

```
SetDirectory["C:\\drorbn\\AcademicPensieve\\People\\Alexakis"];
```

```
det = Get["det.m"]
```

```
(3.868706358657771 × 10362
```

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(0. + 0. × 10-1044 a412 a42 a433 + 0. × 10-1044 a41 a422 a433 + 0. × 10-1043 a412 a422 a433 +
0. × 10-1044 a423 a433 + 7.91051049798 × 10-1031 a41 a423 a433 + 0. × 10-1042 a412 a423 a433 +
7.91051049798 × 10-1031 a424 a433 + 4.37974102095 × 10-1030 a41 a424 a433 +
0. × 10-1042 a412 a424 a433 + 2.929309795191 × 10-1030 a425 a433 +
8.98683806912 × 10-1030 a41 a425 a433 + 0. × 10-1042 a412 a425 a433 +
3.615803673854 × 10-1030 a426 a433 + 8.11748146513 × 10-1030 a41 a426 a433 +
0. × 10-1042 a412 a426 a433 + 1.487726588850 × 10-1030 a427 a433 +
2.72782028469 × 10-1030 a41 a427 a433 + 0. × 10-1043 a412 a427 a433 + 0. × 10-1044 a428 a433 +
0. × 10-1043 a41 a428 a433 + 0. × 10-1058 a412 a434 - 8.218039258357 × 10-1045 a41 a42 a434 +
0. × 10-1043 a412 a42 a434 - 8.923097463471 × 10-1045 a422 a434 +
7.28546181326 × 10-1031 a41 a422 a434 + 0. × 10-1042 a412 a422 a434 +
7.91051049798 × 10-1031 a423 a434 + 5.32667169250 × 10-1030 a41 a423 a434 +
0. × 10-1042 a412 a423 a434 + 4.311834602085 × 10-1030 a424 a434 +
1.543304116833 × 10-1029 a41 a424 a434 + 0. × 10-1041 a412 a424 a434 +
8.73537650036 × 10-1030 a425 a434 + 2.21560110055 × 10-1029 a41 a425 a434 +
0. × 10-1041 a412 a425 a434 + 7.80708900830 × 10-1030 a426 a434 +
1.57690425454 × 10-1029 a41 a426 a434 + 0. × 10-1042 a412 a426 a434 +
2.60010895060 × 10-1030 a427 a434 + 4.45397061139 × 10-1030 a41 a427 a434 +
0. × 10-1042 a412 a427 a434 + 0. × 10-1043 a428 a434 + 0. × 10-1043 a41 a428 a434 +
0. × 10-1072 a41 a435 + 0. × 10-1058 a412 a435 + 0. × 10-1072 a42 a435 +
0. × 10-1057 a41 a42 a435 + 0. × 10-1043 a412 a42 a435 + 0. × 10-1057 a422 a435 +
0. × 10-1043 a41 a422 a435 + 0. × 10-1042 a412 a422 a435 + 0. × 10-1043 a423 a435 +
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0. × 10-1041 a41 a426 a435 + 0. × 10-1042 a412 a426 a435 + 0. × 10-1042 a427 a435 +
0. × 10-1042 a41 a427 a435 + 0. × 10-1042 a412 a427 a435 + 0. × 10-1043 a428 a435 +
0. × 10-1043 a41 a428 a435 + 0. × 10-1072 a41 a436 + 0. × 10-1058 a412 a436 +
0. × 10-1072 a42 a436 + 0. × 10-1058 a41 a42 a436 + 0. × 10-1044 a412 a42 a436 +
0. × 10-1058 a422 a436 + 0. × 10-1043 a41 a422 a436 + 0. × 10-1043 a412 a422 a436 +
0. × 10-1044 a423 a436 + 0. × 10-1042 a41 a423 a436 + 0. × 10-1042 a412 a423 a436 +
0. × 10-1043 a424 a436 + 0. × 10-1042 a41 a424 a436 + 0. × 10-1042 a412 a424 a436 +
