F1[-2/n, -2/n, (-2 + n)/n, -1/2\*(-b + Sqrt[b^2 - 4\*a\*c])/(c\*(-1/2\*(-b + Sqrt[b^2 - 4\*a\*c]))/c + x^n)]/(Sqrt[b^2 - 4\*a\*c]\*(x^n/(-1/2\*(-b + Sqrt[b^2 - 4\*a\*c]))/c + x^n))^(2/n))) / (a\*(-b^2 + 4

$$\begin{aligned}
& *a*c)*n) + (b^2*e*x^2*((1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/n, -1/2* \\
& (-b - \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n)]/(x^n/ \\
& (-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2/n)})/((b*(-b - \text{Sqrt}[b^2 - 4*a*c] \\
& ))/(2*c) + (-b - \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)) + (1 - \text{Hypergeometric2F1}[-2/n, \\
& -2/n, (-2 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b + \text{Sqrt}[b^2 - \\
& 4*a*c])/c + x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2/n)})/((b \\
& *(-b + \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b + \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)))/((2*a \\
& *(-b^2 + 4*a*c)) - (2*c*e*x^2*((1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n)/ \\
& n, -1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n) \\
& ))/(x^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2/n)})/((b*(-b - \text{Sqrt}[b^2 \\
& - 4*a*c]))/(2*c) + (-b - \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)) + (1 - \text{Hypergeometric2} \\
& \text{F1}[-2/n, -2/n, (-2 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b + \text{Sqr} \\
& \text{t}[b^2 - 4*a*c])/c + x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2 \\
& /n)})/((b*(-b + \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b + \text{Sqrt}[b^2 - 4*a*c])^2/(2*c) \\
& )))/(-b^2 + 4*a*c) - (b^2*e*x^2*((1 - \text{Hypergeometric2F1}[-2/n, -2/n, (-2 + n) \\
& )/n, -1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n \\
& ))/(x^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2/n)})/((b*(-b - \text{Sqrt}[b^2 \\
& - 4*a*c]))/(2*c) + (-b - \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)) + (1 - \text{Hypergeometri} \\
& \text{c2F1}[-2/n, -2/n, (-2 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b + S \\
& \text{qrt}[b^2 - 4*a*c])/c + x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2 \\
& /n)})/((b*(-b + \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b + \text{Sqrt}[b^2 - 4*a*c])^2/(2* \\
& c)))/((a*(-b^2 + 4*a*c)*n) + (2*c*e*x^2*((1 - \text{Hypergeometric2F1}[-2/n, -2/n, \\
& (-2 + n)/n, -1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c] \\
& )/c + x^n)]/(x^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{(2/n)})/((b*(-b - \\
& \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b - \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)) + (1 - Hyper \\
& \text{geometric2F1}[-2/n, -2/n, (-2 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2 \\
& *(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n)]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c \\
& + x^n))^{(2/n)})/((b*(-b + \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b + \text{Sqrt}[b^2 - 4*a*c] \\
& )^2/(2*c)))/((-b^2 + 4*a*c)*n) - (b*c*d*x^(1 + n)*(x^n)^(n^(-1) - (1 + n) \\
& /n)*(-(\text{Hypergeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b - \text{Sqrt}[b^2 \\
& - 4*a*c])/c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n)]/(\text{Sqrt}[b^2 - 4*a*c]*( \\
& x^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{n^(-1)})) + \text{Hypergeometric2F1}[- \\
& n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b + S \\
& \text{qrt}[b^2 - 4*a*c])/c + x^n)]/(\text{Sqrt}[b^2 - 4*a*c]*(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - \\
& 4*a*c])/c + x^n))^{n^(-1)})))/((a*(-b^2 + 4*a*c)) + (b*c*d*x^(1 + n)*(x^n)^(n \\
& ^(-1) - (1 + n)/n)*(-(\text{Hypergeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, -1/2* \\
& (-b - \text{Sqrt}[b^2 - 4*a*c])/c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n)]/(\text{Sqrt} \\
& [b^2 - 4*a*c]*(x^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{n^(-1)})) + Hype \\
& \text{rgeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/ \\
& c*(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n)]/(\text{Sqrt}[b^2 - 4*a*c]*(x^n/(-1/2*( \\
& -b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^{n^(-1)})))/((a*(-b^2 + 4*a*c)*n) + (b^2*d*x \\
& *((1 - \text{Hypergeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b - \text{Sqrt}[b^2 \\
& - 4*a*c])/c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n)]/(x^n/(-1/2*(-b - \text{Sqr} \\
& \text{t}[b^2 - 4*a*c])/c + x^n))^{n^(-1)})/((b*(-b - \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b \\
& - \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)) + (1 - \text{Hypergeometric2F1}[-n^(-1), -n^(-1), (
\end{aligned}$$

$$\begin{aligned}
& -1 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/(c*(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/ \\
& c + x^n))]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^n(-1))/((b*(-b + \\
& \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b + \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)))/((a*(-b^2 + \\
& 4*a*c) - (4*c*d*x*((1 - \text{Hypergeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, -1 \\
& /2*(-b - \text{Sqrt}[b^2 - 4*a*c])/(c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))]/(x \\
& ^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^n(-1))/((b*(-b - \text{Sqrt}[b^2 - 4* \\
& a*c]))/(2*c) + (-b - \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)) + (1 - \text{Hypergeometric2F1}[- \\
& n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/(c*(-1/2*(-b + \text{S} \\
& \text{qrt}[b^2 - 4*a*c])/c + x^n))]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^ \\
& n^(-1))/((b*(-b + \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b + \text{Sqrt}[b^2 - 4*a*c])^2/(2 \\
& *c)))/(-b^2 + 4*a*c) - (b^2*d*x*((1 - \text{Hypergeometric2F1}[-n^(-1), -n^(-1), \\
& (-1 + n)/n, -1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/(c*(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c]) \\
& /c + x^n))]/(x^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^n(-1))/((b*(-b - \\
& \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b - \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)) + (1 - \text{Hyper \\
& geometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/(c \\
& *(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))]/(x^n/(-1/2*(-b + \text{Sqrt}[b^2 - 4*a* \\
& c])/c + x^n))^n(-1))/((b*(-b + \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b + \text{Sqrt}[b^2 \\
& - 4*a*c])^2/(2*c)))/((a*(-b^2 + 4*a*c)*n) + (2*c*d*x*((1 - \text{Hypergeometric2F} \\
& 1[-n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/(c*(-1/2*(-b \\
& - \text{Sqrt}[b^2 - 4*a*c])/c + x^n))]/(x^n/(-1/2*(-b - \text{Sqrt}[b^2 - 4*a*c])/c + x^n \\
& ))^n(-1))/((b*(-b - \text{Sqrt}[b^2 - 4*a*c]))/(2*c) + (-b - \text{Sqrt}[b^2 - 4*a*c])^2 \\
& /2*c) + (1 - \text{Hypergeometric2F1}[-n^(-1), -n^(-1), (-1 + n)/n, -1/2*(-b + \text{S} \\
& \text{qrt}[b^2 - 4*a*c])/(c*(-1/2*(-b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))]/(x^n/(-1/2*( \\
& -b + \text{Sqrt}[b^2 - 4*a*c])/c + x^n))^n(-1))/((b*(-b + \text{Sqrt}[b^2 - 4*a*c]))/(2* \\
& c) + (-b + \text{Sqrt}[b^2 - 4*a*c])^2/(2*c)))/((-b^2 + 4*a*c)*n)
\end{aligned}$$

## Maple [F]

$$\int \frac{ex + d}{(a + bx^n + cx^{2n})^2} dx$$

[In] int((e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x)

[Out] int((e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x)

## Fricas [F]

$$\int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx = \int \frac{ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="fricas")

[Out] integral((e\*x + d)/(c^2\*x^(4\*n) + b^2\*x^(2\*n) + 2\*a\*b\*x^n + a^2 + 2\*(b\*c\*x^n + a\*c)\*x^(2\*n)), x)

**Sympy [F(-1)]**

Timed out.

$$\int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx = \text{Timed out}$$

[In] integrate((e\*x+d)/(a+b\*x\*\*n+c\*x\*\*(2\*n))\*\*2,x)

[Out] Timed out

**Maxima [F]**

$$\int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx = \int \frac{ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="maxima")

```
[Out] ((b^2*e - 2*a*c*e)*x^2 + (b*c*e*x^2 + b*c*d*x)*x^n + (b^2*d - 2*a*c*d)*x)/(
a^2*b^2*n - 4*a^3*c*n + (a*b^2*c*n - 4*a^2*c^2*n)*x^(2*n) + (a*b^3*n - 4*a^
2*b*c*n)*x^n) - integrate((2*a*c*d*(2*n - 1) - b^2*d*(n - 1) - (b*c*e*(n -
2)*x + b*c*d*(n - 1))*x^n + (4*a*c*e*(n - 1) - b^2*e*(n - 2))*x)/(a^2*b^2*n
- 4*a^3*c*n + (a*b^2*c*n - 4*a^2*c^2*n)*x^(2*n) + (a*b^3*n - 4*a^2*b*c*n)*
x^n), x)
```

**Giac [F]**

$$\int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx = \int \frac{ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="giac")

[Out] integrate((e\*x + d)/(c\*x^(2\*n) + b\*x^n + a)^2, x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx = \int \frac{d + ex}{(a + bx^n + cx^{2n})^2} dx$$

[In] int((d + e\*x)/(a + b\*x^n + c\*x^(2\*n))^2,x)

[Out] int((d + e\*x)/(a + b\*x^n + c\*x^(2\*n))^2, x)

### 3.8

$$\int \frac{d+ex+fx^2}{(a+bx^n+cx^{2n})^2} dx$$

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## Optimal result

Integrand size = 27, antiderivative size = 1194

$$\begin{aligned}
 \int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx &= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 &+ \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 &\frac{cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac - b\sqrt{b^2 - 4ac})n} \\
 &\frac{cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac + b\sqrt{b^2 - 4ac})n} \\
 &\frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac - b\sqrt{b^2 - 4ac})n} \\
 &\frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac + b\sqrt{b^2 - 4ac})n} \\
 &\frac{2cf(2ac(3 - 2n) - b^2(3 - n)) x^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{3a(b^2 - 4ac)(b^2 - 4ac - b\sqrt{b^2 - 4ac})n} \\
 &\frac{2cf(2ac(3 - 2n) - b^2(3 - n)) x^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{3a(b^2 - 4ac)(b^2 - 4ac + b\sqrt{b^2 - 4ac})n} \\
 &\frac{2bc^2e(2 - n)x^{2+n} \operatorname{Hypergeometric2F1}\left(1, \frac{2+n}{n}, 2(1 + \frac{1}{n}), -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(2 + n)} \\
 &+ \frac{2bc^2e(2 - n)x^{2+n} \operatorname{Hypergeometric2F1}\left(1, \frac{2+n}{n}, 2(1 + \frac{1}{n}), -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n(2 + n)} \\
 &\frac{2bc^2f(3 - n)x^{3+n} \operatorname{Hypergeometric2F1}\left(1, \frac{3+n}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(3 + n)} \\
 &+ \frac{2bc^2f(3 - n)x^{3+n} \operatorname{Hypergeometric2F1}\left(1, \frac{3+n}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n(3 + n)}
 \end{aligned}$$

[Out] d\*x\*(b^2-2\*a\*c+b\*c\*x^n)/a/(-4\*a\*c+b^2)/n/(a+b\*x^n+c\*x^(2\*n))+e\*x^2\*(b^2-2\*a\*c+b\*c\*x^n)/a/(-4\*a\*c+b^2)/n/(a+b\*x^n+c\*x^(2\*n))+f\*x^3\*(b^2-2\*a\*c+b\*c\*x^n)/a/(-4\*a\*c+b^2)/n/(a+b\*x^n+c\*x^(2\*n))-2\*b\*c^2\*e\*(2-n)\*x^(2+n)\*hypergeom([1, (2+n)/n], [2+2/n], -2\*c\*x^n/(b-(-4\*a\*c+b^2)^(1/2)))/a/(-4\*a\*c+b^2)^(3/2)/n/(2+n)/(b-(-4\*a\*c+b^2)^(1/2))-2\*b\*c^2\*f\*(3-n)\*x^(3+n)\*hypergeom([1, (3+n)/n], [2+3/n], -2\*c\*x^n/(b-(-4\*a\*c+b^2)^(1/2)))/a/(-4\*a\*c+b^2)^(3/2)/n/(3+n)/(b-(-4

$$\begin{aligned}
& *a*c+b^2)^{(1/2)}+2*b*c^2*e*(2-n)*x^{(2+n)}*hypergeom([1, (2+n)/n], [2+2/n], -2* \\
& c*x^n/(b+(-4*a*c+b^2)^{(1/2)}))/a/(-4*a*c+b^2)^{(3/2)}/n/(2+n)/(b+(-4*a*c+b^2)^{(1/2)})+2*b*c^2*f*(3-n)*x^{(3+n)}*hypergeom([1, (3+n)/n], [2+3/n], -2*c*x^n/(b+ \\
& (-4*a*c+b^2)^{(1/2)}))/a/(-4*a*c+b^2)^{(3/2)}/n/(3+n)/(b+(-4*a*c+b^2)^{(1/2)})-c*e \\
& *(4*a*c*(1-n)-b^2*(2-n))*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b-(-4*a \\
& *c+b^2)^{(1/2)}))/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^{(1/2)})-2/3*c*f*( \\
& 2*a*c*(3-2*n)-b^2*(3-n))*x^3*hypergeom([1, 3/n], [(3+n)/n], -2*c*x^n/(b-(-4*a \\
& *c+b^2)^{(1/2)}))/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^{(1/2)})-c*e*(4*a* \\
& c*(1-n)-b^2*(2-n))*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b+(-4*a*c+b^2 \\
& )^{(1/2)}))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)})-2/3*c*f*(2*a*c* \\
& (3-2*n)-b^2*(3-n))*x^3*hypergeom([1, 3/n], [(3+n)/n], -2*c*x^n/(b+(-4*a*c+b^2 \\
& )^{(1/2)}))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^{(1/2)})-c*d*x*hypergeom \\
& ([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^{(1/2)}))* (4*a*c*(1-2*n)-b^2*(1-n) \\
& -b*(1-n)*(-4*a*c+b^2)^{(1/2)})/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^{(1/ \\
& 2)})-c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^{(1/2)}))* (4*a* \\
& c*(1-2*n)-b^2*(1-n)+b*(1-n)*(-4*a*c+b^2)^{(1/2)})/a/(-4*a*c+b^2)/n/(b^2-4*a*c \\
& +b*(-4*a*c+b^2)^{(1/2)})
\end{aligned}$$

### Rubi [A] (verified)

Time = 1.39 (sec) , antiderivative size = 1194, normalized size of antiderivative = 1.00, number of steps used = 24, number of rules used = 8,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.296$ , Rules used

$$= \{1810, 1359, 1436, 251, 1398, 1574, 1397, 371\}$$

$$\int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx$$

$$= -\frac{2bc^2e(2-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+2}{n}, 2\left(1 + \frac{1}{n}\right), -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^{n+2}}{a(b^2-4ac)^{3/2}(b-\sqrt{b^2-4ac})n(n+2)}$$

$$+ \frac{2bc^2e(2-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+2}{n}, 2\left(1 + \frac{1}{n}\right), -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^{n+2}}{a(b^2-4ac)^{3/2}(b+\sqrt{b^2-4ac})n(n+2)}$$

$$- \frac{2bc^2f(3-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+3}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^{n+3}}{a(b^2-4ac)^{3/2}(b-\sqrt{b^2-4ac})n(n+3)}$$

$$+ \frac{2bc^2f(3-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+3}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^{n+3}}{a(b^2-4ac)^{3/2}(b+\sqrt{b^2-4ac})n(n+3)}$$

$$- \frac{2cf(2ac(3-2n) - b^2(3-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^3}{3a(b^2-4ac)(b-\sqrt{b^2-4ac}b-4ac)n}$$

$$- \frac{2cf(2ac(3-2n) - b^2(3-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^3}{3a(b^2-4ac)(b+\sqrt{b^2-4ac}b-4ac)n}$$

$$+ \frac{f(bcx^n + b^2 - 2ac)x^3}{a(b^2-4ac)n(bx^n + cx^{2n} + a)}$$

$$- \frac{ce(4ac(1-n) - b^2(2-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^2}{a(b^2-4ac)(b-\sqrt{b^2-4ac}b-4ac)n}$$

$$- \frac{ce(4ac(1-n) - b^2(2-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^2}{a(b^2-4ac)(b+\sqrt{b^2-4ac}b-4ac)n}$$

$$+ \frac{e(bcx^n + b^2 - 2ac)x^2}{a(b^2-4ac)n(bx^n + cx^{2n} + a)}$$

$$- \frac{cd(-((1-n)b^2) - \sqrt{b^2-4ac}(1-n)b + 4ac(1-2n)) \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x}{a(b^2-4ac)(b-\sqrt{b^2-4ac}b-4ac)n}$$

$$- \frac{cd(-((1-n)b^2) + \sqrt{b^2-4ac}(1-n)b + 4ac(1-2n)) \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x}{a(b^2-4ac)(b+\sqrt{b^2-4ac}b-4ac)n}$$

$$+ \frac{d(bcx^n + b^2 - 2ac)x}{a(b^2-4ac)n(bx^n + cx^{2n} + a)}$$

[In] Int[(d + e\*x + f\*x^2)/(a + b\*x^n + c\*x^(2\*n))^2, x]

[Out] (d\*x\*(b^2 - 2\*a\*c + b\*c\*x^n)/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) + (e\*x^2\*(b^2 - 2\*a\*c + b\*c\*x^n)/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))))

) + (f\*x^3\*(b^2 - 2\*a\*c + b\*c\*x^n))/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) - (c\*d\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n) - b\*Sqrt[b^2 - 4\*a\*c]\*(1 - n))\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*d\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n) + b\*Sqrt[b^2 - 4\*a\*c]\*(1 - n))\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*e\*(4\*a\*c\*(1 - n) - b^2\*(2 - n))\*x^2\*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*e\*(4\*a\*c\*(1 - n) - b^2\*(2 - n))\*x^2\*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n) - (2\*c\*f\*(2\*a\*c\*(3 - 2\*n) - b^2\*(3 - n))\*x^3\*Hypergeometric2F1[1, 3/n, (3 + n)/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(3\*a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (2\*c\*f\*(2\*a\*c\*(3 - 2\*n) - b^2\*(3 - n))\*x^3\*Hypergeometric2F1[1, 3/n, (3 + n)/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(3\*a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n) - (2\*b\*c^2\*e\*(2 - n)\*x^(2 + n)\*Hypergeometric2F1[1, (2 + n)/n, 2\*(1 + n^(-1)), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b - Sqrt[b^2 - 4\*a\*c])\*n\*(2 + n)) + (2\*b\*c^2\*e\*(2 - n)\*x^(2 + n)\*Hypergeometric2F1[1, (2 + n)/n, 2\*(1 + n^(-1)), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b + Sqrt[b^2 - 4\*a\*c])\*n\*(2 + n)) - (2\*b\*c^2\*f\*(3 - n)\*x^(3 + n)\*Hypergeometric2F1[1, (3 + n)/n, 2 + 3/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b - Sqrt[b^2 - 4\*a\*c])\*n\*(3 + n)) + (2\*b\*c^2\*f\*(3 - n)\*x^(3 + n)\*Hypergeometric2F1[1, (3 + n)/n, 2 + 3/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])])/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b + Sqrt[b^2 - 4\*a\*c])\*n\*(3 + n))

### Rule 251

```
Int[((a_) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Simp[a^p*x*Hypergeometric2F1[-p, 1/n, 1/n + 1, (-b)*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p, 0] && !IntegerQ[1/n] && !ILtQ[Simplify[1/n + p], 0] && (IntegerQ[p] || GtQ[a, 0])
```

### Rule 371

```
Int[((c_.)*(x_)^(m_.))*((a_) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Simp[a^p*((c*x)^(m + 1)/(c*(m + 1)))*Hypergeometric2F1[-p, (m + 1)/n, (m + 1)/n + 1, (-b)*(x^n/a)], x] /; FreeQ[{a, b, c, m, n, p}, x] && !IGtQ[p, 0] && (ILtQ[p, 0] || GtQ[a, 0])
```

### Rule 1359

```
Int[((a_) + (c_.)*(x_)^(n2_.) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Simp[(-x)*(b^2 - 2*a*c + b*c*x^n)*((a + b*x^n + c*x^(2*n))^(p + 1)/(a*n*(p + 1)*(b^2 - 4*a*c))), x] + Dist[1/(a*n*(p + 1)*(b^2 - 4*a*c)), Int[(b^2 - 2*a*c + n*(p + 1)*(b^2 - 4*a*c) + b*c*(n*(2*p + 3) + 1)*x^n)*(a + b*x^n + c*x^(2*n))^(p + 1), x], x] /; FreeQ[{a, b, c, n}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*
```

$a*c, 0$  && ILtQ[p, -1]