0. × 10-1043 a425 a436 + 0. × 10-1042 a41 a425 a436 + 0. × 10-1042 a412 a425 a436 +
0. × 10-1042 a426 a436 + 0. × 10-1042 a41 a426 a436 + 0. × 10-1042 a412 a426 a436 +
0. × 10-1043 a427 a436 + 0. × 10-1042 a41 a427 a436 + 0. × 10-1043 a412 a427 a436 +
0. × 10-1043 a428 a436 + 0. × 10-1043 a41 a428 a436 + 0. × 10-1044 a412 a42 a432 a44 +
0. × 10-1044 a41 a422 a432 a44 + 0. × 10-1043 a412 a422 a432 a44 + 0. × 10-1044 a423 a432 a44 +
7.28546181326 × 10-1031 a41 a423 a432 a44 + 0. × 10-1042 a412 a423 a432 a44 +
7.28546181326 × 10-1031 a424 a432 a44 + 4.03367595154 × 10-1030 a41 a424 a432 a44 +
0. × 10-1042 a412 a424 a432 a44 + 2.697850493656 × 10-1030 a425 a432 a44 +
8.27674340248 × 10-1030 a41 a425 a432 a44 + 0. × 10-1042 a412 a425 a432 a44 +
3.330101084728 × 10-1030 a426 a432 a44 + 7.47607897734 × 10-1030 a41 a426 a432 a44 +
0. × 10-1042 a412 a426 a432 a44 + 1.370173929280 × 10-1030 a427 a432 a44 +
2.51228166913 × 10-1030 a41 a427 a432 a44 + 0. × 10-1043 a412 a427 a432 a44 +
0. × 10-1044 a428 a432 a44 + 0. × 10-1043 a41 a428 a432 a44 + 0. × 10-1058 a412 a433 a44 -
8.218039258357 × 10-1045 a41 a42 a433 a44 + 0. × 10-1043 a412 a42 a433 a44 -
8.923097463471 × 10-1045 a422 a433 a44 + 7.28546181325 × 10-1031 a41 a422 a433 a44 +
0. × 10-1042 a412 a422 a433 a44 + 7.91051049798 × 10-1031 a423 a433 a44 +
```

$$\begin{aligned}
 & 6.56223683827 \times 10^{-1030} a_{41} a_{42}^3 a_{43}^3 a_{44} + 0. \times 10^{-1042} a_{41}^2 a_{42}^3 a_{43}^3 a_{44} + \\
 & 5.55813099404 \times 10^{-1030} a_{42}^4 a_{43}^3 a_{44} + 2.227020666058 \times 10^{-1029} a_{41} a_{42}^4 a_{43}^3 a_{44} + \\
 & 0. \times 10^{-1041} a_{41}^2 a_{42}^4 a_{43}^3 a_{44} + 1.335048728189 \times 10^{-1029} a_{42}^5 a_{43}^3 a_{44} + \\
 & 3.61791942930 \times 10^{-1029} a_{41} a_{42}^5 a_{43}^3 a_{44} + 0. \times 10^{-1041} a_{41}^2 a_{42}^5 a_{43}^3 a_{44} + \\
 & 1.350376695833 \times 10^{-1029} a_{42}^6 a_{43}^3 a_{44} + 2.84311623305 \times 10^{-1029} a_{41} a_{42}^6 a_{43}^3 a_{44} + \\
 & 0. \times 10^{-1041} a_{41}^2 a_{42}^6 a_{43}^3 a_{44} + 4.94401365861 \times 10^{-1030} a_{42}^7 a_{43}^3 a_{44} + \\
 & 8.70771609123 \times 10^{-1030} a_{41} a_{42}^7 a_{43}^3 a_{44} + 0. \times 10^{-1042} a_{41}^2 a_{42}^7 a_{43}^3 a_{44} + \\
 & 0. \times 10^{-1043} a_{42}^8 a_{43}^3 a_{44} + 0. \times 10^{-1043} a_{41} a_{42}^8 a_{43}^3 a_{44} + 6.517792156292 \times 10^{-1059} a_{41} a_{43}^4 a_{44} + \\
 & 0. \times 10^{-1058} a_{41}^2 a_{43}^4 a_{44} + 7.076979414293 \times 10^{-1059} a_{42} a_{43}^4 a_{44} - \\
 & 2.084633903377 \times 10^{-1044} a_{41} a_{42} a_{43}^4 a_{44} + 0. \times 10^{-1043} a_{41}^2 a_{42} a_{43}^4 a_{44} - \\
 & 2.263482919794 \times 10^{-1044} a_{42}^2 a_{43}^4 a_{44} + 1.335825457881 \times 10^{-1030} a_{41} a_{42}^2 a_{43}^4 a_{44} + \\
 & 0. \times 10^{-1042} a_{41}^2 a_{42}^2 a_{43}^4 a_{44} + 1.450431225762 \times 10^{-1030} a_{42}^3 a_{43}^4 a_{44} + \\
 & 9.57669195654 \times 10^{-1030} a_{41} a_{42}^3 a_{43}^4 a_{44} + 0. \times 10^{-1041} a_{41}^2 a_{42}^3 a_{43}^4 a_{44} + \\
 & 7.73929087083 \times 10^{-1030} a_{42}^4 a_{43}^4 a_{44} + 2.72491708796 \times 10^{-1029} a_{41} a_{42}^4 a_{43}^4 a_{44} + \\
 & 0. \times 10^{-1041} a_{41}^2 a_{42}^4 a_{43}^4 a_{44} + 1.539955158302 \times 10^{-1029} a_{42}^5 a_{43}^4 a_{44} + \\
 & 3.84802191644 \times 10^{-1029} a_{41} a_{42}^5 a_{43}^4 a_{44} + 0. \times 10^{-1041} a_{41}^2 a_{42}^5 a_{43}^4 a_{44} + \\
 & 1.355284917145 \times 10^{-1029} a_{42}^6 a_{43}^4 a_{44} + 2.69817158248 \times 10^{-1029} a_{41} a_{42}^6 a_{43}^4 a_{44} + \\
 & 0. \times 10^{-1041} a_{41}^2 a_{42}^6 a_{43}^4 a_{44} + 4.45397061139 \times 10^{-1030} a_{42}^7 a_{43}^4 a_{44} + \\
 & 7.51885825131 \times 10^{-1030} a_{41} a_{42}^7 a_{43}^4 a_{44} + 0. \times 10^{-1042} a_{41}^2 a_{42}^7 a_{43}^4 a_{44} + \\
 & 0. \times 10^{-1043} a_{42}^8 a_{43}^4 a_{44} + 0. \times 10^{-1042} a_{41} a_{42}^8 a_{43}^4 a_{44} + 0. \times 10^{-1072} a_{41} a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1058} a_{41}^2 a_{43}^5 a_{44} + 0. \times 10^{-1072} a_{42} a_{43}^5 a_{44} + 0. \times 10^{-1057} a_{41} a_{42} a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1043} a_{41}^2 a_{42} a_{43}^5 a_{44} + 0. \times 10^{-1057} a_{42}^2 a_{43}^5 a_{44} + 0. \times 10^{-1043} a_{41} a_{42}^2 a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1042} a_{41}^2 a_{42}^2 a_{43}^5 a_{44} + 0. \times 10^{-1043} a_{42}^3 a_{43}^5 a_{44} + 0. \times 10^{-1042} a_{41} a_{42}^3 a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1042} a_{41}^2 a_{42}^3 a_{43}^5 a_{44} + 0. \times 10^{-1042} a_{42}^4 a_{43}^5 a_{44} + 0. \times 10^{-1042} a_{41} a_{42}^4 a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1041} a_{41}^2 a_{42}^4 a_{43}^5 a_{44} + 0. \times 10^{-1042} a_{42}^5 a_{43}^5 a_{44} + 0. \times 10^{-1041} a_{41} a_{42}^5 a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1041} a_{41}^2 a_{42}^5 a_{43}^5 a_{44} + 0. \times 10^{-1042} a_{42}^6 a_{43}^5 a_{44} + 0. \times 10^{-1041} a_{41} a_{42}^6 a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1042} a_{41}^2 a_{42}^6 a_{43}^5 a_{44} + 0. \times 10^{-1042} a_{42}^7 a_{43}^5 a_{44} + 0. \times 10^{-1042} a_{41} a_{42}^7 a_{43}^5 a_{44} + \\