### Rule 1397

Int[((d\_.)\*(x\_))^(m\_.)/((a\_) + (c\_.)\*(x\_)^(n2\_.) + (b\_.)\*(x\_)^(n\_.)), x\_Symbol] := With[{q = Rt[b^2 - 4\*a\*c, 2]}, Dist[2\*(c/q), Int[(d\*x)^m/(b - q + 2\*c\*x^n), x], x] - Dist[2\*(c/q), Int[(d\*x)^m/(b + q + 2\*c\*x^n), x], x]] /; FreeQ[{a, b, c, d, m, n}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0]

### Rule 1398

Int[((d\_.)\*(x\_))^(m\_.)\*((a\_) + (c\_.)\*(x\_)^(n2\_.) + (b\_.)\*(x\_)^(n\_.))^(p\_), x\_Symbol] := Simp[(-d\*x)^(m + 1)\*(b^2 - 2\*a\*c + b\*c\*x^n)\*((a + b\*x^n + c\*x^(2\*n))^(p + 1)/(a\*d\*n\*(p + 1)\*(b^2 - 4\*a\*c))), x] + Dist[1/(a\*n\*(p + 1)\*(b^2 - 4\*a\*c), Int[(d\*x)^m\*(a + b\*x^n + c\*x^(2\*n))^(p + 1)\*Simp[b^2\*(n\*(p + 1) + m + 1) - 2\*a\*c\*(m + 2\*n\*(p + 1) + 1) + b\*c\*(2\*n\*p + 3\*n + m + 1)\*x^n, x], x], x] /; FreeQ[{a, b, c, d, m, n}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0] && ILtQ[p + 1, 0]

### Rule 1436

Int[((d\_) + (e\_.)\*(x\_)^(n\_))/((a\_) + (b\_.)\*(x\_)^(n\_) + (c\_.)\*(x\_)^(n2\_)), x\_Symbol] := With[{q = Rt[b^2 - 4\*a\*c, 2]}, Dist[e/2 + (2\*c\*d - b\*e)/(2\*q), Int[1/(b/2 - q/2 + c\*x^n), x], x] + Dist[e/2 - (2\*c\*d - b\*e)/(2\*q), Int[1/(b/2 + q/2 + c\*x^n), x], x]] /; FreeQ[{a, b, c, d, e, n}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0] && NeQ[c\*d^2 - b\*d\*e + a\*e^2, 0] && (PosQ[b^2 - 4\*a\*c] || !IGtQ[n/2, 0])

### Rule 1574

Int[((f\_.)\*(x\_))^(m\_.)\*((a\_) + (c\_.)\*(x\_)^(n2\_.) + (b\_.)\*(x\_)^(n\_.))^(p\_.)\*(d\_) + (e\_.)\*(x\_)^(n\_))^(q\_.), x\_Symbol] := Int[ExpandIntegrand[(f\*x)^m\*(d + e\*x^n)^q\*(a + b\*x^n + c\*x^(2\*n))^p, x], x] /; FreeQ[{a, b, c, d, e, f, m, n, p, q}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0] && (IGtQ[p, 0] || IGtQ[q, 0])

### Rule 1810

Int[(Pq\_)\*((a\_) + (b\_.)\*(x\_)^(n\_.) + (c\_.)\*(x\_)^(n2\_.))^(p\_), x\_Symbol] := Int[ExpandIntegrand[Pq\*(a + b\*x^n + c\*x^(2\*n))^p, x], x] /; FreeQ[{a, b, c, n}, x] && EqQ[n2, 2\*n] && PolyQ[Pq, x] && ILtQ[p, -1]

### Rubi steps

$$\text{integral} = \int \left( \frac{d}{(a + bx^n + cx^{2n})^2} + \frac{ex}{(a + bx^n + cx^{2n})^2} + \frac{fx^2}{(a + bx^n + cx^{2n})^2} \right) dx$$

$$\begin{aligned}
&= d \int \frac{1}{(a + bx^n + cx^{2n})^2} dx + e \int \frac{x}{(a + bx^n + cx^{2n})^2} dx + f \int \frac{x^2}{(a + bx^n + cx^{2n})^2} dx \\
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad + \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} - \frac{d \int \frac{b^2 - 2ac - (b^2 - 4ac)n + bc(1-n)x^n}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&\quad - \frac{e \int \frac{x(-4ac(1-n) + b^2(2-n) + bc(2-n)x^n)}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{f \int \frac{x^2(-2ac(3-2n) + b^2(3-n) + bc(3-n)x^n)}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad + \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad - \frac{e \int \left( -\frac{b^2 \left(1 - \frac{4ac(-1+n)}{b^2(-2+n)}\right) (-2+n)x}{a + bx^n + cx^{2n}} - \frac{bc(-2+n)x^{1+n}}{a + bx^n + cx^{2n}} \right) dx}{a(b^2 - 4ac)n} \\
&\quad - \frac{f \int \left( -\frac{b^2(-3+n) \left(1 - \frac{2ac(-3+2n)}{b^2(-3+n)}\right) x^2}{a + bx^n + cx^{2n}} - \frac{bc(-3+n)x^{2+n}}{a + bx^n + cx^{2n}} \right) dx}{a(b^2 - 4ac)n} \\
&\quad + \frac{(cd(4ac(1-2n) - b^2(1-n) - b\sqrt{b^2 - 4ac}(1-n))) \int \frac{1}{\frac{b}{2} - \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
&\quad - \frac{(cd(4ac(1-2n) - b^2(1-n) + b\sqrt{b^2 - 4ac}(1-n))) \int \frac{1}{\frac{b}{2} + \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad + \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\quad + \frac{cd(4ac(1-2n) - b^2(1-n) - b\sqrt{b^2 - 4ac}(1-n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&\quad - \frac{cd(4ac(1-2n) - b^2(1-n) + b\sqrt{b^2 - 4ac}(1-n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&\quad + \frac{(e(4ac(1-n) - b^2(2-n))) \int \frac{x}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&\quad + \frac{(f(2ac(3-2n) - b^2(3-n))) \int \frac{x^2}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&\quad - \frac{(bce(2-n)) \int \frac{x^{1+n}}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{(bcf(3-n)) \int \frac{x^{2+n}}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n}
\end{aligned}$$

$$\begin{aligned}
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&+ \frac{(2ce(4ac(1 - n) - b^2(2 - n))) \int \frac{x}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2ce(4ac(1 - n) - b^2(2 - n))) \int \frac{x}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&+ \frac{(2cf(2ac(3 - 2n) - b^2(3 - n))) \int \frac{x^2}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2cf(2ac(3 - 2n) - b^2(3 - n))) \int \frac{x^2}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2bc^2e(2 - n)) \int \frac{x^{1+n}}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} + \frac{(2bc^2e(2 - n)) \int \frac{x^{1+n}}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2bc^2f(3 - n)) \int \frac{x^{2+n}}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} + \frac{(2bc^2f(3 - n)) \int \frac{x^{2+n}}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n}
\end{aligned}$$

$$\begin{aligned}
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&+ \frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 {}_2F_1\left(1, \frac{2}{n}; \frac{2+n}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 {}_2F_1\left(1, \frac{2}{n}; \frac{2+n}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&+ \frac{2cf(2ac(3 - 2n) - b^2(3 - n)) x^3 {}_2F_1\left(1, \frac{3}{n}; \frac{3+n}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{3a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{2cf(2ac(3 - 2n) - b^2(3 - n)) x^3 {}_2F_1\left(1, \frac{3}{n}; \frac{3+n}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{3a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&- \frac{2bc^2e(2 - n)x^{2+n} {}_2F_1\left(1, \frac{2+n}{n}; 2(1 + \frac{1}{n}); -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(2 + n)} \\
&+ \frac{2bc^2e(2 - n)x^{2+n} {}_2F_1\left(1, \frac{2+n}{n}; 2(1 + \frac{1}{n}); -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n(2 + n)} \\
&- \frac{2bc^2f(3 - n)x^{3+n} {}_2F_1\left(1, \frac{3+n}{n}; 2 + \frac{3}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(3 + n)} \\
&+ \frac{2bc^2f(3 - n)x^{3+n} {}_2F_1\left(1, \frac{3+n}{n}; 2 + \frac{3}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n(3 + n)}
\end{aligned}$$



**Mathematica [B] (warning: unable to verify)**

Leaf count is larger than twice the leaf count of optimal. 6525 vs. 2(1194) = 2388.

Time = 6.55 (sec) , antiderivative size = 6525, normalized size of antiderivative = 5.46

$$\int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx = \text{Result too large to show}$$

[In] Integrate[(d + e\*x + f\*x^2)/(a + b\*x^n + c\*x^(2\*n))^2,x]

[Out] Result too large to show

**Maple [F]**

$$\int \frac{f x^2 + ex + d}{(a + b x^n + c x^{2n})^2} dx$$

[In] int((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x)

[Out] int((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x)

**Fricas [F]**

$$\int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx = \int \frac{fx^2 + ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="fricas")

[Out] integral((f\*x^2 + e\*x + d)/(c^2\*x^(4\*n) + b^2\*x^(2\*n) + 2\*a\*b\*x^n + a^2 + 2\*(b\*c\*x^n + a\*c)\*x^(2\*n)), x)

**Sympy [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx = \text{Timed out}$$

[In] integrate((f\*x\*\*2+e\*x+d)/(a+b\*x\*\*n+c\*x\*\*(2\*n))\*\*2,x)

[Out] Timed out

**Maxima [F]**

$$\int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx = \int \frac{fx^2 + ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="maxima")

[Out] ((b^2\*f - 2\*a\*c\*f)\*x^3 + (b^2\*e - 2\*a\*c\*e)\*x^2 + (b\*c\*f\*x^3 + b\*c\*e\*x^2 + b\*c\*d\*x)\*x^n + (b^2\*d - 2\*a\*c\*d)\*x)/(a^2\*b^2\*n - 4\*a^3\*c\*n + (a\*b^2\*c\*n - 4\*a^2\*c^2\*n)\*x^(2\*n) + (a\*b^3\*n - 4\*a^2\*b\*c\*n)\*x^n) - integrate((2\*a\*c\*d\*(2\*n - 1) - b^2\*d\*(n - 1) + (2\*a\*c\*f\*(2\*n - 3) - b^2\*f\*(n - 3))\*x^2 - (b\*c\*f\*(n - 3)\*x^2 + b\*c\*e\*(n - 2)\*x + b\*c\*d\*(n - 1))\*x^n + (4\*a\*c\*e\*(n - 1) - b^2\*e\*(n - 2))\*x)/(a^2\*b^2\*n - 4\*a^3\*c\*n + (a\*b^2\*c\*n - 4\*a^2\*c^2\*n)\*x^(2\*n) + (a\*b^3\*n - 4\*a^2\*b\*c\*n)\*x^n), x)

**Giac [F]**

$$\int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx = \int \frac{fx^2 + ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="giac")

[Out] integrate((f\*x^2 + e\*x + d)/(c\*x^(2\*n) + b\*x^n + a)^2, x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2}{(a + bx^n + cx^{2n})^2} dx = \int \frac{fx^2 + ex + d}{(a + bx^n + cx^{2n})^2} dx$$

[In] int((d + e\*x + f\*x^2)/(a + b\*x^n + c\*x^(2\*n))^2,x)

[Out] int((d + e\*x + f\*x^2)/(a + b\*x^n + c\*x^(2\*n))^2, x)

### 3.9 $\int \frac{d+ex+fx^2+gx^3}{(a+bx^n+cx^{2n})^2} dx$

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Maple [F]	268
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Sympy [F(-1)]	268
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## Optimal result

Integrand size = 32, antiderivative size = 1654

$$\begin{aligned}
 & \int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx = \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 & + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 & + \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{gx^4(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 & \frac{cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac - b\sqrt{b^2 - 4ac})n} \\
 & \frac{cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac + b\sqrt{b^2 - 4ac})n} \\
 & \frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac - b\sqrt{b^2 - 4ac})n} \\
 & \frac{ce(4ac(1 - n) - b^2(2 - n)) x^2 \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{2+n}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)(b^2 - 4ac + b\sqrt{b^2 - 4ac})n} \\
 & \frac{2cf(2ac(3 - 2n) - b^2(3 - n)) x^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{3a(b^2 - 4ac)(b^2 - 4ac - b\sqrt{b^2 - 4ac})n} \\
 & \frac{2cf(2ac(3 - 2n) - b^2(3 - n)) x^3 \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{3+n}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{3a(b^2 - 4ac)(b^2 - 4ac + b\sqrt{b^2 - 4ac})n} \\
 & \frac{cg(4ac(2 - n) - b^2(4 - n)) x^4 \operatorname{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{4+n}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{2a(b^2 - 4ac)(b^2 - 4ac - b\sqrt{b^2 - 4ac})n} \\
 & \frac{cg(4ac(2 - n) - b^2(4 - n)) x^4 \operatorname{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{4+n}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{2a(b^2 - 4ac)(b^2 - 4ac + b\sqrt{b^2 - 4ac})n} \\
 & \frac{2bc^2e(2 - n)x^{2+n} \operatorname{Hypergeometric2F1}\left(1, \frac{2+n}{n}, 2(1 + \frac{1}{n}), -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(2 + n)} \\
 & + \frac{2bc^2e(2 - n)x^{2+n} \operatorname{Hypergeometric2F1}\left(1, \frac{2+n}{n}, 2(1 + \frac{1}{n}), -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n(2 + n)} \\
 & \frac{2bc^2f(3 - n)x^{3+n} \operatorname{Hypergeometric2F1}\left(1, \frac{3+n}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(3 + n)} \\
 & + \frac{2bc^2f(3 - n)x^{3+n} \operatorname{Hypergeometric2F1}\left(1, \frac{3+n}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n(3 + n)} \\
 & \frac{2bc^2g(4 - n)x^{4+n} \operatorname{Hypergeometric2F1}\left(1, \frac{4+n}{n}, 2(1 + \frac{2}{n}), -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(4 + n)} \\
 & \frac{2bc^2a(4 - n)x^{4+n} \operatorname{Hypergeometric2F1}\left(1, \frac{4+n}{n}, 2(1 + \frac{2}{n}), -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n(4 + n)}
 \end{aligned}$$

```
[Out] d*x*(b^2-2*a*c+b*c*x^n)/a/(-4*a*c+b^2)/n/(a+b*x^n+c*x^(2*n))+e*x^2*(b^2-2*a*c+b*c*x^n)/a/(-4*a*c+b^2)/n/(a+b*x^n+c*x^(2*n))+f*x^3*(b^2-2*a*c+b*c*x^n)/a/(-4*a*c+b^2)/n/(a+b*x^n+c*x^(2*n))+g*x^4*(b^2-2*a*c+b*c*x^n)/a/(-4*a*c+b^2)/n/(a+b*x^n+c*x^(2*n))-2*b*c^2*e*(2-n)*x^(2+n)*hypergeom([1, (2+n)/n], [2+2/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)^(3/2)/n/(2+n)/(b-(-4*a*c+b^2)^(1/2))-2*b*c^2*f*(3-n)*x^(3+n)*hypergeom([1, (3+n)/n], [2+3/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)^(3/2)/n/(3+n)/(b-(-4*a*c+b^2)^(1/2))-2*b*c^2*g*(4-n)*x^(4+n)*hypergeom([1, (4+n)/n], [2+4/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)^(3/2)/n/(4+n)/(b-(-4*a*c+b^2)^(1/2))+2*b*c^2*e*(2-n)*x^(2+n)*hypergeom([1, (2+n)/n], [2+2/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)^(3/2)/n/(2+n)/(b+(-4*a*c+b^2)^(1/2))+2*b*c^2*f*(3-n)*x^(3+n)*hypergeom([1, (3+n)/n], [2+3/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)^(3/2)/n/(3+n)/(b+(-4*a*c+b^2)^(1/2))+2*b*c^2*g*(4-n)*x^(4+n)*hypergeom([1, (4+n)/n], [2+4/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)^(3/2)/n/(4+n)/(b+(-4*a*c+b^2)^(1/2))-c*e*(4*a*c*(1-n)-b^2*(2-n))*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-2/3*c*f*(2*a*c*(3-2*n)-b^2*(3-n))*x^3*hypergeom([1, 3/n], [(3+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-1/2*c*g*(4*a*c*(2-n)-b^2*(4-n))*x^4*hypergeom([1, 4/n], [(4+n)/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-c*e*(4*a*c*(1-n)-b^2*(2-n))*x^2*hypergeom([1, 2/n], [(2+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))-2/3*c*f*(2*a*c*(3-2*n)-b^2*(3-n))*x^3*hypergeom([1, 3/n], [(3+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))-1/2*c*g*(4*a*c*(2-n)-b^2*(4-n))*x^4*hypergeom([1, 4/n], [(4+n)/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))-c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))*(4*a*c*(1-2*n)-b^2*(1-n)-b*(1-n)*(-4*a*c+b^2)^(1/2))/a/(-4*a*c+b^2)/n/(b^2-4*a*c-b*(-4*a*c+b^2)^(1/2))-c*d*x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))*(4*a*c*(1-2*n)-b^2*(1-n)+b*(1-n)*(-4*a*c+b^2)^(1/2))/a/(-4*a*c+b^2)/n/(b^2-4*a*c+b*(-4*a*c+b^2)^(1/2))
```

**Rubi [A] (verified)**

Time = 1.99 (sec) , antiderivative size = 1654, normalized size of antiderivative = 1.00, number of steps used = 33, number of rules used = 8,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.250$ , Rules used

$$\begin{aligned}
&= \{1810, 1359, 1436, 251, 1398, 1574, 1397, 371\} \\
&\int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx \\
&= -\frac{2bc^2e(2-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+2}{n}, 2\left(1 + \frac{1}{n}\right), -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^{n+2}}{a(b^2-4ac)^{3/2}(b-\sqrt{b^2-4ac})n(n+2)} \\
&+ \frac{2bc^2e(2-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+2}{n}, 2\left(1 + \frac{1}{n}\right), -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^{n+2}}{a(b^2-4ac)^{3/2}(b+\sqrt{b^2-4ac})n(n+2)} \\
&- \frac{2bc^2f(3-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+3}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^{n+3}}{a(b^2-4ac)^{3/2}(b-\sqrt{b^2-4ac})n(n+3)} \\
&+ \frac{2bc^2f(3-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+3}{n}, 2 + \frac{3}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^{n+3}}{a(b^2-4ac)^{3/2}(b+\sqrt{b^2-4ac})n(n+3)} \\
&- \frac{2bc^2g(4-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+4}{n}, 2\left(1 + \frac{2}{n}\right), -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^{n+4}}{a(b^2-4ac)^{3/2}(b-\sqrt{b^2-4ac})n(n+4)} \\
&+ \frac{2bc^2g(4-n) \operatorname{Hypergeometric2F1}\left(1, \frac{n+4}{n}, 2\left(1 + \frac{2}{n}\right), -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^{n+4}}{a(b^2-4ac)^{3/2}(b+\sqrt{b^2-4ac})n(n+4)} \\
&- \frac{cg(4ac(2-n) - b^2(4-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{n+4}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^4}{2a(b^2-4ac)(b^2-\sqrt{b^2-4ac}b-4ac)n} \\
&- \frac{cg(4ac(2-n) - b^2(4-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{4}{n}, \frac{n+4}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^4}{2a(b^2-4ac)(b^2+\sqrt{b^2-4ac}b-4ac)n} \\
&+ \frac{g(bcx^n + b^2 - 2ac) x^4}{a(b^2-4ac)n(bx^n + cx^{2n} + a)} \\
&- \frac{2cf(2ac(3-2n) - b^2(3-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^3}{3a(b^2-4ac)(b^2-\sqrt{b^2-4ac}b-4ac)n} \\
&- \frac{2cf(2ac(3-2n) - b^2(3-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{3}{n}, \frac{n+3}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^3}{3a(b^2-4ac)(b^2+\sqrt{b^2-4ac}b-4ac)n} \\
&+ \frac{f(bcx^n + b^2 - 2ac) x^3}{a(b^2-4ac)n(bx^n + cx^{2n} + a)} \\
&- \frac{ce(4ac(1-n) - b^2(2-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x^2}{a(b^2-4ac)(b^2-\sqrt{b^2-4ac}b-4ac)n} \\
&- \frac{ce(4ac(1-n) - b^2(2-n)) \operatorname{Hypergeometric2F1}\left(1, \frac{2}{n}, \frac{n+2}{n}, -\frac{2cx^n}{b+\sqrt{b^2-4ac}}\right) x^2}{a(b^2-4ac)(b^2+\sqrt{b^2-4ac}b-4ac)n} \\
&+ \frac{e(bcx^n + b^2 - 2ac) x^2}{a(b^2-4ac)n(bx^n + cx^{2n} + a)} \\
&- \frac{cd(-((1-n)b^2) - \sqrt{b^2-4ac}(1-n)b + 4ac(1-2n)) \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b-\sqrt{b^2-4ac}}\right) x}{a(b^2-4ac)(b^2-\sqrt{b^2-4ac}b-4ac)n}
\end{aligned}$$

[In] Int[(d + e\*x + f\*x^2 + g\*x^3)/(a + b\*x^n + c\*x^(2\*n))^2,x]