 & 0. \times 10^{-1042} a_{41}^2 a_{42}^7 a_{43}^5 a_{44} + 0. \times 10^{-1043} a_{42}^8 a_{43}^5 a_{44} + 0. \times 10^{-1043} a_{41} a_{42}^8 a_{43}^5 a_{44}) / \\
 & \left((1.10885 \times 10^{-204} - 9.83019 \times 10^{-191} a_{42})^2 (5.10087 \times 10^{-97} + 6.29627 \times 10^{-97} a_{42})^3 \right. \\
 & \left. (0. - 0.0238001 a_{43})^2 \right)
 \end{aligned}$$

d2 = Together [det]

$$\begin{aligned}
 & \left(\begin{aligned}
 & 0. + 5.40272349473 \times 10^{-665} a_1 a_2^3 a_3 + \\
 & 5.40272349473 \times 10^{-665} a_2^4 a_3 + 2.99127720275 \times 10^{-664} a_1 a_2^4 a_3 + \\
 & 2.000661127730 \times 10^{-664} a_2^5 a_3 + 6.13783411219 \times 10^{-664} a_1 a_2^5 a_3 + \\
 & 2.469522980348 \times 10^{-664} a_2^6 a_3 + 5.54408060527 \times 10^{-664} a_1 a_2^6 a_3 + \\
 & 1.016088076410 \times 10^{-664} a_2^7 a_3 + 1.863047744548 \times 10^{-664} a_1 a_2^7 a_3 - \\
 & 5.612759605470 \times 10^{-679} a_1 a_2 a_3^2 - 6.094300528890 \times 10^{-679} a_2^2 a_3^2 + \\
 & 4.97582750424 \times 10^{-665} a_1 a_2^2 a_3^2 + 5.402723494729 \times 10^{-665} a_2^3 a_3^2 + \\
 & 3.63801227609 \times 10^{-664} a_1 a_2^3 a_3^2 + 2.944898450739 \times 10^{-664} a_2^4 a_3^2 + \\
 & 1.054046437793 \times 10^{-663} a_1 a_2^4 a_3^2 + 5.96609079349 \times 10^{-664} a_2^5 a_3^2 + \\
 & 1.513212089655 \times 10^{-663} a_1 a_2^5 a_3^2 + 5.33208864603 \times 10^{-664} a_2^6 a_3^2 + \\
 & 1.076994672733 \times 10^{-663} a_1 a_2^6 a_3^2 + 1.775823408594 \times 10^{-664} a_2^7 a_3^2 + \\
 & 3.04197455690 \times 10^{-664} a_1 a_2^7 a_3^2 + 4.97582750424 \times 10^{-665} a_1 a_2^3 a_4 + \\
 & 4.97582750424 \times 10^{-665} a_2^4 a_4 + 2.75492154887 \times 10^{-664} a_1 a_2^4 a_4 + \\
 & 1.842578965170 \times 10^{-664} a_2^5 a_4 + 5.65285338435 \times 10^{-664} a_1 a_2^5 a_4 + \\
 & 2.274393716419 \times 10^{-664} a_2^6 a_4 + 5.10601528809 \times 10^{-664} a_1 a_2^6 a_4 + \\
 & 9.35801915878 \times 10^{-665} a_2^7 a_4 + 1.715839098202 \times 10^{-664} a_1 a_2^7 a_4 - \\
 & 5.612759605470 \times 10^{-679} a_1 a_2 a_3 a_4 - 6.094300528890 \times 10^{-679} a_2^2 a_3 a_4 + \\
 & 4.97582750424 \times 10^{-665} a_1 a_2^2 a_3 a_4 + 5.40272349473 \times 10^{-665} a_2^3 a_3 a_4 + \\
 & 4.48187903336 \times 10^{-664} a_1 a_2^3 a_3 a_4 + 3.796094438649 \times 10^{-664} a_2^4 a_3 a_4 + \\
 & 1.521011428886 \times 10^{-663} a_1 a_2^4 a_3 a_4 + 9.11812092561 \times 10^{-664} a_2^5 a_3 a_4 + \\
 & 2.47096799981 \times 10^{-663} a_1 a_2^5 a_3 a_4 + 9.22280793783 \times 10^{-664} a_2^6 a_3 a_4 + \\
 & 1.941792615590 \times 10^{-663} a_1 a_2^6 a_3 a_4 + 3.37666434529 \times 10^{-664} a_2^7 a_3 a_4 + \\
 & 5.94719927665 \times 10^{-664} a_1 a_2^7 a_3 a_4 + 4.451524187413 \times 10^{-693} a_1 a_3^2 a_4 + \\
 & 4.833438115411 \times 10^{-693} a_2 a_3^2 a_4 - 1.423764063084 \times 10^{-678} a_1 a_2 a_3^2 a_4 - \\
 & 1.545914432931 \times 10^{-678} a_2^2 a_3^2 a_4 + 9.12342583704 \times 10^{-665} a_1 a_2^2 a_3^2 a_4 + \\
 & 9.90616075020 \times 10^{-665} a_2^3 a_3^2 a_4 + 6.54069274651 \times 10^{-664} a_1 a_2^3 a_3^2 a_4 + \\
 & 5.28578384809 \times 10^{-664} a_2^4 a_3^2 a_4 + 1.86106491813 \times 10^{-663} a_1 a_2^4 a_3^2 a_4 + \\
 & 1.051759164811 \times 10^{-663} a_2^5 a_3^2 a_4 + 2.62812348476 \times 10^{-663} a_1 a_2^5 a_3^2 a_4 + \\
 & 9.25633012658 \times 10^{-664} a_2^6 a_3^2 a_4 + 1.84279826254 \times 10^{-663} a_1 a_2^6 a_3^2 a_4 + \\
 & 3.04197455690 \times 10^{-664} a_2^7 a_3^2 a_4 + 5.13523269304 \times 10^{-664} a_1 a_2^7 a_3^2 a_4 \Big) / \\
 & \left((1.10885 \times 10^{-204} - 9.83019 \times 10^{-191} a_2)^2 (5.10087 \times 10^{-97} + 6.29627 \times 10^{-97} a_2)^3 \right)
 \end{aligned}
 \right)$$

Cases[d2, _Symbol, ∞] // Union

{a1, a2, a3, a4}

d2 /. {a1 → 1, a2 → 1, a3 → 1, a4 → 1}

0.

$$\begin{aligned}
 d3 = & \left(\begin{aligned}
 & 5.4027234947288059323838154849 \cdot 12.21532680880618 \cdot 10^{-665} a_1 a_2^3 a_3 + \\
 & 5.4027234947288823415832552348 \cdot 12.612241203515852 \cdot 10^{-665} a_2^4 a_3 + \\
 & 2.99127720274966042763735784828 \cdot 12.416962792450057 \cdot 10^{-664} a_1 a_2^4 a_3 + \\
 & 2.00066112773002111728168419739 \cdot 12.757612726351578 \cdot 10^{-664} a_2^5 a_3 + \\
 & 6.13783411218722277029650494044 \cdot 12.488189308897063 \cdot 10^{-664} a_1 a_2^5 a_3 + \\
 & 2.46952298034811189432977945771 \cdot 12.75391391907731 \cdot 10^{-664} a_2^6 a_3 + \\
 & 5.54408060527016095468163848136 \cdot 12.485603396104278 \cdot 10^{-664} a_1 a_2^6 a_3 + \\
 & 1.01608807640950657334612635362 \cdot 12.600442328076644 \cdot 10^{-664} a_2^7 a_3 + \\
 & 1.86304774454785431349945767891 \cdot 12.37174817959532 \cdot 10^{-664} a_1 a_2^7 a_3 - \\
 & 5.6127596054697535404954084095402811 \cdot 12.916717685822091 \cdot 10^{-679} a_1 a_2 a_3^2 - \\
 & 6.0943005288896929160833329856131461 \cdot 13.094635890097939 \cdot 10^{-679} a_2^2 a_3^2 + \\
 & 4.9758275042370104259637622618 \cdot 12.401119168977544 \cdot 10^{-665} a_1 a_2^2 a_3^2 +
 \end{aligned}
 \right)$$

$$\begin{aligned}
 & 5.402723494728789708049024886` 12.744238527116044*^-665 a42^3 a43^2 + \\