[Out] (d\*x\*(b^2 - 2\*a\*c + b\*c\*x^n)/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) + (e\*x^2\*(b^2 - 2\*a\*c + b\*c\*x^n)/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) + (f\*x^3\*(b^2 - 2\*a\*c + b\*c\*x^n)/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) + (g\*x^4\*(b^2 - 2\*a\*c + b\*c\*x^n)/(a\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n)))) - (c\*d\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n) - b\*Sqrt[b^2 - 4\*a\*c]\*(1 - n))\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*d\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n) + b\*Sqrt[b^2 - 4\*a\*c]\*(1 - n))\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*e\*(4\*a\*c\*(1 - n) - b^2\*(2 - n))\*x^2\*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*e\*(4\*a\*c\*(1 - n) - b^2\*(2 - n))\*x^2\*Hypergeometric2F1[1, 2/n, (2 + n)/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n) - (2\*c\*f\*(2\*a\*c\*(3 - 2\*n) - b^2\*(3 - n))\*x^3\*Hypergeometric2F1[1, 3/n, (3 + n)/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(3\*a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (2\*c\*f\*(2\*a\*c\*(3 - 2\*n) - b^2\*(3 - n))\*x^3\*Hypergeometric2F1[1, 3/n, (3 + n)/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(3\*a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*g\*(4\*a\*c\*(2 - n) - b^2\*(4 - n))\*x^4\*Hypergeometric2F1[1, 4/n, (4 + n)/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(2\*a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c - b\*Sqrt[b^2 - 4\*a\*c])\*n) - (c\*g\*(4\*a\*c\*(2 - n) - b^2\*(4 - n))\*x^4\*Hypergeometric2F1[1, 4/n, (4 + n)/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(2\*a\*(b^2 - 4\*a\*c)\*(b^2 - 4\*a\*c + b\*Sqrt[b^2 - 4\*a\*c])\*n) - (2\*b\*c^2\*e\*(2 - n)\*x^(2 + n)\*Hypergeometric2F1[1, (2 + n)/n, 2\*(1 + n^(-1)), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b - Sqrt[b^2 - 4\*a\*c])\*n\*(2 + n)) + (2\*b\*c^2\*e\*(2 - n)\*x^(2 + n)\*Hypergeometric2F1[1, (2 + n)/n, 2\*(1 + n^(-1)), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b + Sqrt[b^2 - 4\*a\*c])\*n\*(2 + n)) - (2\*b\*c^2\*f\*(3 - n)\*x^(3 + n)\*Hypergeometric2F1[1, (3 + n)/n, 2 + 3/n, (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b - Sqrt[b^2 - 4\*a\*c])\*n\*(3 + n)) + (2\*b\*c^2\*f\*(3 - n)\*x^(3 + n)\*Hypergeometric2F1[1, (3 + n)/n, 2 + 3/n, (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b + Sqrt[b^2 - 4\*a\*c])\*n\*(3 + n)) - (2\*b\*c^2\*g\*(4 - n)\*x^(4 + n)\*Hypergeometric2F1[1, (4 + n)/n, 2\*(1 + 2/n), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b - Sqrt[b^2 - 4\*a\*c])\*n\*(4 + n)) + (2\*b\*c^2\*g\*(4 - n)\*x^(4 + n)\*Hypergeometric2F1[1, (4 + n)/n, 2\*(1 + 2/n), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(a\*(b^2 - 4\*a\*c)^(3/2)\*(b + Sqrt[b^2 - 4\*a\*c])\*n\*(4 + n))

#### Rule 251

Int[((a\_) + (b\_.)\*(x\_)^(n\_))^(p\_), x\_Symbol] :> Simp[a^p\*x\*Hypergeometric2F1[-p, 1/n, 1/n + 1, (-b)\*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p, 0] && !IntegerQ[1/n] && !ILtQ[Simplify[1/n + p], 0] && (IntegerQ[p] || GtQ[a, 0])

Rule 371

```
Int[((c_.)*(x_))^(m_.)*((a_) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Simp[a^p
*((c*x)^(m + 1)/(c*(m + 1)))*Hypergeometric2F1[-p, (m + 1)/n, (m + 1)/n + 1
, (-b)*(x^n/a)], x] /; FreeQ[{a, b, c, m, n, p}, x] && !IGtQ[p, 0] && (ILt
Q[p, 0] || GtQ[a, 0])
```

Rule 1359

```
Int[((a_) + (c_.)*(x_)^(n2_.) + (b_.)*(x_)^(n_))^(p_), x_Symbol] := Simp[(-
x)*(b^2 - 2*a*c + b*c*x^n)*((a + b*x^n + c*x^(2*n))^(p + 1)/(a*n*(p + 1)*(b
^2 - 4*a*c))), x] + Dist[1/(a*n*(p + 1)*(b^2 - 4*a*c)), Int[(b^2 - 2*a*c +
n*(p + 1)*(b^2 - 4*a*c) + b*c*(n*(2*p + 3) + 1)*x^n)*(a + b*x^n + c*x^(2*n)
)^(p + 1), x], x] /; FreeQ[{a, b, c, n}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*
a*c, 0] && ILtQ[p, -1]
```

Rule 1397

```
Int[((d_.)*(x_))^(m_.)/((a_) + (c_.)*(x_)^(n2_.) + (b_.)*(x_)^(n_)), x_Symb
ol] := With[{q = Rt[b^2 - 4*a*c, 2]}, Dist[2*(c/q), Int[(d*x)^m/(b - q + 2*
c*x^n), x], x] - Dist[2*(c/q), Int[(d*x)^m/(b + q + 2*c*x^n), x], x]] /; Fr
eeQ[{a, b, c, d, m, n}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*a*c, 0]
```

Rule 1398

```
Int[((d_.)*(x_))^(m_.)*((a_) + (c_.)*(x_)^(n2_.) + (b_.)*(x_)^(n_))^(p_), x
_Symbol] := Simp[(-(d*x)^(m + 1))*(b^2 - 2*a*c + b*c*x^n)*((a + b*x^n + c*x
^(2*n))^(p + 1)/(a*d*n*(p + 1)*(b^2 - 4*a*c))), x] + Dist[1/(a*n*(p + 1)*(b
^2 - 4*a*c)), Int[(d*x)^m*(a + b*x^n + c*x^(2*n))^(p + 1)*Simp[b^2*(n*(p +
1) + m + 1) - 2*a*c*(m + 2*n*(p + 1) + 1) + b*c*(2*n*p + 3*n + m + 1)*x^n,
x], x], x] /; FreeQ[{a, b, c, d, m, n}, x] && EqQ[n2, 2*n] && NeQ[b^2 - 4*a
*c, 0] && ILtQ[p + 1, 0]
```

Rule 1436

```
Int[((d_) + (e_.)*(x_)^(n_))/((a_) + (b_.)*(x_)^(n_) + (c_.)*(x_)^(n2_)), x
_Symbol] := With[{q = Rt[b^2 - 4*a*c, 2]}, Dist[e/2 + (2*c*d - b*e)/(2*q),
Int[1/(b/2 - q/2 + c*x^n), x], x] + Dist[e/2 - (2*c*d - b*e)/(2*q), Int[1/(
b/2 + q/2 + c*x^n), x], x]] /; FreeQ[{a, b, c, d, e, n}, x] && EqQ[n2, 2*n]
&& NeQ[b^2 - 4*a*c, 0] && NeQ[c*d^2 - b*d*e + a*e^2, 0] && (PosQ[b^2 - 4*a
*c] || !IGtQ[n/2, 0])
```

Rule 1574

```
Int[((f_.)*(x_))^(m_.)*((a_) + (c_.)*(x_)^(n2_.) + (b_.)*(x_)^(n_))^(p_.)*(
(d_) + (e_.)*(x_)^(n_))^(q_.), x_Symbol] := Int[ExpandIntegrand[(f*x)^m*(d
```



+ e\*x^n)^q\*(a + b\*x^n + c\*x^(2\*n))^p, x], x] /; FreeQ[{a, b, c, d, e, f, m, n, p, q}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0] && (IGtQ[p, 0] || IGtQ[q, 0])

### Rule 1810

Int[(Pq\_)\*((a\_) + (b\_)\*(x\_)^(n\_)) + (c\_)\*(x\_)^(n2\_)]^(p\_), x\_Symbol] :>  
 Int[ExpandIntegrand[Pq\*(a + b\*x^n + c\*x^(2\*n))^p, x], x] /; FreeQ[{a, b, c, n}, x] && EqQ[n2, 2\*n] && PolyQ[Pq, x] && ILtQ[p, -1]

### Rubi steps

$$\begin{aligned}
 \text{integral} &= \int \left( \frac{d}{(a + bx^n + cx^{2n})^2} + \frac{ex}{(a + bx^n + cx^{2n})^2} + \frac{fx^2}{(a + bx^n + cx^{2n})^2} + \frac{gx^3}{(a + bx^n + cx^{2n})^2} \right) dx \\
 &= d \int \frac{1}{(a + bx^n + cx^{2n})^2} dx + e \int \frac{x}{(a + bx^n + cx^{2n})^2} dx \\
 &\quad + f \int \frac{x^2}{(a + bx^n + cx^{2n})^2} dx + g \int \frac{x^3}{(a + bx^n + cx^{2n})^2} dx \\
 &= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 &\quad + \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{gx^4(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
 &\quad - \frac{d \int \frac{b^2 - 2ac - (b^2 - 4ac)n + bc(1-n)x^n}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{e \int \frac{x(-4ac(1-n) + b^2(2-n) + bc(2-n)x^n)}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} \\
 &\quad - \frac{f \int \frac{x^2(-2ac(3-2n) + b^2(3-n) + bc(3-n)x^n)}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{g \int \frac{x^3(-4ac(2-n) + b^2(4-n) + bc(4-n)x^n)}{a + bx^n + cx^{2n}} dx}{a(b^2 - 4ac)n}
 \end{aligned}$$

$$\begin{aligned}
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{gx^4(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&\frac{e \int \left( -\frac{b^2 \left(1 - \frac{4ac(-1+n)}{b^2(-2+n)}\right) (-2+n)x}{a+bx^n+cx^{2n}} - \frac{bc(-2+n)x^{1+n}}{a+bx^n+cx^{2n}} \right) dx}{a(b^2 - 4ac)n} \\
&\frac{f \int \left( -\frac{b^2(-3+n) \left(1 - \frac{2ac(-3+2n)}{b^2(-3+n)}\right) x^2}{a+bx^n+cx^{2n}} - \frac{bc(-3+n)x^{2+n}}{a+bx^n+cx^{2n}} \right) dx}{a(b^2 - 4ac)n} \\
&\frac{g \int \left( -\frac{b^2 \left(1 - \frac{4ac(-2+n)}{b^2(-4+n)}\right) (-4+n)x^3}{a+bx^n+cx^{2n}} - \frac{bc(-4+n)x^{3+n}}{a+bx^n+cx^{2n}} \right) dx}{a(b^2 - 4ac)n} \\
&+ \frac{(cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n))) \int \frac{1}{\frac{b}{2} - \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n))) \int \frac{1}{\frac{b}{2} + \frac{1}{2}\sqrt{b^2 - 4ac} + cx^n} dx}{2a(b^2 - 4ac)^{3/2}n} \\
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{gx^4(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&+ \frac{(e(4ac(1 - n) - b^2(2 - n))) \int \frac{x}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&+ \frac{(f(2ac(3 - 2n) - b^2(3 - n))) \int \frac{x^2}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&+ \frac{(g(4ac(2 - n) - b^2(4 - n))) \int \frac{x^3}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{(bce(2 - n)) \int \frac{x^{1+n}}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n} \\
&- \frac{(bcf(3 - n)) \int \frac{x^{2+n}}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n} - \frac{(bcg(4 - n)) \int \frac{x^{3+n}}{a+bx^n+cx^{2n}} dx}{a(b^2 - 4ac)n}
\end{aligned}$$

$$\begin{aligned}
&= \frac{dx(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{ex^2(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{fx^3(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} + \frac{gx^4(b^2 - 2ac + bcx^n)}{a(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{cd(4ac(1 - 2n) - b^2(1 - n) - b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b - \sqrt{b^2 - 4ac})n} \\
&- \frac{cd(4ac(1 - 2n) - b^2(1 - n) + b\sqrt{b^2 - 4ac}(1 - n)) x {}_2F_1\left(1, \frac{1}{n}; 1 + \frac{1}{n}; -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right)}{a(b^2 - 4ac)^{3/2}(b + \sqrt{b^2 - 4ac})n} \\
&+ \frac{(2ce(4ac(1 - n) - b^2(2 - n))) \int \frac{x}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2ce(4ac(1 - n) - b^2(2 - n))) \int \frac{x}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&+ \frac{(2cf(2ac(3 - 2n) - b^2(3 - n))) \int \frac{x^2}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2cf(2ac(3 - 2n) - b^2(3 - n))) \int \frac{x^2}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&+ \frac{(2cg(4ac(2 - n) - b^2(4 - n))) \int \frac{x^3}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2cg(4ac(2 - n) - b^2(4 - n))) \int \frac{x^3}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2bc^2e(2 - n)) \int \frac{x^{1+n}}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} + \frac{(2bc^2e(2 - n)) \int \frac{x^{1+n}}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2bc^2f(3 - n)) \int \frac{x^{2+n}}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} + \frac{(2bc^2f(3 - n)) \int \frac{x^{2+n}}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} \\
&- \frac{(2bc^2g(4 - n)) \int \frac{x^{3+n}}{b - \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n} + \frac{(2bc^2g(4 - n)) \int \frac{x^{3+n}}{b + \sqrt{b^2 - 4ac + 2cx^n}} dx}{a(b^2 - 4ac)^{3/2}n}
\end{aligned}$$

= Too large to display

**Mathematica [B] (warning: unable to verify)**

Leaf count is larger than twice the leaf count of optimal. 8737 vs.  $2(1654) = 3308$ .

Time = 6.73 (sec) , antiderivative size = 8737, normalized size of antiderivative = 5.28

$$\int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx = \text{Result too large to show}$$

[In] Integrate[(d + e\*x + f\*x^2 + g\*x^3)/(a + b\*x^n + c\*x^(2\*n))^2,x]

[Out] Result too large to show

**Maple [F]**

$$\int \frac{gx^3 + fx^2 + ex + d}{(a + bx^n + cx^{2n})^2} dx$$

[In] int((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x)

[Out] int((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x)

**Fricas [F]**

$$\int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx = \int \frac{gx^3 + fx^2 + ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="fricas")

[Out] integral((g\*x^3 + f\*x^2 + e\*x + d)/(c^2\*x^(4\*n) + b^2\*x^(2\*n) + 2\*a\*b\*x^n + a^2 + 2\*(b\*c\*x^n + a\*c)\*x^(2\*n)), x)

**Sympy [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx = \text{Timed out}$$

[In] integrate((g\*x\*\*3+f\*x\*\*2+e\*x+d)/(a+b\*x\*\*n+c\*x\*\*(2\*n))\*\*2,x)

[Out] Timed out

**Maxima [F]**

$$\int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx = \int \frac{gx^3 + fx^2 + ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="maxima")

[Out] ((b^2\*g - 2\*a\*c\*g)\*x^4 + (b^2\*f - 2\*a\*c\*f)\*x^3 + (b^2\*e - 2\*a\*c\*e)\*x^2 + (b\*c\*g\*x^4 + b\*c\*f\*x^3 + b\*c\*e\*x^2 + b\*c\*d\*x)\*x^n + (b^2\*d - 2\*a\*c\*d)\*x)/(a^2\*b^2\*n - 4\*a^3\*c\*n + (a\*b^2\*c\*n - 4\*a^2\*c^2\*n)\*x^(2\*n) + (a\*b^3\*n - 4\*a^2\*b\*c\*n)\*x^n) - integrate((2\*a\*c\*d\*(2\*n - 1) - b^2\*d\*(n - 1) + (4\*a\*c\*g\*(n - 2) - b^2\*g\*(n - 4))\*x^3 + (2\*a\*c\*f\*(2\*n - 3) - b^2\*f\*(n - 3))\*x^2 - (b\*c\*g\*(n - 4)\*x^3 + b\*c\*f\*(n - 3)\*x^2 + b\*c\*e\*(n - 2)\*x + b\*c\*d\*(n - 1))\*x^n + (4\*a\*c\*e\*(n - 1) - b^2\*e\*(n - 2))\*x)/(a^2\*b^2\*n - 4\*a^3\*c\*n + (a\*b^2\*c\*n - 4\*a^2\*c^2\*n)\*x^(2\*n) + (a\*b^3\*n - 4\*a^2\*b\*c\*n)\*x^n), x)

**Giac [F]**

$$\int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx = \int \frac{gx^3 + fx^2 + ex + d}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((g\*x^3+f\*x^2+e\*x+d)/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="giac")

[Out] integrate((g\*x^3 + f\*x^2 + e\*x + d)/(c\*x^(2\*n) + b\*x^n + a)^2, x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{d + ex + fx^2 + gx^3}{(a + bx^n + cx^{2n})^2} dx = \int \frac{gx^3 + fx^2 + ex + d}{(a + bx^n + cx^{2n})^2} dx$$

[In] int((d + e\*x + f\*x^2 + g\*x^3)/(a + b\*x^n + c\*x^(2\*n))^2,x)

[Out] int((d + e\*x + f\*x^2 + g\*x^3)/(a + b\*x^n + c\*x^(2\*n))^2, x)

$$3.10 \quad \int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a+bx^n+cx^{2n})^{3/2}} dx$$

Optimal result	270
Rubi [A] (verified)	270
Mathematica [A] (verified)	271
Maple [F]	271
Fricas [A] (verification not implemented)	272
Sympy [F(-1)]	272
Maxima [F]	272
Giac [F]	273
Mupad [F(-1)]	273

### Optimal result

Integrand size = 63, antiderivative size = 75

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a+bx^n+cx^{2n})^{3/2}} dx =$$

$$-\frac{2(c(bf-2ag) + (b^2-4ac)hx^{n/2} + c(2cf-bg)x^n)}{(b^2-4ac)n\sqrt{a+bx^n+cx^{2n}}}$$

[Out]  $-2*(c*(-2*a*g+b*f)+(-4*a*c+b^2)*h*x^{(1/2*n)}+c*(-b*g+2*c*f)*x^n)/(-4*a*c+b^2)/n/(a+b*x^n+c*x^{(2*n)})^{(1/2)}$

### Rubi [A] (verified)

Time = 0.34 (sec), antiderivative size = 75, normalized size of antiderivative = 1.00, number of steps used = 2, number of rules used = 2,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.032$ , Rules used = {6873, 1767}

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a+bx^n+cx^{2n})^{3/2}} dx =$$

$$-\frac{2(hx^{n/2}(b^2-4ac) + c(bf-2ag) + cx^n(2cf-bg))}{n(b^2-4ac)\sqrt{a+bx^n+cx^{2n}}}$$

[In]  $\text{Int}[(-a*h*x^{(-1+n/2)} + c*f*x^{(-1+n)} + c*g*x^{(-1+2*n)} + c*h*x^{(-1+(5*n)/2)})/(a + b*x^n + c*x^{(2*n)})^{(3/2)}, x]$

[Out]  $(-2*(c*(b*f - 2*a*g) + (b^2 - 4*a*c)*h*x^{(n/2)} + c*(2*c*f - b*g)*x^n))/((b^2 - 4*a*c)*n*\text{Sqrt}[a + b*x^n + c*x^{(2*n)}])$

Rule 1767

```
Int[((x_)^(m_)*((e_) + (f_)*(x_)^(q_) + (g_)*(x_)^(r_) + (h_)*(x_)^(s_)))/((a_) + (b_)*(x_)^(n_) + (c_)*(x_)^(n2_))^(3/2), x_Symbol] := Simp[-(2*c*(b*f - 2*a*g) + 2*h*(b^2 - 4*a*c)*x^(n/2) + 2*c*(2*c*f - b*g)*x^n)/(c*n*(b^2 - 4*a*c)*Sqrt[a + b*x^n + c*x^(2*n)]), x] /; FreeQ[{a, b, c, e, f, g, h, m, n}, x] && EqQ[n2, 2*n] && EqQ[q, n/2] && EqQ[r, 3*(n/2)] && EqQ[s, 2*n] && NeQ[b^2 - 4*a*c, 0] && EqQ[2*m - n + 2, 0] && EqQ[c*e + a*h, 0]
```

### Rule 6873

```
Int[u_, x_Symbol] := With[{v = NormalizeIntegrand[u, x]}, Int[v, x] /; v != u]
```

### Rubi steps

$$\begin{aligned} \text{integral} &= \int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx \\ &= -\frac{2(c(bf - 2ag) + (b^2 - 4ac)hx^{n/2} + c(2cf - bg)x^n)}{(b^2 - 4ac)n\sqrt{a + bx^n + cx^{2n}}} \end{aligned}$$

### Mathematica [A] (verified)

Time = 2.15 (sec) , antiderivative size = 84, normalized size of antiderivative = 1.12

$$\begin{aligned} \int \frac{-ahx^{-1+\frac{n}{2}} + cf x^{-1+n} + cg x^{-1+2n} + ch x^{-1+\frac{5n}{2}}}{(a + bx^n + cx^{2n})^{3/2}} dx = \\ -\frac{2(bcf - 2acg + b^2hx^{n/2} - 4achx^{n/2} + 2c^2fx^n - bcgx^n)}{(b^2 - 4ac)n\sqrt{a + bx^n + cx^{2n}}} \end{aligned}$$

```
[In] Integrate[(-(a*h*x^(-1 + n/2)) + c*f*x^(-1 + n) + c*g*x^(-1 + 2*n) + c*h*x^(-1 + (5*n)/2))/(a + b*x^n + c*x^(2*n))^(3/2), x]
```

```
[Out] (-2*(b*c*f - 2*a*c*g + b^2*h*x^(n/2) - 4*a*c*h*x^(n/2) + 2*c^2*f*x^n - b*c*g*x^n))/((b^2 - 4*a*c)*n*Sqrt[a + b*x^n + c*x^(2*n)])
```

### Maple [F]

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cf x^{-1+n} + cg x^{-1+2n} + ch x^{-1+\frac{5n}{2}}}{(a + bx^n + cx^{2n})^{\frac{3}{2}}} dx$$

```
[In] int((-a*h*x^(-1+1/2*n)+c*f*x^(-1+n)+c*g*x^(-1+2*n)+c*h*x^(-1+5/2*n))/(a+b*x^n+c*x^(2*n))^(3/2), x)
```

```
[Out] int((-a*h*x^(-1+1/2*n)+c*f*x^(-1+n)+c*g*x^(-1+2*n)+c*h*x^(-1+5/2*n))/(a+b*x^n+c*x^(2*n))^(3/2), x)
```

**Fricas [A] (verification not implemented)**

none

Time = 0.27 (sec) , antiderivative size = 137, normalized size of antiderivative = 1.83

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a + bx^n + cx^{2n})^{3/2}} dx =$$

$$\frac{2\sqrt{cx^4x^{2n-4} + bx^2x^{n-2} + a}\left((2c^2f - bcbg)x^2x^{n-2} + (b^2 - 4ac)hxx^{\frac{1}{2}n-1} + bcf - 2acg\right)}{(b^2c - 4ac^2)nx^4x^{2n-4} + (b^3 - 4abc)nx^2x^{n-2} + (ab^2 - 4a^2c)n}$$

```
[In] integrate((-a*h*x^(-1+1/2*n)+c*f*x^(-1+n)+c*g*x^(-1+2*n)+c*h*x^(-1+5/2*n))/
(a+b*x^n+c*x^(2*n))^(3/2),x, algorithm="fricas")
```

```
[Out] -2*sqrt(c*x^4*x^(2*n - 4) + b*x^2*x^(n - 2) + a)*((2*c^2*f - b*c*g)*x^2*x^(
n - 2) + (b^2 - 4*a*c)*h*x*x^(1/2*n - 1) + b*c*f - 2*a*c*g)/((b^2*c - 4*a*c
^2)*n*x^4*x^(2*n - 4) + (b^3 - 4*a*b*c)*n*x^2*x^(n - 2) + (a*b^2 - 4*a^2*c)
*n)
```

**Sympy [F(-1)]**

Timed out.