 & 3.63801227608928046518399425828` 12.362607308186686*^-664 a41 a42^3 a43^2 + \\
 & 2.94489845073899304932043725106` 12.683526517261956*^-664 a42^4 a43^2 + \\
 & 1.054046437792869885286785804475` 12.31838026781235*^-663 a41 a42^4 a43^2 + \\
 & 5.96609079348713956670812312416` 12.604470880813269*^-664 a42^5 a43^2 + \\
 & 1.513212089655319640164319296866` 12.261496290215117*^-663 a41 a42^5 a43^2 + \\
 & 5.33208864602600862430846768845` 12.485247960991813*^-664 a42^6 a43^2 + \\
 & 1.076994672732628523809321834616` 12.174712253058571*^-663 a41 a42^6 a43^2 + \\
 & 1.77582340859438087304286150836` 12.25477252992247*^-664 a42^7 a43^2 + \\
 & 3.04197455690494502657727570313` 11.9959109616945*^-664 a41 a42^7 a43^2 + \\
 & 4.9758275042371140691441972215` 12.190902536612464*^-665 a41 a42^3 a44 + \\
 & 4.9758275042371753042983740389` 12.591437983939832*^-665 a42^4 a44 + \\
 & 2.75492154887454689743989784644` 12.393702277341179*^-664 a41 a42^4 a44 + \\
 & 1.84257896516999992148976950666` 12.737591547995514*^-664 a42^5 a44 + \\
 & 5.6528533843464649858124995931` 12.465346825301848*^-664 a41 a42^5 a44 + \\
 & 2.27439371641922382345481363471` 12.733650705948588*^-664 a42^6 a44 + \\
 & 5.10601528809044939156710178074` 12.462340275819164*^-664 a41 a42^6 a44 + \\
 & 9.3580191587790650421764924495` 12.578896923256307*^-665 a42^7 a44 + \\
 & 1.71583909820160904911028036978` 12.346716772841841*^-664 a41 a42^7 a44 - \\
 & 5.6127596054696046091854411668121808` 12.955964195524842*^-679 a41 a42 a43 a44 - \\
 & 6.0943005288895952626512657836175372` 13.150680004032335*^-679 a42^2 a43 a44 + \\
 & 4.9758275042368129725340393027` 12.323049249421114*^-665 a41 a42^2 a43 a44 + \\
 & 5.4027234947286394405100817504` 12.666865798986462*^-665 a42^3 a43 a44 + \\
 & 4.48187903336367401167483470229` 12.365376322746036*^-664 a41 a42^3 a43 a44 + \\
 & 3.79609443864930024133191319001` 12.703248426095394*^-664 a42^4 a43 a44 + \\
 & 1.521011428886112891708136026576` 12.381757089588072*^-663 a41 a42^4 a43 a44 + \\
 & 9.1181209256110554905894660178` 12.689115704544449*^-664 a42^5 a43 a44 + \\
 & 2.470967999813723510142671050048` 12.372263084484352*^-663 a41 a42^5 a43 a44 + \\
 & 9.22280793783409866727442332777` 12.617826822500563*^-664 a42^6 a43 a44 + \\
 & 1.941792615590002458545900307146` 12.324148518568142*^-663 a41 a42^6 a43 a44 + \\
 & 3.37666434529438831005505320592` 12.42561045372966*^-664 a42^7 a43 a44 + \\
 & 5.94719927664630882159604251731` 12.178831773036283*^-664 a41 a42^7 a43 a44 + \\
 & 4.451524187413007767714344881488651276609` 13.477612443355834*^-693 a41 a43^2 a44 + \\
 & 4.833438115411048907771738660525234046129` 13.477612443355834*^-693 a42 a43^2 a44 - \\
 & 1.42376406308444256548505137025807937` 12.836779523716007*^-678 a41 a42 a43^2 a44 - \\
 & 1.54591443293136651818036267568556908` 13.014189083493873*^-678 a42^2 a43^2 a44 + \\
 & 9.1234258370445815891385836226` 12.28319182368749*^-665 a41 a42^2 a43^2 a44 + \\
 & 9.9061607501958274385114633621` 12.632873783218713*^-665 a42^3 a43^2 a44 + \\
 & 6.54069274651126894160084698434` 12.248315892630309*^-664 a41 a42^3 a43^2 a44 + \\
 & 5.28578384808557288995093628266` 12.575183099391314*^-664 a42^4 a43^2 a44 + \\
 & 1.86106491813373684310794596542` 12.206855673410217*^-663 a41 a42^4 a43^2 a44 + \\
 & 1.051759164811132317454408078826` 12.498299241261579*^-663 a42^5 a43^2 a44 + \\
 & 2.628123484755649927540495254909` 12.151987651123699*^-663 a41 a42^5 a43^2 a44 + \\
 & 9.25633012657975520160606070921` 12.38080218961779*^-664 a42^6 a43^2 a44 + \\
 & 1.842798262537768269813540974578` 12.06656861345375*^-663 a41 a42^6 a43^2 a44 + \\
 & 3.04197455690496372901940237193` 12.15191578565244*^-664 a42^7 a43^2 a44 + \\
 & 5.13523269303961018981635775619` 11.888496628628777*^-664 a41 a42^7 a43^2 a44) / \\
 & ((1.1088504383096044` *^-204 - 9.83018852909682` *^-191 a42)^2 \\
 & (5.100866449633201` *^-97 + 6.296272138474589` *^-97 a42)^3)
 \end{aligned}$$

$$\begin{aligned}
& (5.40272349473 \times 10^{-665} a_{41} a_{42}^3 a_{43} + \\
& 5.40272349473 \times 10^{-665} a_{42}^4 a_{43} + 2.99127720275 \times 10^{-664} a_{41} a_{42}^4 a_{43} + \\
& 2.000661127730 \times 10^{-664} a_{42}^5 a_{43} + 6.13783411219 \times 10^{-664} a_{41} a_{42}^5 a_{43} + \\
& 2.469522980348 \times 10^{-664} a_{42}^6 a_{43} + 5.54408060527 \times 10^{-664} a_{41} a_{42}^6 a_{43} + \\
& 1.016088076410 \times 10^{-664} a_{42}^7 a_{43} + 1.863047744548 \times 10^{-664} a_{41} a_{42}^7 a_{43} - \\
& 5.612759605470 \times 10^{-679} a_{41} a_{42} a_{43}^2 - 6.094300528890 \times 10^{-679} a_{42}^2 a_{43}^2 + \\
& 4.97582750424 \times 10^{-665} a_{41} a_{42}^2 a_{43}^2 + 5.402723494729 \times 10^{-665} a_{42}^3 a_{43}^2 + \\
& 3.63801227609 \times 10^{-664} a_{41} a_{42}^3 a_{43}^2 + 2.944898450739 \times 10^{-664} a_{42}^4 a_{43}^2 + \\
& 1.054046437793 \times 10^{-663} a_{41} a_{42}^4 a_{43}^2 + 5.96609079349 \times 10^{-664} a_{42}^5 a_{43}^2 + \\
& 1.513212089655 \times 10^{-663} a_{41} a_{42}^5 a_{43}^2 + 5.33208864603 \times 10^{-664} a_{42}^6 a_{43}^2 + \\
& 1.076994672733 \times 10^{-663} a_{41} a_{42}^6 a_{43}^2 + 1.775823408594 \times 10^{-664} a_{42}^7 a_{43}^2 + \\