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a + bx^n + cx^{2n})^{3/2}} dx = \text{Timed out}$$

```
[In] integrate((-a*h*x**(-1+1/2*n)+c*f*x**(-1+n)+c*g*x**(-1+2*n)+c*h*x**(-1+5/2*
n))/(a+b*x**n+c*x**(2*n))**(3/2),x)
```

```
[Out] Timed out
```

**Maxima [F]**

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a + bx^n + cx^{2n})^{3/2}} dx = \int \frac{chx^{\frac{5}{2}n-1} + cgx^{2n-1} + cfx^{n-1} - ahx^{\frac{1}{2}n-1}}{(cx^{2n} + bx^n + a)^{\frac{3}{2}}} dx$$

```
[In] integrate((-a*h*x^(-1+1/2*n)+c*f*x^(-1+n)+c*g*x^(-1+2*n)+c*h*x^(-1+5/2*n))/
(a+b*x^n+c*x^(2*n))^(3/2),x, algorithm="maxima")
```

```
[Out] integrate((c*h*x^(5/2*n - 1) + c*g*x^(2*n - 1) + c*f*x^(n - 1) - a*h*x^(1/2
*n - 1))/(c*x^(2*n) + b*x^n + a)^(3/2), x)
```



**Giac [F]**

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a + bx^n + cx^{2n})^{3/2}} dx = \int \frac{chx^{\frac{5}{2}n-1} + cgx^{2n-1} + cfx^{n-1} - ahx^{\frac{1}{2}n-1}}{(cx^{2n} + bx^n + a)^{\frac{3}{2}}} dx$$

[In] integrate((-a\*h\*x^(-1+1/2\*n)+c\*f\*x^(-1+n)+c\*g\*x^(-1+2\*n)+c\*h\*x^(-1+5/2\*n))/(a+b\*x^n+c\*x^(2\*n))^(3/2),x, algorithm="giac")

[Out] integrate((c\*h\*x^(5/2\*n - 1) + c\*g\*x^(2\*n - 1) + c\*f\*x^(n - 1) - a\*h\*x^(1/2\*n - 1))/(c\*x^(2\*n) + b\*x^n + a)^(3/2), x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{-ahx^{-1+\frac{n}{2}} + cfx^{-1+n} + cgx^{-1+2n} + chx^{-1+\frac{5n}{2}}}{(a + bx^n + cx^{2n})^{3/2}} dx = \int \frac{c g x^{2n-1} - a h x^{\frac{n}{2}-1} + c h x^{\frac{5n}{2}-1} + c f x^{n-1}}{(a + b x^n + c x^{2n})^{3/2}} dx$$

[In] int((c\*g\*x^(2\*n - 1) - a\*h\*x^(n/2 - 1) + c\*h\*x^((5\*n)/2 - 1) + c\*f\*x^(n - 1))/(a + b\*x^n + c\*x^(2\*n))^(3/2),x)

[Out] int((c\*g\*x^(2\*n - 1) - a\*h\*x^(n/2 - 1) + c\*h\*x^((5\*n)/2 - 1) + c\*f\*x^(n - 1))/(a + b\*x^n + c\*x^(2\*n))^(3/2), x)

### 3.11 $\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx$

Optimal result	274
Rubi [A] (verified)	274
Mathematica [A] (verified)	275
Maple [A] (verified)	275
Fricas [A] (verification not implemented)	275
Sympy [B] (verification not implemented)	276
Maxima [A] (verification not implemented)	276
Giac [B] (verification not implemented)	276
Mupad [B] (verification not implemented)	277

#### Optimal result

Integrand size = 45, antiderivative size = 20

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx = x(a + bx^n + cx^{2n})^{1+p}$$

[Out]  $x*(a+b*x^n+c*x^{(2*n)})^{(p+1)}$

#### Rubi [A] (verified)

Time = 0.02 (sec) , antiderivative size = 20, normalized size of antiderivative = 1.00, number of steps used = 1, number of rules used = 1,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.022$ , Rules used = {1789}

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx = x(a + bx^n + cx^{2n})^{p+1}$$

[In]  $\text{Int}[(a + b*x^n + c*x^{(2*n)})^p*(a + b*(1 + n + n*p)*x^n + c*(1 + 2*n*(1 + p))*x^{(2*n)}], x]$

[Out]  $x*(a + b*x^n + c*x^{(2*n)})^{(1 + p)}$

#### Rule 1789

$\text{Int}[(a + b*x^n + c*x^{(2*n)})^p*(d + e*x^n + f*x^{(2*n)}), x\_Symbol] \rightarrow \text{Simp}[d*x*(a + b*x^n + c*x^{(2*n)})^{(p + 1)/a}, x] /;$   $\text{FreeQ}\{a, b, c, d, e, f, n, p\}, x$  &&  $\text{EqQ}[n2, 2*n]$  &&  $\text{EqQ}[a*e - b*d*(n*(p + 1) + 1), 0]$  &&  $\text{EqQ}[a*f - c*d*(2*n*(p + 1) + 1), 0]$

#### Rubi steps

$$\text{integral} = x(a + bx^n + cx^{2n})^{1+p}$$

**Mathematica [A] (verified)**

Time = 0.58 (sec) , antiderivative size = 19, normalized size of antiderivative = 0.95

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx = x(a + x^n(b + cx^n))^{1+p}$$

[In] Integrate[(a + b\*x^n + c\*x^(2\*n))^p\*(a + b\*(1 + n + n\*p)\*x^n + c\*(1 + 2\*n\*(1 + p))\*x^(2\*n)),x]

[Out] x\*(a + x^n\*(b + c\*x^n))^(1 + p)

**Maple [A] (verified)**

Time = 5.16 (sec) , antiderivative size = 33, normalized size of antiderivative = 1.65

method	result	size
risch	$x(a + bx^n + cx^{2n})(a + bx^n + cx^{2n})^p$	33
parallelrisch	$\frac{xx^n(a+bx^n+cx^{2n})^pbc+xx^{2n}(a+bx^n+cx^{2n})^pc^2+x(a+bx^n+cx^{2n})^pac}{c}$	75

[In] int((a+b\*x^n+c\*x^(2\*n))^p\*(a+b\*(n\*p+n+1)\*x^n+c\*(1+2\*n\*(1+p))\*x^(2\*n)),x,method=\_RETURNVERBOSE)

[Out] x\*(a+b\*x^n+c\*(x^n)^2)\*(a+b\*x^n+c\*(x^n)^2)^p

**Fricas [A] (verification not implemented)**

none

Time = 0.27 (sec) , antiderivative size = 35, normalized size of antiderivative = 1.75

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx = (cxx^{2n} + bxx^n + ax)(cx^{2n} + bx^n + a)^p$$

[In] integrate((a+b\*x^n+c\*x^(2\*n))^p\*(a+b\*(n\*p+n+1)\*x^n+c\*(1+2\*n\*(1+p))\*x^(2\*n)),x,algorithm="fricas")

[Out] (c\*x\*x^(2\*n) + b\*x\*x^n + a\*x)\*(c\*x^(2\*n) + b\*x^n + a)^p

**Sympy [B] (verification not implemented)**

Leaf count of result is larger than twice the leaf count of optimal. 63 vs.  $2(17) = 34$ .

Time = 29.90 (sec) , antiderivative size = 63, normalized size of antiderivative = 3.15

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx$$

$$= ax(a + bx^n + cx^{2n})^p + bxx^n(a + bx^n + cx^{2n})^p + cxx^{2n}(a + bx^n + cx^{2n})^p$$

[In] integrate((a+b\*x\*\*n+c\*x\*\*(2\*n))\*\*p\*(a+b\*(n\*p+n+1)\*x\*\*n+c\*(1+2\*n\*(1+p))\*x\*\*(2\*n)),x)

[Out] a\*x\*(a + b\*x\*\*n + c\*x\*\*(2\*n))\*\*p + b\*x\*x\*\*n\*(a + b\*x\*\*n + c\*x\*\*(2\*n))\*\*p + c\*x\*x\*\*(2\*n)\*(a + b\*x\*\*n + c\*x\*\*(2\*n))\*\*p

**Maxima [A] (verification not implemented)**

none

Time = 0.25 (sec) , antiderivative size = 35, normalized size of antiderivative = 1.75

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx$$

$$= (c x^{2n} + b x^n + a x) (c x^{2n} + b x^n + a)^p$$

[In] integrate((a+b\*x^n+c\*x^(2\*n))^p\*(a+b\*(n\*p+n+1)\*x^n+c\*(1+2\*n\*(1+p))\*x^(2\*n)),x, algorithm="maxima")

[Out] (c\*x\*x^(2\*n) + b\*x\*x^n + a\*x)\*(c\*x^(2\*n) + b\*x^n + a)^p

**Giac [B] (verification not implemented)**

Leaf count of result is larger than twice the leaf count of optimal. 66 vs.  $2(20) = 40$ .

Time = 0.37 (sec) , antiderivative size = 66, normalized size of antiderivative = 3.30

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx$$

$$= (cx^{2n} + bx^n + a)^p cxx^{2n} + (cx^{2n} + bx^n + a)^p bxx^n + (cx^{2n} + bx^n + a)^p ax$$

[In] integrate((a+b\*x^n+c\*x^(2\*n))^p\*(a+b\*(n\*p+n+1)\*x^n+c\*(1+2\*n\*(1+p))\*x^(2\*n)),x, algorithm="giac")

[Out] (c\*x^(2\*n) + b\*x^n + a)^p\*c\*x\*x^(2\*n) + (c\*x^(2\*n) + b\*x^n + a)^p\*b\*x\*x^n + (c\*x^(2\*n) + b\*x^n + a)^p\*a\*x

**Mupad [B] (verification not implemented)**

Time = 8.88 (sec) , antiderivative size = 35, normalized size of antiderivative = 1.75

$$\int (a + bx^n + cx^{2n})^p (a + b(1 + n + np)x^n + c(1 + 2n(1 + p))x^{2n}) dx$$

$$= (a + bx^n + cx^{2n})^p (ax + bxx^n + cxx^{2n})$$

[In] int((a + b\*x^n + c\*x^(2\*n))^p\*(a + b\*x^n\*(n + n\*p + 1) + c\*x^(2\*n)\*(2\*n\*(p + 1) + 1)),x)

[Out] (a + b\*x^n + c\*x^(2\*n))^p\*(a\*x + b\*x\*x^n + c\*x\*x^(2\*n))

$$3.12 \quad \int \frac{x^{-1+\frac{n}{4}}(-ah+cfx^{n/4}+cgx^{3n/4}+chx^n)}{(a+cx^n)^{3/2}} dx$$

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### Optimal result

Integrand size = 52, antiderivative size = 45

$$\int \frac{x^{-1+\frac{n}{4}}(-ah+cfx^{n/4}+cgx^{3n/4}+chx^n)}{(a+cx^n)^{3/2}} dx = -\frac{2(ag+2ahx^{n/4}-cfx^{n/2})}{an\sqrt{a+cx^n}}$$

[Out]  $-2*(a*g+2*a*h*x^{(1/4*n)}-c*f*x^{(1/2*n)})/a/n/(a+c*x^n)^{(1/2)}$

### Rubi [A] (verified)

Time = 0.05 (sec), antiderivative size = 45, normalized size of antiderivative = 1.00, number of steps used = 1, number of rules used = 1,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.019$ , Rules used = {1830}

$$\int \frac{x^{-1+\frac{n}{4}}(-ah+cfx^{n/4}+cgx^{3n/4}+chx^n)}{(a+cx^n)^{3/2}} dx = -\frac{2(ag+2ahx^{n/4}-cfx^{n/2})}{an\sqrt{a+cx^n}}$$

[In]  $\text{Int}[(x^{(-1+n/4)}*(-(a*h)+c*f*x^{(n/4)}+c*g*x^{((3*n)/4)}+c*h*x^n))/(a+c*x^n)^{(3/2)},x]$

[Out]  $(-2*(a*g+2*a*h*x^{(n/4)}-c*f*x^{(n/2)}))/(a*n*\text{Sqrt}[a+c*x^n])$

#### Rule 1830

$\text{Int}[(x_)^{(m_*)}*((e_)+(h_)*(x_)^{(n_*)}+(f_)*(x_)^{(q_*)}+(g_)*(x_)^{(r_*)})]/((a_)+(c_)*(x_)^{(n_*)})^{(3/2)},x\_Symbol] \rightarrow \text{Simp}[-(2*a*g+4*a*h*x^{(n/4)}-2*c*f*x^{(n/2)})/(a*c*n*\text{Sqrt}[a+c*x^n]),x] /;$   $\text{FreeQ}\{a,c,e,f,g,h,m,n\},x] \&\& \text{EqQ}[q,n/4] \&\& \text{EqQ}[r,3*(n/4)] \&\& \text{EqQ}[4*m-n+4,0] \&\& \text{EqQ}[c*e+a*h,0]$

Rubi steps

$$\text{integral} = -\frac{2(ag + 2ahx^{n/4} - cfx^{n/2})}{an\sqrt{a + cx^n}}$$

**Mathematica [A] (verified)**

Time = 0.71 (sec) , antiderivative size = 45, normalized size of antiderivative = 1.00

$$\int \frac{x^{-1+\frac{n}{4}}(-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \frac{2cfx^{n/2} - 2a(g + 2hx^{n/4})}{an\sqrt{a + cx^n}}$$

[In] Integrate[(x^(-1 + n/4)\*(-a\*h) + c\*f\*x^(n/4) + c\*g\*x^((3\*n)/4) + c\*h\*x^n)/(a + c\*x^n)^(3/2), x]

[Out] (2\*c\*f\*x^(n/2) - 2\*a\*(g + 2\*h\*x^(n/4)))/(a\*n\*Sqrt[a + c\*x^n])

**Maple [F]**

$$\int \frac{x^{-1+\frac{n}{4}}(-ah + cfx^{\frac{n}{4}} + cgx^{\frac{3n}{4}} + chx^n)}{(a + cx^n)^{\frac{3}{2}}} dx$$

[In] int(x^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2), x)

[Out] int(x^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2), x)

**Fricas [A] (verification not implemented)**

none

Time = 0.25 (sec) , antiderivative size = 48, normalized size of antiderivative = 1.07

$$\int \frac{x^{-1+\frac{n}{4}}(-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \frac{2\left(cfx^{\frac{1}{2}n} - 2ahx^{\frac{1}{4}n} - ag\right)\sqrt{cx^n + a}}{acnx^n + a^2n}$$

[In] integrate(x^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2), x, algorithm="fricas")

[Out] 2\*(c\*f\*x^(1/2\*n) - 2\*a\*h\*x^(1/4\*n) - a\*g)\*sqrt(c\*x^n + a)/(a\*c\*n\*x^n + a^2\*n)

**Sympy [F(-1)]**

Timed out.

$$\int \frac{x^{-1+\frac{n}{4}}(-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \text{Timed out}$$

[In] integrate(x\*\*(-1+1/4\*n)\*(-a\*h+c\*f\*x\*\*(1/4\*n)+c\*g\*x\*\*(3/4\*n)+c\*h\*x\*\*n)/(a+c\*x\*\*n)\*\*(3/2),x)

[Out] Timed out

**Maxima [F]**

$$\int \frac{x^{-1+\frac{n}{4}}(-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \int \frac{(cgx^{\frac{3}{4}n} + cfx^{\frac{1}{4}n} + chx^n - ah)x^{\frac{1}{4}n-1}}{(cx^n + a)^{\frac{3}{2}}} dx$$

[In] integrate(x^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2),x, algorithm="maxima")

[Out] integrate((c\*g\*x^(3/4\*n) + c\*f\*x^(1/4\*n) + c\*h\*x^n - a\*h)\*x^(1/4\*n - 1)/(c\*x^n + a)^(3/2), x)

**Giac [A] (verification not implemented)**

none

Time = 5.16 (sec) , antiderivative size = 39, normalized size of antiderivative = 0.87

$$\int \frac{x^{-1+\frac{n}{4}}(-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \frac{2 \left( \left( \frac{cf(x^n)^{\frac{1}{4}}}{a} - 2h \right) (x^n)^{\frac{1}{4}} - g \right)}{\sqrt{cx^n + a}n}$$

[In] integrate(x^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2),x, algorithm="giac")

[Out] 2\*((c\*f\*(x^n)^(1/4)/a - 2\*h)\*(x^n)^(1/4) - g)/(sqrt(c\*x^n + a)\*n)



**Mupad [B] (verification not implemented)**

Time = 9.08 (sec) , antiderivative size = 39, normalized size of antiderivative = 0.87

$$\int \frac{x^{-1+\frac{n}{4}}(-ah + cf x^{n/4} + cg x^{3n/4} + ch x^n)}{(a + cx^n)^{3/2}} dx = -\frac{2(ag - cf x^{n/2} + 2ah x^{n/4})}{an \sqrt{a + cx^n}}$$

[In] int((x^(n/4 - 1)\*(c\*h\*x^n - a\*h + c\*f\*x^(n/4) + c\*g\*x^((3\*n)/4)))/(a + c\*x^n)^(3/2),x)

[Out] -(2\*(a\*g - c\*f\*x^(n/2) + 2\*a\*h\*x^(n/4)))/(a\*n\*(a + c\*x^n)^(1/2))

$$3.13 \quad \int \frac{(dx)^{-1+\frac{n}{4}} \left( -ah + cfx^{n/4} + cgx^{3n/4} + chx^n \right)}{(a+cx^n)^{3/2}} dx$$

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Fricas [A] (verification not implemented)	284
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Maxima [F]	285
Giac [F]	285
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### Optimal result

Integrand size = 54, antiderivative size = 65

$$\int \frac{(dx)^{-1+\frac{n}{4}} \left( -ah + cfx^{n/4} + cgx^{3n/4} + chx^n \right)}{(a+cx^n)^{3/2}} dx =$$

$$-\frac{2x^{1-\frac{n}{4}}(dx)^{\frac{1}{4}(-4+n)}(ag + 2ahx^{n/4} - cfx^{n/2})}{an\sqrt{a+cx^n}}$$

[Out]  $-2*x^{(1-1/4*n)}*(d*x)^{(-1+1/4*n)}*(a*g+2*a*h*x^{(1/4*n)}-c*f*x^{(1/2*n)})/a/n/(a+c*x^n)^{(1/2)}$