& 3.04197455690 \times 10^{-664} a_{41} a_{42}^7 a_{43}^2 + 4.97582750424 \times 10^{-665} a_{41} a_{42}^3 a_{44} + \\
& 4.97582750424 \times 10^{-665} a_{42}^4 a_{44} + 2.75492154887 \times 10^{-664} a_{41} a_{42}^4 a_{44} + \\
& 1.842578965170 \times 10^{-664} a_{42}^5 a_{44} + 5.65285338435 \times 10^{-664} a_{41} a_{42}^5 a_{44} + \\
& 2.274393716419 \times 10^{-664} a_{42}^6 a_{44} + 5.10601528809 \times 10^{-664} a_{41} a_{42}^6 a_{44} + \\
& 9.35801915878 \times 10^{-665} a_{42}^7 a_{44} + 1.715839098202 \times 10^{-664} a_{41} a_{42}^7 a_{44} - \\
& 5.612759605470 \times 10^{-679} a_{41} a_{42} a_{43} a_{44} - 6.094300528890 \times 10^{-679} a_{42}^2 a_{43} a_{44} + \\
& 4.97582750424 \times 10^{-665} a_{41} a_{42}^2 a_{43} a_{44} + 5.40272349473 \times 10^{-665} a_{42}^3 a_{43} a_{44} + \\
& 4.48187903336 \times 10^{-664} a_{41} a_{42}^3 a_{43} a_{44} + 3.796094438649 \times 10^{-664} a_{42}^4 a_{43} a_{44} + \\
& 1.521011428886 \times 10^{-663} a_{41} a_{42}^4 a_{43} a_{44} + 9.11812092561 \times 10^{-664} a_{42}^5 a_{43} a_{44} + \\
& 2.47096799981 \times 10^{-663} a_{41} a_{42}^5 a_{43} a_{44} + 9.22280793783 \times 10^{-664} a_{42}^6 a_{43} a_{44} + \\
& 1.941792615590 \times 10^{-663} a_{41} a_{42}^6 a_{43} a_{44} + 3.37666434529 \times 10^{-664} a_{42}^7 a_{43} a_{44} + \\
& 5.94719927665 \times 10^{-664} a_{41} a_{42}^7 a_{43} a_{44} + 4.451524187413 \times 10^{-693} a_{41} a_{43}^2 a_{44} + \\
& 4.833438115411 \times 10^{-693} a_{42} a_{43}^2 a_{44} - 1.423764063084 \times 10^{-678} a_{41} a_{42} a_{43}^2 a_{44} - \\
& 1.545914432931 \times 10^{-678} a_{42}^2 a_{43}^2 a_{44} + 9.12342583704 \times 10^{-665} a_{41} a_{42}^2 a_{43}^2 a_{44} + \\
& 9.90616075020 \times 10^{-665} a_{42}^3 a_{43}^2 a_{44} + 6.54069274651 \times 10^{-664} a_{41} a_{42}^3 a_{43}^2 a_{44} + \\
& 5.28578384809 \times 10^{-664} a_{42}^4 a_{43}^2 a_{44} + 1.86106491813 \times 10^{-663} a_{41} a_{42}^4 a_{43}^2 a_{44} + \\
& 1.051759164811 \times 10^{-663} a_{42}^5 a_{43}^2 a_{44} + 2.62812348476 \times 10^{-663} a_{41} a_{42}^5 a_{43}^2 a_{44} + \\
& 9.25633012658 \times 10^{-664} a_{42}^6 a_{43}^2 a_{44} + 1.84279826254 \times 10^{-663} a_{41} a_{42}^6 a_{43}^2 a_{44} + \\
& 3.04197455690 \times 10^{-664} a_{42}^7 a_{43}^2 a_{44} + 5.13523269304 \times 10^{-664} a_{41} a_{42}^7 a_{43}^2 a_{44}) / \\
& \left((1.10885 \times 10^{-204} - 9.83019 \times 10^{-191} a_{42})^2 (5.10087 \times 10^{-97} + 6.29627 \times 10^{-97} a_{42})^3 \right)
\end{aligned}$$

d3 /. {a41 → 1, a42 → 1, a43 → 1, a44 → 1}

$$2.13814924595 \times 10^6$$