### Rubi [A] (verified)

Time = 0.10 (sec) , antiderivative size = 65, normalized size of antiderivative = 1.00, number of steps used = 2, number of rules used = 2,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.037$ , Rules used = {1831, 1830}

$$\int \frac{(dx)^{-1+\frac{n}{4}} \left( -ah + cfx^{n/4} + cgx^{3n/4} + chx^n \right)}{(a+cx^n)^{3/2}} dx = -\frac{2x^{1-\frac{n}{4}}(dx)^{\frac{n-4}{4}}(ag + 2ahx^{n/4} - cfx^{n/2})}{an\sqrt{a+cx^n}}$$

[In]  $\text{Int}[\left(\left(d*x\right)^{-1+n/4}\left(-\left(a*h\right)+c*f*x^{n/4}+c*g*x^{(3*n)/4}+c*h*x^n\right)\right)/\left(a+c*x^n\right)^{(3/2)},x]$

[Out]  $\left(-2*x^{(1-n/4)}*(d*x)^{((-4+n)/4)}*(a*g+2*a*h*x^{n/4}-c*f*x^{n/2})\right)/(a*n*\text{Sqrt}[a+c*x^n])$

#### Rule 1830

$\text{Int}[\left(\left(x\right)^{m_*}\left(\left(e\right)+\left(h\right)_*(x)^{n_*}\right)+\left(f\right)_*(x)^{q_*}\right)+\left(g\right)_*(x)^{r_*}\right)/\left(\left(a\right)+\left(c\right)_*(x)^{n_*}\right)^{(3/2)},x\_Symbol] \rightarrow \text{Simp}[-(2*a*g+4*a*h*x^$

$(n/4) - 2*c*f*x^{(n/2)} / (a*c*n*\text{Sqrt}[a + c*x^n]), x] /; \text{FreeQ}[a, c, e, f, g, h, m, n], x] \&\& \text{EqQ}[q, n/4] \&\& \text{EqQ}[r, 3*(n/4)] \&\& \text{EqQ}[4*m - n + 4, 0] \&\& \text{EqQ}[c*e + a*h, 0]$

### Rule 1831

$\text{Int}[(((d_)*(x_))^{(m_)}*((e_)+(h_)*(x_)^{(n_)}+(f_)*(x_)^{(q_)}+(g_)*(x_)^{(r_)}))/((a_)+(c_)*(x_)^{(n_)})^{(3/2)}, x\_Symbol] :> \text{Dist}[(d*x)^m/x^m, \text{Int}[x^m*((e+f*x^{(n/4)}+g*x^{((3*n)/4)}+h*x^n)/(a+c*x^n)^{(3/2)}), x], x] /; \text{FreeQ}[a, c, d, e, f, g, h, m, n], x] \&\& \text{EqQ}[4*m - n + 4, 0] \&\& \text{EqQ}[q, n/4] \&\& \text{EqQ}[r, 3*(n/4)] \&\& \text{EqQ}[c*e + a*h, 0]$

### Rubi steps

$$\begin{aligned} \text{integral} &= (x^{1-\frac{n}{4}}(dx)^{-1+\frac{n}{4}}) \int \frac{x^{-1+\frac{n}{4}}(-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx \\ &= -\frac{2x^{1-\frac{n}{4}}(dx)^{\frac{1}{4}(-4+n)}(ag + 2ahx^{n/4} - cfx^{n/2})}{an\sqrt{a + cx^n}} \end{aligned}$$

### Mathematica [A] (verified)

Time = 0.67 (sec) , antiderivative size = 64, normalized size of antiderivative = 0.98

$$\int \frac{(dx)^{-1+\frac{n}{4}}(-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \frac{2x^{-n/4}(dx)^{n/4}(cfx^{n/2} - a(g + 2hx^{n/4}))}{adn\sqrt{a + cx^n}}$$

[In] Integrate[(((d\*x)^(-1 + n/4)\*(-a\*h) + c\*f\*x^(n/4) + c\*g\*x^((3\*n)/4) + c\*h\*x^n))/(a + c\*x^n)^(3/2), x]

[Out] (2\*(d\*x)^(n/4)\*(c\*f\*x^(n/2) - a\*(g + 2\*h\*x^(n/4))))/(a\*d\*n\*x^(n/4)\*Sqrt[a + c\*x^n])

### Maple [F]

$$\int \frac{(dx)^{-1+\frac{n}{4}}(-ah + cfx^{\frac{n}{4}} + cgx^{\frac{3n}{4}} + chx^n)}{(a + cx^n)^{\frac{3}{2}}} dx$$

[In] int((d\*x)^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2), x)

[Out] int((d\*x)^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2), x)

**Fricas [A] (verification not implemented)**

none

Time = 0.26 (sec) , antiderivative size = 69, normalized size of antiderivative = 1.06

$$\int \frac{(dx)^{-1+\frac{n}{4}} (-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \frac{2 \left( cd^{\frac{1}{4}n-1} fx^{\frac{1}{2}n} - 2ad^{\frac{1}{4}n-1} hx^{\frac{1}{4}n} - ad^{\frac{1}{4}n-1} g \right) \sqrt{cx^n + a}}{acnx^n + a^2n}$$

[In] integrate((d\*x)^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2),x, algorithm="fricas")

[Out] 2\*(c\*d^(1/4\*n - 1)\*f\*x^(1/2\*n) - 2\*a\*d^(1/4\*n - 1)\*h\*x^(1/4\*n) - a\*d^(1/4\*n - 1)\*g)\*sqrt(c\*x^n + a)/(a\*c\*n\*x^n + a^2\*n)

**Sympy [C] (verification not implemented)**

Result contains complex when optimal does not.

Time = 117.27 (sec) , antiderivative size = 160, normalized size of antiderivative = 2.46

$$\int \frac{(dx)^{-1+\frac{n}{4}} (-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \frac{2\sqrt{cd^{\frac{n}{4}-1}f}}{an\sqrt{\frac{ax-n}{c}+1}} - \frac{2d^{\frac{n}{4}-1}g}{\sqrt{an}\sqrt{1+\frac{cx^n}{a}}}$$

$$- \frac{d^{\frac{n}{4}-1}hx^{\frac{n}{4}}\Gamma(\frac{1}{4}) {}_2F_1\left(\frac{1}{4}, \frac{3}{2} \middle| \frac{cx^n e^{i\pi}}{a}\right)}{\sqrt{an}\Gamma(\frac{5}{4})} + \frac{cd^{\frac{n}{4}-1}hx^{\frac{5n}{4}}\Gamma(\frac{5}{4}) {}_2F_1\left(\frac{5}{4}, \frac{3}{2} \middle| \frac{cx^n e^{i\pi}}{a}\right)}{a^{\frac{3}{2}}n\Gamma(\frac{9}{4})}$$

[In] integrate((d\*x)\*\*(-1+1/4\*n)\*(-a\*h+c\*f\*x\*\*(1/4\*n)+c\*g\*x\*\*(3/4\*n)+c\*h\*x\*\*n)/(a+c\*x\*\*n)\*\*(3/2),x)

[Out] 2\*sqrt(c)\*d\*\*(n/4 - 1)\*f/(a\*n\*sqrt(a/(c\*x\*\*n) + 1)) - 2\*d\*\*(n/4 - 1)\*g/(sqrt(a)\*n\*sqrt(1 + c\*x\*\*n/a)) - d\*\*(n/4 - 1)\*h\*x\*\*(n/4)\*gamma(1/4)\*hyper((1/4, 3/2), (5/4, ), c\*x\*\*n\*exp\_polar(I\*pi)/a)/(sqrt(a)\*n\*gamma(5/4)) + c\*d\*\*(n/4 - 1)\*h\*x\*\*(5\*n/4)\*gamma(5/4)\*hyper((5/4, 3/2), (9/4, ), c\*x\*\*n\*exp\_polar(I\*pi)/a)/(a\*\*(3/2)\*n\*gamma(9/4))

**Maxima [F]**

$$\int \frac{(dx)^{-1+\frac{n}{4}} (-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \int \frac{(cgx^{\frac{3}{4}n} + cfx^{\frac{1}{4}n} + chx^n - ah)(dx)^{\frac{1}{4}n-1}}{(cx^n + a)^{\frac{3}{2}}} dx$$

[In] integrate((d\*x)^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2),x, algorithm="maxima")

[Out] integrate((c\*g\*x^(3/4\*n) + c\*f\*x^(1/4\*n) + c\*h\*x^n - a\*h)\*(d\*x)^(1/4\*n - 1)/(c\*x^n + a)^(3/2), x)

**Giac [F]**

$$\int \frac{(dx)^{-1+\frac{n}{4}} (-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \int \frac{(cgx^{\frac{3}{4}n} + cfx^{\frac{1}{4}n} + chx^n - ah)(dx)^{\frac{1}{4}n-1}}{(cx^n + a)^{\frac{3}{2}}} dx$$

[In] integrate((d\*x)^(-1+1/4\*n)\*(-a\*h+c\*f\*x^(1/4\*n)+c\*g\*x^(3/4\*n)+c\*h\*x^n)/(a+c\*x^n)^(3/2),x, algorithm="giac")

[Out] integrate((c\*g\*x^(3/4\*n) + c\*f\*x^(1/4\*n) + c\*h\*x^n - a\*h)\*(d\*x)^(1/4\*n - 1)/(c\*x^n + a)^(3/2), x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{(dx)^{-1+\frac{n}{4}} (-ah + cfx^{n/4} + cgx^{3n/4} + chx^n)}{(a + cx^n)^{3/2}} dx = \int \frac{(dx)^{\frac{n}{4}-1} (chx^n - ah + cfx^{n/4} + cgx^{\frac{3n}{4}})}{(a + cx^n)^{3/2}} dx$$

[In] int(((d\*x)^(n/4 - 1)\*(c\*h\*x^n - a\*h + c\*f\*x^(n/4) + c\*g\*x^((3\*n)/4)))/(a + c\*x^n)^(3/2), x)

[Out] int(((d\*x)^(n/4 - 1)\*(c\*h\*x^n - a\*h + c\*f\*x^(n/4) + c\*g\*x^((3\*n)/4)))/(a + c\*x^n)^(3/2), x)

$$3.14 \quad \int \frac{x^{-1+\frac{n}{2}} \left( -ah + cfx^{n/2} + cgx^{3n/2} + chx^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx$$

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Fricas [A] (verification not implemented)	288
Sympy [F(-1)]	288
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Giac [B] (verification not implemented)	289
Mupad [B] (verification not implemented)	289

### Optimal result

Integrand size = 61, antiderivative size = 75

$$\int \frac{x^{-1+\frac{n}{2}} \left( -ah + cfx^{n/2} + cgx^{3n/2} + chx^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx = \frac{2(c(bf - 2ag) + (b^2 - 4ac)hx^{n/2} + c(2cf - bg)x^n)}{(b^2 - 4ac)n\sqrt{a + bx^n + cx^{2n}}}$$

[Out]  $-2*(c*(-2*a*g+b*f)+(-4*a*c+b^2)*h*x^{(1/2*n)}+c*(-b*g+2*c*f)*x^n)/(-4*a*c+b^2)/n/(a+b*x^n+c*x^{(2*n)})^{(1/2)}$

### Rubi [A] (verified)

Time = 0.07 (sec) , antiderivative size = 75, normalized size of antiderivative = 1.00, number of steps used = 1, number of rules used = 1,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.016$ , Rules used = {1767}

$$\int \frac{x^{-1+\frac{n}{2}} \left( -ah + cfx^{n/2} + cgx^{3n/2} + chx^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx = \frac{2(hx^{n/2}(b^2 - 4ac) + c(bf - 2ag) + cx^n(2cf - bg))}{n(b^2 - 4ac)\sqrt{a + bx^n + cx^{2n}}}$$

[In]  $\text{Int}[(x^{(-1 + n/2)}*(-(a*h) + c*f*x^{(n/2)} + c*g*x^{((3*n)/2)} + c*h*x^{(2*n)}))/(a + b*x^n + c*x^{(2*n)})^{(3/2)}, x]$

[Out]  $(-2*(c*(b*f - 2*a*g) + (b^2 - 4*a*c)*h*x^{(n/2)} + c*(2*c*f - b*g)*x^n))/((b^2 - 4*a*c)*n*\text{Sqrt}[a + b*x^n + c*x^{(2*n)}])$

Rule 1767

```
Int[((x_)^(m_)*((e_) + (f_)*(x_)^(q_) + (g_)*(x_)^(r_) + (h_)*(x_)^(s_)))/((a_) + (b_)*(x_)^(n_) + (c_)*(x_)^(n2_))^(3/2), x_Symbol] := Simp[-(2*c*(b*f - 2*a*g) + 2*h*(b^2 - 4*a*c)*x^(n/2) + 2*c*(2*c*f - b*g)*x^n)/(c*n*(b^2 - 4*a*c)*Sqrt[a + b*x^n + c*x^(2*n)]), x] /; FreeQ[{a, b, c, e, f, g, h, m, n}, x] && EqQ[n2, 2*n] && EqQ[q, n/2] && EqQ[r, 3*(n/2)] && EqQ[s, 2*n] && NeQ[b^2 - 4*a*c, 0] && EqQ[2*m - n + 2, 0] && EqQ[c*e + a*h, 0]
```

Rubi steps

$$\text{integral} = -\frac{2(c(bf - 2ag) + (b^2 - 4ac)hx^{n/2} + c(2cf - bg)x^n)}{(b^2 - 4ac)n\sqrt{a + bx^n + cx^{2n}}}$$

**Mathematica [A] (verified)**

Time = 0.08 (sec) , antiderivative size = 84, normalized size of antiderivative = 1.12

$$\int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx = -\frac{2(bcf - 2acg + b^2hx^{n/2} - 4achx^{n/2} + 2c^2fx^n - bcgx^n)}{(b^2 - 4ac)n\sqrt{a + bx^n + cx^{2n}}}$$

```
[In] Integrate[(x^(-1 + n/2)*(-(a*h) + c*f*x^(n/2) + c*g*x^((3*n)/2) + c*h*x^(2*n)))/(a + b*x^n + c*x^(2*n))^(3/2), x]
```

```
[Out] (-2*(b*c*f - 2*a*c*g + b^2*h*x^(n/2) - 4*a*c*h*x^(n/2) + 2*c^2*f*x^n - b*c*g*x^n))/((b^2 - 4*a*c)*n*Sqrt[a + b*x^n + c*x^(2*n)])
```

**Maple [F]**

$$\int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{\frac{n}{2}} + cg x^{\frac{3n}{2}} + ch x^{2n})}{(a + bx^n + cx^{2n})^{\frac{3}{2}}} dx$$

```
[In] int(x^(-1+1/2*n)*(-a*h+c*f*x^(1/2*n)+c*g*x^(3/2*n)+c*h*x^(2*n))/(a+b*x^n+c*x^(2*n))^(3/2), x)
```

```
[Out] int(x^(-1+1/2*n)*(-a*h+c*f*x^(1/2*n)+c*g*x^(3/2*n)+c*h*x^(2*n))/(a+b*x^n+c*x^(2*n))^(3/2), x)
```

**Fricas [A] (verification not implemented)**

none

Time = 0.27 (sec) , antiderivative size = 109, normalized size of antiderivative = 1.45

$$\int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx =$$

$$\frac{2 \left( bcf - 2acg + (b^2 - 4ac)hx^{\frac{1}{2}n} + (2c^2f - bcg)x^n \right) \sqrt{cx^{2n} + bx^n + a}}{(b^2c - 4ac^2)nx^{2n} + (b^3 - 4abc)nx^n + (ab^2 - 4a^2c)n}$$

```
[In] integrate(x^(-1+1/2*n)*(-a*h+c*f*x^(1/2*n)+c*g*x^(3/2*n)+c*h*x^(2*n))/(a+b*x^n+c*x^(2*n))^(3/2),x, algorithm="fricas")
```

```
[Out] -2*(b*c*f - 2*a*c*g + (b^2 - 4*a*c)*h*x^(1/2*n) + (2*c^2*f - b*c*g)*x^n)*sqrt(c*x^(2*n) + b*x^n + a)/((b^2*c - 4*a*c^2)*n*x^(2*n) + (b^3 - 4*a*b*c)*n*x^n + (a*b^2 - 4*a^2*c)*n)
```

**Sympy [F(-1)]**

Timed out.

$$\int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx = \text{Timed out}$$

```
[In] integrate(x**(-1+1/2*n)*(-a*h+c*f*x**(1/2*n)+c*g*x**(3/2*n)+c*h*x**(2*n))/(a+b*x**n+c*x**(2*n))**(3/2),x)
```

```
[Out] Timed out
```

**Maxima [F]**

$$\int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx = \int \frac{(chx^{2n} + cgx^{\frac{3}{2}n} + cf x^{\frac{1}{2}n} - ah)x^{\frac{1}{2}n-1}}{(cx^{2n} + bx^n + a)^{\frac{3}{2}}} dx$$

```
[In] integrate(x^(-1+1/2*n)*(-a*h+c*f*x^(1/2*n)+c*g*x^(3/2*n)+c*h*x^(2*n))/(a+b*x^n+c*x^(2*n))^(3/2),x, algorithm="maxima")
```

```
[Out] integrate((c*h*x^(2*n) + c*g*x^(3/2*n) + c*f*x^(1/2*n) - a*h)*x^(1/2*n - 1)/(c*x^(2*n) + b*x^n + a)^(3/2), x)
```



**Giac [B] (verification not implemented)**

Leaf count of result is larger than twice the leaf count of optimal. 187 vs. 2(71) = 142.

Time = 1.00 (sec) , antiderivative size = 187, normalized size of antiderivative = 2.49

$$\int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx =$$

$$\frac{2 \left( \sqrt{x^n} \left( \frac{(2b^2c^2f - 8ac^3f - b^3cg + 4abc^2g)\sqrt{x^n}}{b^4 - 8ab^2c + 16a^2c^2} + \frac{b^4h - 8ab^2ch + 16a^2c^2h}{b^4 - 8ab^2c + 16a^2c^2} \right) + \frac{b^3cf - 4abc^2f - 2ab^2cg + 8a^2c^2g}{b^4 - 8ab^2c + 16a^2c^2} \right)}{\sqrt{cx^{2n} + bx^n + an}}$$

[In] integrate(x^(-1+1/2\*n)\*(-a\*h+c\*f\*x^(1/2\*n)+c\*g\*x^(3/2\*n)+c\*h\*x^(2\*n))/(a+b\*x^n+c\*x^(2\*n))^(3/2),x, algorithm="giac")

[Out] -2\*(sqrt(x^n)\*((2\*b^2\*c^2\*f - 8\*a\*c^3\*f - b^3\*c\*g + 4\*a\*b\*c^2\*g)\*sqrt(x^n)/(b^4 - 8\*a\*b^2\*c + 16\*a^2\*c^2) + (b^4\*h - 8\*a\*b^2\*c\*h + 16\*a^2\*c^2\*h)/(b^4 - 8\*a\*b^2\*c + 16\*a^2\*c^2)) + (b^3\*c\*f - 4\*a\*b\*c^2\*f - 2\*a\*b^2\*c\*g + 8\*a^2\*c^2\*g)/(b^4 - 8\*a\*b^2\*c + 16\*a^2\*c^2))/(sqrt(c\*x^(2\*n) + b\*x^n + a)\*n)

**Mupad [B] (verification not implemented)**

Time = 8.88 (sec) , antiderivative size = 80, normalized size of antiderivative = 1.07

$$\int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx =$$

$$\frac{2b^2 h x^{n/2} - 4acg + 2bcf + 4c^2 f x^n - 8ach x^{n/2} - 2bcg x^n}{(b^2 n - 4acn) \sqrt{a + bx^n + cx^{2n}}}$$

[In] int((x^(n/2 - 1)\*(c\*f\*x^(n/2) - a\*h + c\*g\*x^((3\*n)/2) + c\*h\*x^(2\*n)))/(a + b\*x^n + c\*x^(2\*n))^(3/2),x)

[Out] -(2\*b^2\*h\*x^(n/2) - 4\*a\*c\*g + 2\*b\*c\*f + 4\*c^2\*f\*x^n - 8\*a\*c\*h\*x^(n/2) - 2\*b\*c\*g\*x^n)/((b^2\*n - 4\*a\*c\*n)\*(a + b\*x^n + c\*x^(2\*n))^(1/2))

$$3.15 \quad \int \frac{(dx)^{-1+\frac{n}{2}} \left( -ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx$$

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### Optimal result

Integrand size = 63, antiderivative size = 95

$$\int \frac{(dx)^{-1+\frac{n}{2}} \left( -ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx =$$

$$\frac{2x^{1-\frac{n}{2}}(dx)^{\frac{1}{2}(-2+n)} \left( c(bf - 2ag) + (b^2 - 4ac)hx^{n/2} + c(2cf - bg)x^n \right)}{(b^2 - 4ac)n\sqrt{a + bx^n + cx^{2n}}}$$

[Out]  $-2*x^{(1-1/2*n)}*(d*x)^{(-1+1/2*n)}*(c*(-2*a*g+b*f)+(-4*a*c+b^2)*h*x^{(1/2*n)}+c*(-b*g+2*c*f)*x^n)/(-4*a*c+b^2)/n/(a+b*x^n+c*x^{(2*n)})^{(1/2)}$

### Rubi [A] (verified)

Time = 0.14 (sec) , antiderivative size = 95, normalized size of antiderivative = 1.00, number of steps used = 2, number of rules used = 2,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.032$ , Rules used = {1768, 1767}

$$\int \frac{(dx)^{-1+\frac{n}{2}} \left( -ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx =$$

$$\frac{2x^{1-\frac{n}{2}}(dx)^{\frac{n-2}{2}} \left( hx^{n/2}(b^2 - 4ac) + c(bf - 2ag) + cx^n(2cf - bg) \right)}{n(b^2 - 4ac)\sqrt{a + bx^n + cx^{2n}}}$$

[In]  $\text{Int}[\left(\left(d*x\right)^{-1+n/2}*(-a*h) + c*f*x^{(n/2)} + c*g*x^{((3*n)/2)} + c*h*x^{(2*n)}\right)/(a + b*x^n + c*x^{(2*n)})^{(3/2)}, x]$

[Out]  $(-2*x^{(1-n/2)}*(d*x)^{((-2+n)/2)}*(c*(b*f-2*a*g) + (b^2-4*a*c)*h*x^{(n/2)} + c*(2*c*f-b*g)*x^n)/((b^2-4*a*c)*n*\text{Sqrt}[a + b*x^n + c*x^{(2*n)}])$

Rule 1767

```
Int[((x_)^(m_)*((e_) + (f_)*(x_)^(q_) + (g_)*(x_)^(r_) + (h_)*(x_)^(s_)))/((a_) + (b_)*(x_)^(n_) + (c_)*(x_)^(n2_))^(3/2), x_Symbol] := Simp[-(2*c*(b*f - 2*a*g) + 2*h*(b^2 - 4*a*c)*x^(n/2) + 2*c*(2*c*f - b*g)*x^n)/(c*n*(b^2 - 4*a*c)*Sqrt[a + b*x^n + c*x^(2*n)]), x] /; FreeQ[{a, b, c, e, f, g, h, m, n}, x] && EqQ[n2, 2*n] && EqQ[q, n/2] && EqQ[r, 3*(n/2)] && EqQ[s, 2*n] && NeQ[b^2 - 4*a*c, 0] && EqQ[2*m - n + 2, 0] && EqQ[c*e + a*h, 0]
```

### Rule 1768

```
Int[(((d_)*(x_))^(m_)*((e_) + (f_)*(x_)^(q_) + (g_)*(x_)^(r_) + (h_)*(x_)^(s_)))/((a_) + (b_)*(x_)^(n_) + (c_)*(x_)^(n2_))^(3/2), x_Symbol] := Dist[(d*x)^m/x^m, Int[x^m*((e) + f*x^(n/2) + g*x^((3*n)/2) + h*x^(2*n))/(a + b*x^n + c*x^(2*n))^(3/2)], x] /; FreeQ[{a, b, c, d, e, f, g, h, m, n}, x] && EqQ[n2, 2*n] && EqQ[q, n/2] && EqQ[r, 3*(n/2)] && EqQ[s, 2*n] && NeQ[b^2 - 4*a*c, 0] && EqQ[2*m - n + 2, 0] && EqQ[c*e + a*h, 0]
```

### Rubi steps

$$\begin{aligned} \text{integral} &= (x^{1-\frac{n}{2}}(dx)^{-1+\frac{n}{2}}) \int \frac{x^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx \\ &= -\frac{2x^{1-\frac{n}{2}}(dx)^{\frac{1}{2}(-2+n)}(c(bf - 2ag) + (b^2 - 4ac)hx^{n/2} + c(2cf - bg)x^n)}{(b^2 - 4ac)n\sqrt{a + bx^n + cx^{2n}}} \end{aligned}$$

### Mathematica [B] (verified)

Leaf count is larger than twice the leaf count of optimal. 242 vs. 2(95) = 190.

Time = 3.46 (sec) , antiderivative size = 242, normalized size of antiderivative = 2.55

$$\begin{aligned} \int \frac{(dx)^{-1+\frac{n}{2}}(-ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx = \\ \frac{x^{-n/2}(dx)^{n/2}(-2ab^2hx^{n/2} - 2abc(f - gx^n) + 4ac(-cfx^n + a(g + 2hx^{n/2})) + b\sqrt{c}(bf - 2ag)\sqrt{a + x^n(b^2 + 4ac)})}{a(-b^2 + 4ac)} \end{aligned}$$

```
[In] Integrate[(((d*x)^(-1 + n/2))*(-(a*h) + c*f*x^(n/2) + c*g*x^((3*n)/2) + c*h*x^(2*n)))/((a + b*x^n + c*x^(2*n))^(3/2)), x]
```

```
[Out] -((((d*x)^(n/2))*(-2*a*b^2*h*x^(n/2) - 2*a*b*c*(f - g*x^n) + 4*a*c*(-(c*f*x^n) + a*(g + 2*h*x^(n/2)))) + b*Sqrt[c]*(b*f - 2*a*g)*Sqrt[a + x^n*(b + c*x^n)]*ArcTanh[(b + 2*c*x^n)/(2*Sqrt[c]*Sqrt[a + x^n*(b + c*x^n)])] + b*Sqrt[c]*(b*f - 2*a*g)*Sqrt[a + x^n*(b + c*x^n)]*Log[b + 2*c*x^n - 2*Sqrt[c]*Sqrt[a + x^n*(b + c*x^n)]])/(a*(-b^2 + 4*a*c)*d*n*x^(n/2)*Sqrt[a + x^n*(b + c*x^n)])
```

**Maple [F]**

$$\int \frac{(dx)^{-1+\frac{n}{2}} \left( -ah + cf x^{\frac{n}{2}} + cg x^{\frac{3n}{2}} + ch x^{2n} \right)}{(a + bx^n + cx^{2n})^{\frac{3}{2}}} dx$$

[In] int((d\*x)^(-1+1/2\*n)\*(-a\*h+c\*f\*x^(1/2\*n)+c\*g\*x^(3/2\*n)+c\*h\*x^(2\*n))/(a+b\*x^n+c\*x^(2\*n))^(3/2),x)

[Out] int((d\*x)^(-1+1/2\*n)\*(-a\*h+c\*f\*x^(1/2\*n)+c\*g\*x^(3/2\*n)+c\*h\*x^(2\*n))/(a+b\*x^n+c\*x^(2\*n))^(3/2),x)

**Fricas [A] (verification not implemented)**

none

Time = 0.28 (sec) , antiderivative size = 132, normalized size of antiderivative = 1.39

$$\int \frac{(dx)^{-1+\frac{n}{2}} \left( -ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx =$$

$$\frac{2 \left( (b^2 - 4ac) d^{\frac{1}{2}n-1} h x^{\frac{1}{2}n} + (2c^2 f - b c g) d^{\frac{1}{2}n-1} x^n + (bcf - 2acg) d^{\frac{1}{2}n-1} \right) \sqrt{cx^{2n} + bx^n + a}}{(b^2c - 4ac^2)nx^{2n} + (b^3 - 4abc)nx^n + (ab^2 - 4a^2c)n}$$

[In] integrate((d\*x)^(-1+1/2\*n)\*(-a\*h+c\*f\*x^(1/2\*n)+c\*g\*x^(3/2\*n)+c\*h\*x^(2\*n))/(a+b\*x^n+c\*x^(2\*n))^(3/2),x, algorithm="fricas")

[Out] -2\*((b^2 - 4\*a\*c)\*d^(1/2\*n - 1)\*h\*x^(1/2\*n) + (2\*c^2\*f - b\*c\*g)\*d^(1/2\*n - 1)\*x^n + (b\*c\*f - 2\*a\*c\*g)\*d^(1/2\*n - 1))\*sqrt(c\*x^(2\*n) + b\*x^n + a)/((b^2\*c - 4\*a\*c^2)\*n\*x^(2\*n) + (b^3 - 4\*a\*b\*c)\*n\*x^n + (a\*b^2 - 4\*a^2\*c)\*n)

**Sympy [F(-1)]**

Timed out.

$$\int \frac{(dx)^{-1+\frac{n}{2}} \left( -ah + cf x^{n/2} + cg x^{3n/2} + ch x^{2n} \right)}{(a + bx^n + cx^{2n})^{3/2}} dx = \text{Timed out}$$

[In] integrate((d\*x)\*\*(-1+1/2\*n)\*(-a\*h+c\*f\*x\*\*(1/2\*n)+c\*g\*x\*\*(3/2\*n)+c\*h\*x\*\*(2\*n)))/(a+b\*x\*\*n+c\*x\*\*(2\*n))\*\*(3/2),x)

[Out] Timed out

**Maxima [F]**

$$\int \frac{(dx)^{-1+\frac{n}{2}} (-ah + cfx^{n/2} + cgx^{3n/2} + chx^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx = \int \frac{(chx^{2n} + cgx^{\frac{3}{2}n} + cfx^{\frac{1}{2}n} - ah)(dx)^{\frac{1}{2}n-1}}{(cx^{2n} + bx^n + a)^{\frac{3}{2}}} dx$$

[In] integrate((d\*x)^(-1+1/2\*n)\*(-a\*h+c\*f\*x^(1/2\*n)+c\*g\*x^(3/2\*n)+c\*h\*x^(2\*n))/(a+b\*x^n+c\*x^(2\*n))^(3/2),x, algorithm="maxima")

[Out] integrate((c\*h\*x^(2\*n) + c\*g\*x^(3/2\*n) + c\*f\*x^(1/2\*n) - a\*h)\*(d\*x)^(1/2\*n - 1)/(c\*x^(2\*n) + b\*x^n + a)^(3/2), x)

**Giac [F]**

$$\int \frac{(dx)^{-1+\frac{n}{2}} (-ah + cfx^{n/2} + cgx^{3n/2} + chx^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx = \int \frac{(chx^{2n} + cgx^{\frac{3}{2}n} + cfx^{\frac{1}{2}n} - ah)(dx)^{\frac{1}{2}n-1}}{(cx^{2n} + bx^n + a)^{\frac{3}{2}}} dx$$

[In] integrate((d\*x)^(-1+1/2\*n)\*(-a\*h+c\*f\*x^(1/2\*n)+c\*g\*x^(3/2\*n)+c\*h\*x^(2\*n))/(a+b\*x^n+c\*x^(2\*n))^(3/2),x, algorithm="giac")

[Out] integrate((c\*h\*x^(2\*n) + c\*g\*x^(3/2\*n) + c\*f\*x^(1/2\*n) - a\*h)\*(d\*x)^(1/2\*n - 1)/(c\*x^(2\*n) + b\*x^n + a)^(3/2), x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{(dx)^{-1+\frac{n}{2}} (-ah + cfx^{n/2} + cgx^{3n/2} + chx^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx = \int \frac{(dx)^{\frac{n}{2}-1} (cfx^{n/2} - ah + cgx^{\frac{3}{2}n} + chx^{2n})}{(a + bx^n + cx^{2n})^{3/2}} dx$$

[In] int(((d\*x)^(n/2 - 1)\*(c\*f\*x^(n/2) - a\*h + c\*g\*x^((3\*n)/2) + c\*h\*x^(2\*n)))/(a + b\*x^n + c\*x^(2\*n))^(3/2),x)

[Out] int(((d\*x)^(n/2 - 1)\*(c\*f\*x^(n/2) - a\*h + c\*g\*x^((3\*n)/2) + c\*h\*x^(2\*n)))/(a + b\*x^n + c\*x^(2\*n))^(3/2), x)

### 3.16 $\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n +$

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Giac [B] (verification not implemented)	297
Mupad [B] (verification not implemented)	297

#### Optimal result

Integrand size = 56, antiderivative size = 29

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n + np)x^n + c(1+m+2n(1+p))x^{2n}) dx = \frac{(gx)^{1+m} (a + bx^n + cx^{2n})^{1+p}}{g}$$

[Out]  $(g*x)^{(1+m)}*(a+b*x^n+c*x^{(2*n)})^{(p+1)}/g$

#### Rubi [A] (verified)

Time = 0.05 (sec) , antiderivative size = 29, normalized size of antiderivative = 1.00, number of steps used = 1, number of rules used = 1,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.018$ , Rules used = {1761}

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n + np)x^n + c(1+m+2n(1+p))x^{2n}) dx = \frac{(gx)^{m+1} (a + bx^n + cx^{2n})^{p+1}}{g}$$

[In]  $\text{Int}[(g*x)^m*(a + b*x^n + c*x^{(2*n)})^p*(a*(1+m) + b*(1+m+n + n*p)*x^n + c*(1+m+2*n*(1+p))*x^{(2*n)}], x]$

[Out]  $((g*x)^{(1+m)}*(a + b*x^n + c*x^{(2*n)})^{(1+p)})/g$

#### Rule 1761

$\text{Int}[(g_*)*(x_)^{(m_*)}*((a_*) + (b_*)*(x_)^{(n_*)} + (c_*)*(x_)^{(n2_*)})^{(p_*)}*((d_*) + (e_*)*(x_)^{(n_*)} + (f_*)*(x_)^{(n2_*)}), x\_Symbol] \rightarrow \text{Simp}[d*(g*x)^{(m+1)}*((a + b*x^n + c*x^{(2*n)})^{(p+1)}/(a*g*(m+1))), x] /;$   $\text{FreeQ}\{a, b, c, d, e, f, g, m, n, p\}, x] \ \&\& \ \text{EqQ}[n2, 2*n] \ \&\& \ \text{EqQ}[a*e*(m+1) - b*d*(m+n$

$(p + 1) + 1), 0]$  && EqQ[ $a*f*(m + 1) - c*d*(m + 2*n*(p + 1) + 1), 0]$  && NeQ[m, -1]

Rubi steps

$$\text{integral} = \frac{(gx)^{1+m} (a + bx^n + cx^{2n})^{1+p}}{g}$$

**Mathematica [A] (verified)**

Time = 1.98 (sec) , antiderivative size = 24, normalized size of antiderivative = 0.83

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n+np)x^n + c(1+m+2n(1+p))x^{2n}) dx = x(gx)^m (a + x^n(b + cx^n))^{1+p}$$

[In] Integrate[(g\*x)^m\*(a + b\*x^n + c\*x^(2\*n))^p\*(a\*(1 + m) + b\*(1 + m + n + n\*p)\*x^n + c\*(1 + m + 2\*n\*(1 + p))\*x^(2\*n)),x]

[Out] x\*(g\*x)^m\*(a + x^n\*(b + c\*x^n))^(1 + p)

**Maple [B] (verified)**

Leaf count of result is larger than twice the leaf count of optimal. 89 vs. 2(29) = 58.

Time = 102.39 (sec) , antiderivative size = 90, normalized size of antiderivative = 3.10

method	result	size
parallelrisch	$\frac{x x^n (gx)^m (a + b x^n + c x^{2n})^p b c + x x^{2n} (gx)^m (a + b x^n + c x^{2n})^p c^2 + x (gx)^m (a + b x^n + c x^{2n})^p a c}{c}$	90

[In] int((g\*x)^m\*(a+b\*x^n+c\*x^(2\*n))^p\*(a\*(1+m)+b\*(n\*p+m+n+1)\*x^n+c\*(1+m+2\*n\*(1+p))\*x^(2\*n)),x,method=\_RETURNVERBOSE)

[Out] (x\*x^n\*(g\*x)^m\*(a+b\*x^n+c\*x^(2\*n))^p\*b\*c+x\*x^(2\*n)\*(g\*x)^m\*(a+b\*x^n+c\*x^(2\*n))^p\*c^2+x\*(g\*x)^m\*(a+b\*x^n+c\*x^(2\*n))^p\*a\*c)/c

**Fricas [B] (verification not implemented)**

Leaf count of result is larger than twice the leaf count of optimal. 65 vs.  $2(29) = 58$ .

Time = 0.26 (sec) , antiderivative size = 65, normalized size of antiderivative = 2.24

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n+np)x^n + c(1+m+2n(1+p))x^{2n}) dx$$

$$= (c x x^{2n} e^{(m \log(g) + m \log(x))} + b x x^n e^{(m \log(g) + m \log(x))} + a x e^{(m \log(g) + m \log(x))}) (c x^{2n} + b x^n + a)^p$$

```
[In] integrate((g*x)^m*(a+b*x^n+c*x^(2*n))^p*(a*(1+m)+b*(n*p+m+n+1)*x^n+c*(1+m+2*n*(1+p))*x^(2*n)),x, algorithm="fricas")
```

```
[Out] (c*x*x^(2*n)*e^(m*log(g) + m*log(x)) + b*x*x^n*e^(m*log(g) + m*log(x)) + a*x*e^(m*log(g) + m*log(x)))*(c*x^(2*n) + b*x^n + a)^p
```

**Sympy [F(-1)]**

Timed out.

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n+np)x^n + c(1+m+2n(1+p))x^{2n}) dx = \text{Timed out}$$

```
[In] integrate((g*x)**m*(a+b*x**n+c*x**(2*n))**p*(a*(1+m)+b*(n*p+m+n+1)*x**n+c*(1+m+2*n*(1+p))*x**(2*n)),x)
```

```
[Out] Timed out
```

**Maxima [B] (verification not implemented)**

Leaf count of result is larger than twice the leaf count of optimal. 60 vs.  $2(29) = 58$ .

Time = 0.26 (sec) , antiderivative size = 60, normalized size of antiderivative = 2.07

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n+np)x^n + c(1+m+2n(1+p))x^{2n}) dx$$

$$= (a g^m x x^m + c g^m x e^{(m \log(x) + 2n \log(x))} + b g^m x e^{(m \log(x) + n \log(x))}) (c x^{2n} + b x^n + a)^p$$

```
[In] integrate((g*x)^m*(a+b*x^n+c*x^(2*n))^p*(a*(1+m)+b*(n*p+m+n+1)*x^n+c*(1+m+2*n*(1+p))*x^(2*n)),x, algorithm="maxima")
```

```
[Out] (a*g^m*x*x^m + c*g^m*x*e^(m*log(x) + 2*n*log(x)) + b*g^m*x*e^(m*log(x) + n*log(x)))*(c*x^(2*n) + b*x^n + a)^p
```



**Giac [B] (verification not implemented)**

Leaf count of result is larger than twice the leaf count of optimal. 96 vs.  $2(29) = 58$ .

Time = 0.44 (sec) , antiderivative size = 96, normalized size of antiderivative = 3.31

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n+np)x^n + c(1+m+2n(1+p))x^{2n}) dx = (cx^{2n} + bx^n + a)^p cxx^{2n} e^{(m \log(g) + m \log(x))} + (cx^{2n} + bx^n + a)^p bxx^n e^{(m \log(g) + m \log(x))} + (cx^{2n} + bx^n + a)^p a x e^{(m \log(g) + m \log(x))}$$

[In] integrate((g\*x)^m\*(a+b\*x^n+c\*x^(2\*n))^p\*(a\*(1+m)+b\*(n\*p+m+n+1)\*x^n+c\*(1+m+2\*n\*(1+p))\*x^(2\*n)),x, algorithm="giac")

[Out] (c\*x^(2\*n) + b\*x^n + a)^p\*c\*x\*x^(2\*n)\*e^(m\*log(g) + m\*log(x)) + (c\*x^(2\*n) + b\*x^n + a)^p\*b\*x\*x^n\*e^(m\*log(g) + m\*log(x)) + (c\*x^(2\*n) + b\*x^n + a)^p\*a\*x\*e^(m\*log(g) + m\*log(x))

**Mupad [B] (verification not implemented)**

Time = 8.73 (sec) , antiderivative size = 50, normalized size of antiderivative = 1.72

$$\int (gx)^m (a + bx^n + cx^{2n})^p (a(1+m) + b(1+m+n+np)x^n + c(1+m+2n(1+p))x^{2n}) dx = (ax(gx)^m + bxx^n(gx)^m + cxx^{2n}(gx)^m) (a + bx^n + cx^{2n})^p$$

[In] int((g\*x)^m\*(a + b\*x^n + c\*x^(2\*n))^p\*(a\*(m + 1) + b\*x^n\*(m + n + n\*p + 1) + c\*x^(2\*n)\*(m + 2\*n\*(p + 1) + 1)),x)

[Out] (a\*x\*(g\*x)^m + b\*x\*x^n\*(g\*x)^m + c\*x\*x^(2\*n)\*(g\*x)^m)\*(a + b\*x^n + c\*x^(2\*n))^p

$$3.17 \quad \int \frac{A+Bx^n+Cx^{2n}+Dx^{3n}}{(a+bx^n+cx^{2n})^2} dx$$

Optimal result	298
Rubi [A] (verified)	299
Mathematica [B] (verified)	301
Maple [F]	301
Fricas [F]	301
Sympy [F(-1)]	301
Maxima [F]	302
Giac [F]	302
Mupad [F(-1)]	302

### Optimal result

Integrand size = 38, antiderivative size = 494

$$\int \frac{A+Bx^n+Cx^{2n}+Dx^{3n}}{(a+bx^n+cx^{2n})^2} dx$$

$$= \frac{x(Ac(b^2-2ac) - a(bBc - 2acC + abD) + (bc(Ac + aC) - ab^2D - 2ac(Bc - aD))x^n)}{ac(b^2-4ac)n(a+bx^n+cx^{2n})}$$

$$+ \frac{(ab^2D - bc(Ac + aC)(1-n) + 2ac(Bc(1-n) - aD(1+n)) + \frac{Ac^2(4ac(1-2n)-b^2(1-n)) - a(4ac^2C+b^3D-b^2cC(1-n))}{\sqrt{b^2-4ac}})}{ac(b^2-4ac)(b-\sqrt{b^2-4ac})n}$$

$$+ \frac{(ab^2D - bc(Ac + aC)(1-n) + 2ac(Bc(1-n) - aD(1+n)) - \frac{Ac^2(4ac(1-2n)-b^2(1-n)) - a(4ac^2C+b^3D-b^2cC(1-n))}{\sqrt{b^2-4ac}})}{ac(b^2-4ac)(b+\sqrt{b^2-4ac})n}$$

```
[Out] x*(A*c*(-2*a*c+b^2)-a*(B*b*c-2*C*a*c+D*a*b)+(b*c*(A*c+C*a)-a*b^2*D-2*a*c*(B*c-D*a))*x^n)/a/c/(-4*a*c+b^2)/n/(a+b*x^n+c*x^(2*n))+x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b-(-4*a*c+b^2)^(1/2)))*(a*b^2*D-b*c*(A*c+C*a)*(1-n)+2*a*c*(B*c*(1-n)-a*D*(1+n))+(A*c^2*(4*a*c*(1-2*n)-b^2*(1-n))-a*(4*a*c^2*C+b^3*D-b^2*c*C*(1-n)-2*b*c*(B*c*n+a*D*(2+n))))/(-4*a*c+b^2)^(1/2))/a/c/(-4*a*c+b^2)/n/(b-(-4*a*c+b^2)^(1/2))+x*hypergeom([1, 1/n], [1+1/n], -2*c*x^n/(b+(-4*a*c+b^2)^(1/2)))*(a*b^2*D-b*c*(A*c+C*a)*(1-n)+2*a*c*(B*c*(1-n)-a*D*(1+n))+(-A*c^2*(4*a*c*(1-2*n)-b^2*(1-n))+a*(4*a*c^2*C+b^3*D-b^2*c*C*(1-n)-2*b*c*(B*c*n+a*D*(2+n))))/(-4*a*c+b^2)^(1/2))/a/c/(-4*a*c+b^2)/n/(b+(-4*a*c+b^2)^(1/2))
```

**Rubi [A] (verified)**

Time = 0.96 (sec) , antiderivative size = 494, normalized size of antiderivative = 1.00, number of steps used = 4, number of rules used = 3,  $\frac{\text{number of rules}}{\text{integrand size}} = 0.079$ , Rules used = {1808, 1436, 251}

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx$$

$$= \frac{x(x^n(bc(aC + Ac) - ab^2D - 2ac(Bc - aD)) + Ac(b^2 - 2ac) - a(abD - 2acC + bBc))}{acn(b^2 - 4ac)(a + bx^n + cx^{2n})}$$

$$+ \frac{x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b - \sqrt{b^2 - 4ac}}\right) \left(\frac{Ac^2(4ac(1-2n) - b^2(1-n)) - a(-2bc(aD(n+2) + Bcn) + 4ac^2C + b^3D - b^2D)}{\sqrt{b^2 - 4ac}}\right)}{acn(b^2 - 4ac)(b - \sqrt{b^2 - 4ac})}$$

$$+ \frac{x \operatorname{Hypergeometric2F1}\left(1, \frac{1}{n}, 1 + \frac{1}{n}, -\frac{2cx^n}{b + \sqrt{b^2 - 4ac}}\right) \left(-\frac{Ac^2(4ac(1-2n) - b^2(1-n)) - a(-2bc(aD(n+2) + Bcn) + 4ac^2C + b^3D - b^2D)}{\sqrt{b^2 - 4ac}}\right)}{acn(b^2 - 4ac)(\sqrt{b^2 - 4ac} + b)}$$

[In] Int[(A + B\*x^n + C\*x^(2\*n) + D\*x^(3\*n))/(a + b\*x^n + c\*x^(2\*n))^2, x]

[Out] (x\*(A\*c\*(b^2 - 2\*a\*c) - a\*(b\*B\*c - 2\*a\*c\*C + a\*b\*D) + (b\*c\*(A\*c + a\*C) - a\*b^2\*D - 2\*a\*c\*(B\*c - a\*D))\*x^n)/(a\*c\*(b^2 - 4\*a\*c)\*n\*(a + b\*x^n + c\*x^(2\*n))) + ((a\*b^2\*D - b\*c\*(A\*c + a\*C)\*(1 - n) + 2\*a\*c\*(B\*c\*(1 - n) - a\*D\*(1 + n)) + (A\*c^2\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n)) - a\*(4\*a\*c^2\*C + b^3\*D - b^2\*c\*C\*(1 - n) - 2\*b\*c\*(B\*c\*n + a\*D\*(2 + n))))/Sqrt[b^2 - 4\*a\*c])\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b - Sqrt[b^2 - 4\*a\*c])]/(a\*c\*(b^2 - 4\*a\*c)\*(b - Sqrt[b^2 - 4\*a\*c])\*n) + ((a\*b^2\*D - b\*c\*(A\*c + a\*C)\*(1 - n) + 2\*a\*c\*(B\*c\*(1 - n) - a\*D\*(1 + n)) - (A\*c^2\*(4\*a\*c\*(1 - 2\*n) - b^2\*(1 - n)) - a\*(4\*a\*c^2\*C + b^3\*D - b^2\*c\*C\*(1 - n) - 2\*b\*c\*(B\*c\*n + a\*D\*(2 + n))))/Sqrt[b^2 - 4\*a\*c])\*x\*Hypergeometric2F1[1, n^(-1), 1 + n^(-1), (-2\*c\*x^n)/(b + Sqrt[b^2 - 4\*a\*c])]/(a\*c\*(b^2 - 4\*a\*c)\*(b + Sqrt[b^2 - 4\*a\*c])\*n)

Rule 251

Int[((a\_) + (b\_)\*(x\_)^(n\_))^(p\_), x\_Symbol] := Simp[a^p\*x\*Hypergeometric2F1[-p, 1/n, 1/n + 1, (-b)\*(x^n/a)], x] /; FreeQ[{a, b, n, p}, x] && !IGtQ[p, 0] && !IntegerQ[1/n] && !LtQ[Simplify[1/n + p], 0] && (IntegerQ[p] || GtQ[a, 0])

Rule 1436

Int[((d\_) + (e\_)\*(x\_)^(n\_))/((a\_) + (b\_)\*(x\_)^(n\_) + (c\_)\*(x\_)^(2n\_)), x\_Symbol] := With[{q = Rt[b^2 - 4\*a\*c, 2]}, Dist[e/2 + (2\*c\*d - b\*e)/(2\*q), Int[1/(b/2 - q/2 + c\*x^n), x], x] + Dist[e/2 - (2\*c\*d - b\*e)/(2\*q), Int[1/(b/2 + q/2 + c\*x^n), x], x]] /; FreeQ[{a, b, c, d, e, n}, x] && EqQ[n2, 2\*n] && NeQ[b^2 - 4\*a\*c, 0] && NeQ[c\*d^2 - b\*d\*e + a\*e^2, 0] && (PosQ[b^2 - 4\*a\*c] || !IGtQ[n/2, 0])

## Rule 1808

```

Int[(P3_)*((a_) + (b_.)*(x_)^(n_) + (c_.)*(x_)^(n2_))^(p_), x_Symbol] := With[
  {d = Coeff[P3, x^n, 0], e = Coeff[P3, x^n, 1], f = Coeff[P3, x^n, 2], g = Coeff[P3, x^n, 3]},
  Simp[(-x)*(b^2*c*d - 2*a*c*(c*d - a*f) - a*b*(c*e + a*g) + (b*c*(c*d + a*f) - a*b^2*g - 2*a*c*(c*e - a*g))*x^n]*((a + b*x^n + c*x^(2*n))^(p + 1)/(a*c*n*(p + 1)*(b^2 - 4*a*c))), x] - Dist[1/(a*c*n*(p + 1)*(b^2 - 4*a*c)), Int[(a + b*x^n + c*x^(2*n))^(p + 1)*Simp[a*b*(c*e + a*g) - b^2*c*d*(n + n*p + 1) - 2*a*c*(a*f - c*d*(2*n*(p + 1) + 1)) + (a*b^2*g*(n*(p + 2) + 1) - b*c*(c*d + a*f)*(n*(2*p + 3) + 1) - 2*a*c*(a*g*(n + 1) - c*e*(n*(2*p + 3) + 1)))*x^n, x], x] /; FreeQ[{a, b, c, n}, x] && EqQ[n2, 2*n] && PolyQ[P3, x^n, 3] && NeQ[b^2 - 4*a*c, 0] && ILtQ[p, -1]

```

## Rubi steps

integral

$$\begin{aligned}
&= \frac{x(Ac(b^2 - 2ac) - a(bBc - 2acC + abD) + (bc(Ac + aC) - ab^2D - 2ac(Bc - aD))x^n)}{ac(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{\int \frac{ab(Bc+aD) - 2ac(aC - Ac(1-2n)) - Ab^2c(1-n) + (ab^2D - bc(Ac+aC)(1-n) + 2ac(Bc(1-n) - aD(1+n)))x^n}{a+bx^n+cx^{2n}} dx}{ac(b^2 - 4ac)n} \\
&= \frac{x(Ac(b^2 - 2ac) - a(bBc - 2acC + abD) + (bc(Ac + aC) - ab^2D - 2ac(Bc - aD))x^n)}{ac(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{(ab^2D - bc(Ac + aC)(1 - n) + 2ac(Bc(1 - n) - aD(1 + n))) - \frac{Ac^2(4ac(1-2n) - b^2(1-n)) - a(4ac^2C + b^3D - b^2cC(1 - \sqrt{b^2 - 4ac}))}{\sqrt{b^2 - 4ac}}}{2ac(b^2 - 4ac)n} \\
&+ \frac{(ab^2D - bc(Ac + aC)(1 - n) + 2ac(Bc(1 - n) - aD(1 + n))) + \frac{Ac^2(4ac(1-2n) - b^2(1-n)) - a(4ac^2C + b^3D - b^2cC(1 - \sqrt{b^2 - 4ac}))}{\sqrt{b^2 - 4ac}}}{2ac(b^2 - 4ac)n} \\
&= \frac{x(Ac(b^2 - 2ac) - a(bBc - 2acC + abD) + (bc(Ac + aC) - ab^2D - 2ac(Bc - aD))x^n)}{ac(b^2 - 4ac)n(a + bx^n + cx^{2n})} \\
&+ \frac{(ab^2D - bc(Ac + aC)(1 - n) + 2ac(Bc(1 - n) - aD(1 + n))) + \frac{Ac^2(4ac(1-2n) - b^2(1-n)) - a(4ac^2C + b^3D - b^2cC(1 - \sqrt{b^2 - 4ac}))}{\sqrt{b^2 - 4ac}}}{ac(b^2 - 4ac)(b - \sqrt{b^2 - 4ac})n} \\
&+ \frac{(ab^2D - bc(Ac + aC)(1 - n) + 2ac(Bc(1 - n) - aD(1 + n))) - \frac{Ac^2(4ac(1-2n) - b^2(1-n)) - a(4ac^2C + b^3D - b^2cC(1 - \sqrt{b^2 - 4ac}))}{\sqrt{b^2 - 4ac}}}{ac(b^2 - 4ac)(b + \sqrt{b^2 - 4ac})n}
\end{aligned}$$

**Mathematica [B] (verified)**

Leaf count is larger than twice the leaf count of optimal. 5439 vs.  $2(494) = 988$ .

Time = 8.36 (sec) , antiderivative size = 5439, normalized size of antiderivative = 11.01

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx = \text{Result too large to show}$$

[In] Integrate[(A + B\*x^n + C\*x^(2\*n) + D\*x^(3\*n))/(a + b\*x^n + c\*x^(2\*n))^2,x]

[Out] Result too large to show

**Maple [F]**

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx$$

[In] int((A+B\*x^n+C\*x^(2\*n)+D\*x^(3\*n))/(a+b\*x^n+c\*x^(2\*n))^2,x)

[Out] int((A+B\*x^n+C\*x^(2\*n)+D\*x^(3\*n))/(a+b\*x^n+c\*x^(2\*n))^2,x)

**Fricas [F]**

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx = \int \frac{\text{capitalD}x^{3n} + Cx^{2n} + Bx^n + A}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((A+B\*x^n+C\*x^(2\*n)+D\*x^(3\*n))/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="fricas")

[Out] integral((D\*x^(3\*n) + C\*x^(2\*n) + B\*x^n + A)/(c^2\*x^(4\*n) + b^2\*x^(2\*n) + 2\*a\*b\*x^n + a^2 + 2\*(b\*c\*x^n + a\*c)\*x^(2\*n)), x)

**Sympy [F(-1)]**

Timed out.

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx = \text{Timed out}$$

[In] integrate((A+B\*x\*\*n+C\*x\*\*(2\*n)+D\*x\*\*(3\*n))/(a+b\*x\*\*n+c\*x\*\*(2\*n))\*\*2,x)

[Out] Timed out

**Maxima [F]**

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx = \int \frac{Dx^{3n} + Cx^{2n} + Bx^n + A}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((A+B\*x^n+C\*x^(2\*n)+D\*x^(3\*n))/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="maxima")

[Out] ((C\*a\*b\*c - 2\*B\*a\*c^2 + A\*b\*c^2 - (a\*b^2 - 2\*a^2\*c)\*D)\*x\*x^n - (D\*a^2\*b - 2\*C\*a^2\*c + B\*a\*b\*c - (b^2\*c - 2\*a\*c^2)\*A)\*x)/(a^2\*b^2\*c\*n - 4\*a^3\*c^2\*n + (a\*b^2\*c^2\*n - 4\*a^2\*c^3\*n)\*x^(2\*n) + (a\*b^3\*c\*n - 4\*a^2\*b\*c^2\*n)\*x^n) - integrate(-(D\*a^2\*b - 2\*C\*a^2\*c + B\*a\*b\*c - (2\*a\*c^2\*(2\*n - 1) - b^2\*c\*(n - 1))\*A + (C\*a\*b\*c\*(n - 1) - 2\*B\*a\*c^2\*(n - 1) + A\*b\*c^2\*(n - 1) - (2\*a^2\*c\*(n + 1) - a\*b^2)\*D)\*x^n)/(a^2\*b^2\*c\*n - 4\*a^3\*c^2\*n + (a\*b^2\*c^2\*n - 4\*a^2\*c^3\*n)\*x^(2\*n) + (a\*b^3\*c\*n - 4\*a^2\*b\*c^2\*n)\*x^n), x)

**Giac [F]**

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx = \int \frac{Dx^{3n} + Cx^{2n} + Bx^n + A}{(cx^{2n} + bx^n + a)^2} dx$$

[In] integrate((A+B\*x^n+C\*x^(2\*n)+D\*x^(3\*n))/(a+b\*x^n+c\*x^(2\*n))^2,x, algorithm="giac")

[Out] integrate((D\*x^(3\*n) + C\*x^(2\*n) + B\*x^n + A)/(c\*x^(2\*n) + b\*x^n + a)^2, x)

**Mupad [F(-1)]**

Timed out.

$$\int \frac{A + Bx^n + Cx^{2n} + Dx^{3n}}{(a + bx^n + cx^{2n})^2} dx = \int \frac{A + Cx^{2n} + x^{3n}D + Bx^n}{(a + bx^n + cx^{2n})^2} dx$$

[In] int((A + C\*x^(2\*n) + x^(3\*n)\*D + B\*x^n)/(a + b\*x^n + c\*x^(2\*n))^2,x)

[Out] int((A + C\*x^(2\*n) + x^(3\*n)\*D + B\*x^n)/(a + b\*x^n + c\*x^(2\*n))^2, x)

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# CHAPTER 4

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## APPENDIX

4.1 Listing of Grading functions . . . . . 303

### 4.1 Listing of Grading functions

The following are the current version of the grading functions used for grading the quality of the antiderivative with reference to the optimal antiderivative included in the test suite.

There is a version for Maple and for Mathematica/Rubi. There is a version for grading Sympy and version for use with Sagemath.

The following are links to the current source code.

The following are the listings of source code of the grading functions.

#### Mathematica and Rubi grading function

```
(* Original version thanks to Albert Rich emailed on 03/21/2017 *)
(* ::Package:: *)

(* Nasser: April 7, 2022. add second output which gives reason for the grade *)
(*      Small rewrite of logic in main function to make it*)
(*      match Maple's logic. No change in functionality otherwise*)

(* ::Subsection:: *)
(*GradeAntiderivative[result,optimal]*)

(* ::Text:: *)
(*If result and optimal are mathematical expressions, *)
```

```

(*      GradeAntiderivative[result,optimal] returns*)
(* "F" if the result fails to integrate an expression that*)
(*   is integrable*)
(* "C" if result involves higher level functions than necessary*)
(* "B" if result is more than twice the size of the optimal*)
(*   antiderivative*)
(* "A" if result can be considered optimal*)

GradeAntiderivative[result_,optimal_] := Module[{expnResult,expnOptimal,leafCountResult,leafCo
  expnResult = ExpnType[result];
  expnOptimal = ExpnType[optimal];
  leafCountResult = LeafCount[result];
  leafCountOptimal = LeafCount[optimal];

  (*Print["expnResult=",expnResult," expnOptimal=",expnOptimal];*)
  If[expnResult<=expnOptimal,
    If[Not[FreeQ[result,Complex]], (*result contains complex*)
      If[Not[FreeQ[optimal,Complex]], (*optimal contains complex*)
        If[leafCountResult<=2*leafCountOptimal,
          finalresult={"A",""}
          ,(*ELSE*)
          finalresult={"B","Both result and optimal contain complex but leaf count is
        ]
      ,(*ELSE*)
      finalresult={"C","Result contains complex when optimal does not."}
    ]
    ,(*ELSE*)(*result does not contains complex*)
    If[leafCountResult<=2*leafCountOptimal,
      finalresult={"A",""}
      ,(*ELSE*)
      finalresult={"B","Leaf count is larger than twice the leaf count of optimal. $"}
    ]
  ]
  ,(*ELSE*) (*expnResult>expnOptimal*)
  If[FreeQ[result,Integrate] && FreeQ[result,Int],
    finalresult={"C","Result contains higher order function than in optimal. Order "<>
    ,
    finalresult={"F","Contains unresolved integral."}
  ]
];

  finalresult
]

(* ::Text:: *)
(*The following summarizes the type number assigned an *)

```



```

(*expression based on the functions it involves*)
(*1 = rational function*)
(*2 = algebraic function*)
(*3 = elementary function*)
(*4 = special function*)
(*5 = hyperpergeometric function*)
(*6 = appell function*)
(*7 = rootsum function*)
(*8 = integrate function*)
(*9 = unknown function*)

```

```

ExpnType[expn_] :=
  If[AtomQ[expn],
    1,
    If[ListQ[expn],
      Max[Map[ExpnType, expn]],
      If[Head[expn]===Power,
        If[IntegerQ[expn[[2]]],
          ExpnType[expn[[1]]],
          If[Head[expn[[2]]]===Rational,
            If[IntegerQ[expn[[1]]] || Head[expn[[1]]]===Rational,
              1,
              Max[ExpnType[expn[[1]], 2]],
            Max[ExpnType[expn[[1]], ExpnType[expn[[2]], 3]]],
          If[Head[expn]===Plus || Head[expn]===Times,
            Max[ExpnType[First[expn]], ExpnType[Rest[expn]]],
            If[ElementaryFunctionQ[Head[expn]],
              Max[3, ExpnType[expn[[1]]],
            If[SpecialFunctionQ[Head[expn]],
              Apply[Max, Append[Map[ExpnType, Apply[List, expn]], 4]],
            If[HypergeometricFunctionQ[Head[expn]],
              Apply[Max, Append[Map[ExpnType, Apply[List, expn]], 5]],
            If[AppellFunctionQ[Head[expn]],
              Apply[Max, Append[Map[ExpnType, Apply[List, expn]], 6]],
            If[Head[expn]===RootSum,
              Apply[Max, Append[Map[ExpnType, Apply[List, expn]], 7]],
            If[Head[expn]===Integrate || Head[expn]===Int,
              Apply[Max, Append[Map[ExpnType, Apply[List, expn]], 8]],
            9]]]]]]]]]]]

```

```

ElementaryFunctionQ[func_] :=
  MemberQ[{
    Exp, Log,
    Sin, Cos, Tan, Cot, Sec, Csc,
    ArcSin, ArcCos, ArcTan, ArcCot, ArcSec, ArcCsc,

```

```

    Sinh, Cosh, Tanh, Coth, Sech, Csch,
    ArcSinh, ArcCosh, ArcTanh, ArcCoth, ArcSech, ArcCsch
  }, func]

SpecialFunctionQ[func_] :=
  MemberQ[{
    Erf, Erfc, Erfi,
    FresnelS, FresnelC,
    ExpIntegralE, ExpIntegralEi, LogIntegral,
    SinIntegral, CosIntegral, SinhIntegral, CoshIntegral,
    Gamma, LogGamma, PolyGamma,
    Zeta, PolyLog, ProductLog,
    EllipticF, EllipticE, EllipticPi
  }, func]

HypergeometricFunctionQ[func_] :=
  MemberQ[{Hypergeometric1F1, Hypergeometric2F1, HypergeometricPFQ}, func]

AppellFunctionQ[func_] :=
  MemberQ[{AppellF1}, func]

```

## Maple grading function

```

# File: GradeAntiderivative.mpl
# Original version thanks to Albert Rich emailed on 03/21/2017

#Nasser 03/22/2017 Use Maple leaf count instead since buildin
#Nasser 03/23/2017 missing 'ln' for ElementaryFunctionQ added
#Nasser 03/24/2017 corrected the check for complex result
#Nasser 10/27/2017 check for leafsize and do not call ExpnType()
#
# if leaf size is "too large". Set at 500,000
#Nasser 12/22/2019 Added debug flag, added 'dilog' to special functions
#
# see problem 156, file Apostol_Problems
#Nasser 4/07/2022 add second output which gives reason for the grade

GradeAntiderivative := proc(result, optimal)
local leaf_count_result,
      leaf_count_optimal,
      ExpnType_result,
      ExpnType_optimal,
      debug:=false;

      leaf_count_result:=leafcount(result);

```

```

#do NOT call ExpnType() if leaf size is too large. Recursion problem
if leaf_count_result > 500000 then
    return "B","result has leaf size over 500,000. Avoiding possible recursion issues
fi;

leaf_count_optimal := leafcount(optimal);
ExpnType_result := ExpnType(result);
ExpnType_optimal := ExpnType(optimal);

if debug then
    print("ExpnType_result",ExpnType_result," ExpnType_optimal=",ExpnType_optimal);
fi;

# If result and optimal are mathematical expressions,
# GradeAntiderivative[result,optimal] returns
# "F" if the result fails to integrate an expression that
# is integrable
# "C" if result involves higher level functions than necessary
# "B" if result is more than twice the size of the optimal
# antiderivative
# "A" if result can be considered optimal

#This check below actually is not needed, since I only
#call this grading only for passed integrals. i.e. I check
#for "F" before calling this. But no harm of keeping it here.
#just in case.

if not type(result,freeof('int')) then
    return "F","Result contains unresolved integral";
fi;

if ExpnType_result<=ExpnType_optimal then
    if debug then
        print("ExpnType_result<=ExpnType_optimal");
    fi;
    if is_contains_complex(result) then
        if is_contains_complex(optimal) then
            if debug then
                print("both result and optimal complex");
            fi;
            if leaf_count_result<=2*leaf_count_optimal then
                return "A"," ";
            else
                return "B",cat("Both result and optimal contain complex but leaf count of
                                convert(leaf_count_result,string)," vs. $2 ("
```

```

                                convert(leaf_count_optimal,string)," ) = ",convert(2*leaf_c
    end if
else #result contains complex but optimal is not
    if debug then
        print("result contains complex but optimal is not");
    fi;
    return "C","Result contains complex when optimal does not.";
fi;
else # result do not contain complex
    # this assumes optimal do not as well. No check is needed here.
    if debug then
        print("result do not contain complex, this assumes optimal do not as well")
    fi;
    if leaf_count_result<=2*leaf_count_optimal then
        if debug then
            print("leaf_count_result<=2*leaf_count_optimal");
        fi;
        return "A"," ";
    else
        if debug then
            print("leaf_count_result>2*leaf_count_optimal");
        fi;
        return "B",cat("Leaf count of result is larger than twice the leaf count of opt
                                convert(leaf_count_result,string)," $ vs. $2(",
                                convert(leaf_count_optimal,string)," )=",convert(2*leaf_coun
    fi;
fi;
else #ExpnType(result) > ExpnType(optimal)
    if debug then
        print("ExpnType(result) > ExpnType(optimal)");
    fi;
    return "C",cat("Result contains higher order function than in optimal. Order ",
                    convert(ExpnType_result,string)," vs. order ",
                    convert(ExpnType_optimal,string),".");
fi;

end proc:

#
# is_contains_complex(result)
# takes expressions and returns true if it contains "I" else false
#
#Nasser 032417
is_contains_complex:= proc(expression)
    return (has(expression,I));
end proc:

```

```

# The following summarizes the type number assigned an expression
# based on the functions it involves
# 1 = rational function
# 2 = algebraic function
# 3 = elementary function
# 4 = special function
# 5 = hyperpergeometric function
# 6 = appell function
# 7 = rootsum function
# 8 = integrate function
# 9 = unknown function

ExpnType := proc(expn)
  if type(expn,'atomic') then
    1
  elif type(expn,'list') then
    apply(max,map(ExpnType,expn))
  elif type(expn,'sqrt') then
    if type(op(1,expn),'rational') then
      1
    else
      max(2,ExpnType(op(1,expn)))
    end if
  elif type(expn,'^^') then
    if type(op(2,expn),'integer') then
      ExpnType(op(1,expn))
    elif type(op(2,expn),'rational') then
      if type(op(1,expn),'rational') then
        1
      else
        max(2,ExpnType(op(1,expn)))
      end if
    else
      max(3,ExpnType(op(1,expn)),ExpnType(op(2,expn)))
    end if
  elif type(expn,'+`) or type(expn,'*`) then
    max(ExpnType(op(1,expn)),max(ExpnType(rest(expn))))
  elif ElementaryFunctionQ(op(0,expn)) then
    max(3,ExpnType(op(1,expn)))
  elif SpecialFunctionQ(op(0,expn)) then
    max(4,apply(max,map(ExpnType,[op(expn)])))
  elif HypergeometricFunctionQ(op(0,expn)) then
    max(5,apply(max,map(ExpnType,[op(expn)])))
  elif AppellFunctionQ(op(0,expn)) then
    max(6,apply(max,map(ExpnType,[op(expn)])))
  elif op(0,expn)='int' then
    max(8,apply(max,map(ExpnType,[op(expn)]))) else

```

```

9
end if
end proc:

ElementaryFunctionQ := proc(func)
  member(func, [
    exp, log, ln,
    sin, cos, tan, cot, sec, csc,
    arcsin, arccos, arctan, arccot, arcsec, arccsc,
    sinh, cosh, tanh, coth, sech, csch,
    arcsinh, arccosh, arctanh, arccoth, arcsech, arccsch])
end proc:

SpecialFunctionQ := proc(func)
  member(func, [
    erf, erfc, erfi,
    FresnelS, FresnelC,
    Ei, Ei, Li, Si, Ci, Shi, Chi,
    GAMMA, lnGAMMA, Psi, Zeta, polylog, dilog, LambertW,
    EllipticF, EllipticE, EllipticPi])
end proc:

HypergeometricFunctionQ := proc(func)
  member(func, [Hypergeometric1F1, hypergeom, HypergeometricPFQ])
end proc:

AppellFunctionQ := proc(func)
  member(func, [AppellF1])
end proc:

# u is a sum or product. rest(u) returns all but the
# first term or factor of u.
rest := proc(u) local v;
  if nops(u)=2 then
    op(2,u)
  else
    apply(op(0,u), op(2..nops(u), u))
  end if
end proc:

#leafcount(u) returns the number of nodes in u.
#Nasser 3/23/17 Replaced by build-in leafCount from package in Maple
leafcount := proc(u)
  MmaTranslator[Mma][LeafCount](u);
end proc:

```

## Sympy grading function

```

#Dec 24, 2019. Nasser M. Abbasi:
#      Port of original Maple grading function by
#      Albert Rich to use with Sympy/Python
#Dec 27, 2019 Nasser. Added `RootSum`. See problem 177, Timofeev file
#      added 'exp_polar'
from sympy import *

def leaf_count(expr):
    #sympy do not have leaf count function. This is approximation
    return round(1.7*count_ops(expr))

def is_sqrt(expr):
    if isinstance(expr,Pow):
        if expr.args[1] == Rational(1,2):
            return True
        else:
            return False
    else:
        return False

def is_elementary_function(func):
    return func in [exp,log,ln,sin,cos,tan,cot,sec,csc,
        asin,acos,atan,acot,asec,acsc,sinh,cosh,tanh,coth,sech,csch,
        asinh,acosh,atanh,acoth,asech,acsch
    ]

def is_special_function(func):
    return func in [ erf,erfc,erfi,
        fresnels,fresnelc,Ei,Ei,Li,Si,Ci,Shi,Chi,
        gamma,loggamma,digamma,zeta,polylog,LambertW,
        elliptic_f,elliptic_e,elliptic_pi,exp_polar
    ]

def is_hypergeometric_function(func):
    return func in [hyper]

def is_appell_function(func):
    return func in [appellf1]

def is_atom(expn):
    try:
        if expn.isAtom or isinstance(expn,int) or isinstance(expn,float):
            return True
        else:
            return False

```

```

except AttributeError as error:
    return False

def expnType(expn):
    debug=False
    if debug:
        print("expn=",expn,"type(expn)=",type(expn))

    if is_atom(expn):
        return 1
    elif isinstance(expn,list):
        return max(map(expnType, expn)) #apply(max,map(ExpnType,expn))
    elif is_sqrt(expn):
        if isinstance(expn.args[0],Rational): #type(op(1,expn),'rational')
            return 1
        else:
            return max(2,expnType(expn.args[0])) #max(2,ExpnType(op(1,expn)))
    elif isinstance(expn,Pow): #type(expn,'^')
        if isinstance(expn.args[1],Integer): #type(op(2,expn),'integer')
            return expnType(expn.args[0]) #ExpnType(op(1,expn))
        elif isinstance(expn.args[1],Rational): #type(op(2,expn),'rational')
            if isinstance(expn.args[0],Rational): #type(op(1,expn),'rational')
                return 1
            else:
                return max(2,expnType(expn.args[0])) #max(2,ExpnType(op(1,expn)))
        else:
            return max(3,expnType(expn.args[0]),expnType(expn.args[1])) #max(3,ExpnType(op(1,expn)),ExpnTy
    elif isinstance(expn,Add) or isinstance(expn,Mul): #type(expn,'+') or type(expn,'*')
        m1 = expnType(expn.args[0])
        m2 = expnType(list(expn.args[1:]))
        return max(m1,m2) #max(ExpnType(op(1,expn)),max(ExpnType(rest(expn))))
    elif is_elementary_function(expn.func): #ElementaryFunctionQ(op(0,expn))
        return max(3,expnType(expn.args[0])) #max(3,ExpnType(op(1,expn)))
    elif is_special_function(expn.func): #SpecialFunctionQ(op(0,expn))
        m1 = max(map(expnType, list(expn.args)))
        return max(4,m1) #max(4,apply(max,map(ExpnType,[op(expn)])))
    elif is_hypergeometric_function(expn.func): #HypergeometricFunctionQ(op(0,expn))
        m1 = max(map(expnType, list(expn.args)))
        return max(5,m1) #max(5,apply(max,map(ExpnType,[op(expn)])))
    elif is_appell_function(expn.func):
        m1 = max(map(expnType, list(expn.args)))
        return max(6,m1) #max(5,apply(max,map(ExpnType,[op(expn)])))
    elif isinstance(expn,RootSum):
        m1 = max(map(expnType, list(expn.args))) #Apply[Max,Append[Map[ExpnType,Apply[List,expn]],7]],
        return max(7,m1)
    elif str(expn).find("Integral") != -1:

```



```

    m1 = max(map(expnType, list(expn.args)))
    return max(8,m1)  #max(5,apply(max,map(ExpnType,[op(expn)])))
else:
    return 9

#main function
def grade_antiderivative(result,optimal):

    #print ("Enter grade_antiderivative for sagemath")
    #print("Enter grade_antiderivative, result=",result," optimal=",optimal)

    leaf_count_result = leaf_count(result)
    leaf_count_optimal = leaf_count(optimal)

    #print("leaf_count_result=",leaf_count_result)
    #print("leaf_count_optimal=",leaf_count_optimal)

    expnType_result = expnType(result)
    expnType_optimal = expnType(optimal)

    if str(result).find("Integral") != -1:
        grade = "F"
        grade_annotation = ""
    else:
        if expnType_result <= expnType_optimal:
            if result.has(I):
                if optimal.has(I): #both result and optimal complex
                    if leaf_count_result <= 2*leaf_count_optimal:
                        grade = "A"
                        grade_annotation = ""
                    else:
                        grade = "B"
                        grade_annotation = "Both result and optimal contain complex but leaf count of result is large"
                else: #result contains complex but optimal is not
                    grade = "C"
                    grade_annotation = "Result contains complex when optimal does not."
            else: # result do not contain complex, this assumes optimal do not as well
                if leaf_count_result <= 2*leaf_count_optimal:
                    grade = "A"
                    grade_annotation = ""
                else:
                    grade = "B"
                    grade_annotation = "Leaf count of result is larger than twice the leaf count of optimal. "+str(leaf_count_result)+str(leaf_count_optimal)
            else:
                grade = "C"
                grade_annotation = "Result contains higher order function than in optimal. Order "+str(ExpnType_result)+str(ExpnType_optimal)

```

```

# print("Before returning. grade=", grade, " grade_annotation=", grade_annotation)

return grade, grade_annotation

```

## SageMath grading function

```

# Dec 24, 2019. Nasser: Ported original Maple grading function by
#       Albert Rich to use with Sagemath. This is used to
#       grade Fricas, Giac and Maxima results.
# Dec 24, 2019. Nasser: Added 'exp_integral_e' and 'sng', 'sin_integral'
#       'arctan2', 'floor', 'abs', 'log_integral'
# June 4, 2022 Made default grade_annotation "none" instead of "" due
#       issue later when reading the file.
# July 14, 2022. Added ellipticF. This is until they fix sagemath, then remove it.

from sage.all import *
from sage.symbolic.operators import add_vararg, mul_vararg

debug=False;

def tree_size(expr):
    r"""
    Return the tree size of this expression.
    """
    # print("Enter tree_size, expr is ", expr)

    if expr not in SR:
        # deal with lists, tuples, vectors
        return 1 + sum(tree_size(a) for a in expr)
    expr = SR(expr)
    x, aa = expr.operator(), expr.operands()
    if x is None:
        return 1
    else:
        return 1 + sum(tree_size(a) for a in aa)

def is_sqrt(expr):
    if expr.operator() == operator.pow: # isinstance(expr, Pow):
        if expr.operands()[1] == 1/2: # expr.args[1] == Rational(1,2):
            if debug: print("expr is sqrt")
            return True
        else:
            return False
    else:
        return False

```

```

def is_elementary_function(func):
    #debug=False
    m = func.name() in ['exp','log','ln',
        'sin','cos','tan','cot','sec','csc',
        'arcsin','arccos','arctan','arccot','arcsec','arccsc',
        'sinh','cosh','tanh','coth','sech','csch',
        'arcsinh','arccosh','arctanh','arccoth','arcsech','arccsch','sgn',
        'arctan2','floor','abs'
    ]
    if debug:
        if m:
            print ("func ", func , " is elementary_function")
        else:
            print ("func ", func , " is NOT elementary_function")

    return m

def is_special_function(func):
    #debug=False
    if debug:
        print ("type(func)=", type(func))

    m= func.name() in ['erf','erfc','erfi','fresnel_sin','fresnel_cos','Ei',
        'Ei','Li','Si','sin_integral','Ci','cos_integral','Shi','sinh_integral',
        'Chi','cosh_integral','gamma','log_gamma','psi,zeta',
        'polylog','lambert_w','elliptic_f','elliptic_e','ellipticF',
        'elliptic_pi','exp_integral_e','log_integral']

    if debug:
        print ("m=",m)
        if m:
            print ("func ", func , " is special_function")
        else:
            print ("func ", func , " is NOT special_function")

    return m

def is_hypergeometric_function(func):
    return func.name() in ['hypergeometric','hypergeometric_M','hypergeometric_U']

def is_appell_function(func):
    return func.name() in ['hypergeometric']    #[appellf1] can't find this in sagemath

```

```

def is_atom(expn):

    #debug=False
    if debug:
        print ("Enter is_atom, expn=",expn)

    if not hasattr(expn, 'parent'):
        return False

    #thanks to answer at https://ask.sagemath.org/question/49179/what-is-sagemath-equivalent-to-atomic-t
    try:
        if expn.parent() is SR:
            return expn.operator() is None
        if expn.parent() in (ZZ, QQ, AA, QQbar):
            return expn in expn.parent() # Should always return True
        if hasattr(expn.parent(), "base_ring") and hasattr(expn.parent(), "gens"):
            return expn in expn.parent().base_ring() or expn in expn.parent().gens()

        return False

    except AttributeError as error:
        print("Exception,AttributeError in is_atom")
        print ("caught exception" , type(error).__name__ )
        return False

def expnType(expn):

    if debug:
        print (">>>>Enter expnType, expn=", expn)
        print (">>>>is_atom(expn)=", is_atom(expn))

    if is_atom(expn):
        return 1
    elif type(expn)==list: #isinstance(expn,list):
        return max(map(expnType, expn)) #apply(max,map(ExpnType,expn))
    elif is_sqrt(expn):
        if type(expn.operands()[0])==Rational: #type(isinstance(expn.args[0],Rational):
            return 1
        else:
            return max(2,expnType(expn.operands()[0])) #max(2,expnType(expn.args[0]))
    elif expn.operator() == operator.pow: #isinstance(expn,Pow)
        if type(expn.operands()[1])==Integer: #isinstance(expn.args[1],Integer)
            return expnType(expn.operands()[0]) #expnType(expn.args[0])
        elif type(expn.operands()[1])==Rational: #isinstance(expn.args[1],Rational)
            if type(expn.operands()[0])==Rational: #isinstance(expn.args[0],Rational)

```

```

        return 1
    else:
        return max(2,expnType(expn.operands()[0])) #max(2,expnType(expn.args[0]))
    else:
        return max(3,expnType(expn.operands()[0]),expnType(expn.operands()[1])) #max(3,expnType(expn.
elif expn.operator() == add_vararg or expn.operator() == mul_vararg: #isinstance(expn,Add) or isinst
    m1 = expnType(expn.operands()[0]) #expnType(expn.args[0])
    m2 = expnType(expn.operands()[1:]) #expnType(list(expn.args[1:]))
    return max(m1,m2) #max(ExpnType(op(1,expn)),max(ExpnType(rest(expn))))
elif is_elementary_function(expn.operator()): #is_elementary_function(expn.func)
    return max(3,expnType(expn.operands()[0]))
elif is_special_function(expn.operator()): #is_special_function(expn.func)
    m1 = max(map(expnType, expn.operands())) #max(map(expnType, list(expn.args)))
    return max(4,m1) #max(4,m1)
elif is_hypergeometric_function(expn.operator()): #is_hypergeometric_function(expn.func)
    m1 = max(map(expnType, expn.operands())) #max(map(expnType, list(expn.args)))
    return max(5,m1) #max(5,m1)
elif is_appell_function(expn.operator()):
    m1 = max(map(expnType, expn.operands())) #max(map(expnType, list(expn.args)))
    return max(6,m1) #max(6,m1)
elif str(expn).find("Integral") != -1: #this will never happen, since it
    #is checked before calling the grading function that is passed.
    #but kept it here.
    m1 = max(map(expnType, expn.operands())) #max(map(expnType, list(expn.args)))
    return max(8,m1) #max(5,apply(max,map(ExpnType,[op(expn)])))
else:
    return 9

#main function
def grade_antiderivative(result,optimal):

    if debug:
        print ("Enter grade_antiderivative for sagemath")
        print("Enter grade_antiderivative, result=",result)
        print("Enter grade_antiderivative, optimal=",optimal)
        print("type(anti)=",type(result))
        print("type(optimal)=",type(optimal))

    leaf_count_result = tree_size(result) #leaf_count(result)
    leaf_count_optimal = tree_size(optimal) #leaf_count(optimal)

    #if debug: print ("leaf_count_result=", leaf_count_result, "leaf_count_optimal=",leaf_count_optimal)

    expnType_result = expnType(result)
    expnType_optimal = expnType(optimal)

```

```

if debug: print ("expnType_result=", expnType_result, "expnType_optimal=",expnType_optimal)

if expnType_result <= expnType_optimal:
    if result.has(I):
        if optimal.has(I): #both result and optimal complex
            if leaf_count_result <= 2*leaf_count_optimal:
                grade = "A"
                grade_annotation = "none"
            else:
                grade = "B"
                grade_annotation = "Both result and optimal contain complex but leaf count of result is larger than"
        else: #result contains complex but optimal is not
            grade = "C"
            grade_annotation = "Result contains complex when optimal does not."
    else: # result do not contain complex, this assumes optimal do not as well
        if leaf_count_result <= 2*leaf_count_optimal:
            grade = "A"
            grade_annotation = "none"
        else:
            grade = "B"
            grade_annotation = "Leaf count of result is larger than twice the leaf count of optimal. " + str(leaf_c
    else:
        grade = "C"
        grade_annotation = "Result contains higher order function than in optimal. Order " + str(expnType_result)

print("Before returning. grade=",grade, " grade_annotation=",grade_annotation)

return grade, grade_annotation

```