

## CORRIGENDA

D. S. DUMMIT, *Solving solvable quintics*, Math. Comp. **57** (1991), 387–401.

The microfiche supplement containing the Appendix to the above paper was inadvertently omitted and is now supplied at the end of the present issue. The editors regret the unfortunate oversight. Electronic files of the tables contained in the Appendix are available from the author.

THE EDITORS



**Mathematics of Computation**  
**Vol. 59, no. 199 (Jul., 1992)**  
**“Corrigenda: Solving Solvable Quintics” (p. 309)**

Please note: The supplement referenced in the following correction notice can be found at the end of the corresponding article in Vol. 57, no. 195 (Jul., 1991), pp. 387-401. It is not located at the end of this issue as stated in the “Corrigenda.”

**Please click on "Next Page" to begin viewing this article.**

$$\begin{aligned}
D = & -4p^3q^2r^2 - 27q^4r^2 + 16p^4r^3 + 144pq^2r^3 - 128p^2r^4 + 256r^5 \\
& + 16p^3q^3s + 108q^5s - 72p^4qrs - 630pq^3rs + 560p^2qr^2s - 1600qr^3s \\
& + 108p^5s^2 + 825p^2q^2s^2 - 900p^3rs^2 + 2250q^2rs^2 + 2000pr^2s^2 \\
& - 3750pqs^3 + 3125s^4
\end{aligned}$$

$$\begin{aligned}
F = & 4p^6q^6 + 59p^3q^8 + 216q^{10} - 36p^7q^4r - 623p^4q^6r - 2610pq^8r \\
& + 81p^8q^2r^2 + 2015p^5q^4r^2 + 10825p^2q^6r^2 - 1800p^6q^2r^3 \\
& - 17500p^3q^4r^3 + 625q^6r^3 + 10000p^4q^2r^4 + 108p^8q^3s + 1584p^5q^5s \\
& + 5700p^2q^7s - 486p^9qrs - 9720p^6q^3rs - 45050p^3q^5rs - 9000q^7rs \\
& + 10800p^7qr^2s + 92500p^4q^3r^2s + 32500pq^5r^2s - 60000p^5qr^3s - 50000p^2q^3r^3s \\
& + 729p^{10}s^2 + 12150p^7q^2s^2 + 60000p^4q^4s^2 + 93750pq^6s^2 \\
& - 18225p^8rs^2 - 175500p^5q^2rs^2 - 478125p^2q^4rs^2 + 135000p^6r^2s^2 \\
& + 850000p^3q^2r^2s^2 + 15625q^4r^2s^2 - 250000p^4r^3s^2 + 225000p^3q^3s^3 \\
& + 175000q^5s^3 - 1012500p^4qrs^3 - 1187500pq^3rs^3 + 1250000p^2qr^2s^3 \\
& + 928125p^5s^4 + 1875000p^2q^2s^4 - 2812500p^3rs^4 - 390625q^2rs^4 - 9765625s^6
\end{aligned}$$

$$l_0 = (a_0 + a_1\theta + a_2\theta^2 + a_3\theta^3 + a_4\theta^4 + a_5\theta^5)/F \quad (8.0)$$

$$T_1 = (b_{10} + b_{11}\theta + b_{12}\theta^2 + b_{13}\theta^3 + b_{14}\theta^4 + b_{15}\theta^5)/(2F) \quad (8.1)$$

$$T_2 = (b_{20} + b_{21}\theta + b_{22}\theta^2 + b_{23}\theta^3 + b_{24}\theta^4 + b_{25}\theta^5)/(2DF) \quad (8.2)$$

$$T_3 = (b_{30} + b_{31}\theta + b_{32}\theta^2 + b_{33}\theta^3 + b_{34}\theta^4 + b_{35}\theta^5)/(2F) \quad (8.3)$$

$$T_4 = (b_{40} + b_{41}\theta + b_{42}\theta^2 + b_{43}\theta^3 + b_{44}\theta^4 + b_{45}\theta^5)/(2DF) \quad (8.4)$$

$$O = (o_0 + o_1\theta + o_2\theta^2 + o_3\theta^3 + o_4\theta^4 + o_5\theta^5)/(DF) \quad (9)$$

$$u = -25q/2$$

$$v = (c_0 + c_1\theta + c_2\theta^2 + c_3\theta^3 + c_4\theta^4 + c_5\theta^5)/(2DF) \quad (11)$$

$$\begin{aligned}
a_0 = & -100p^7q^7 - 2175p^4q^9 - 10500pq^{11} + 1100p^8q^5r + 27975p^5q^7r \\
& + 152950p^2q^9r - 4125p^9q^3r^2 - 128875p^6q^5r^2 - 830525p^3q^7r^2 \\
& + 59450q^9r^2 + 5400p^{10}qr^3 + 243800p^7q^3r^3 + 2082650p^4q^5r^3 \\
& - 333925pq^7r^3 - 139200p^8qr^4 - 2406000p^5q^3r^4 - 122600p^2q^5r^4 \\
& + 1254400p^6qr^5 + 3776000p^3q^3r^5 + 1832000q^5r^5 - 4736000p^4qr^6 \\
& - 6720000pq^3r^6 + 6400000p^2qr^7 - 900p^9q^4s - 37400p^6q^6s \\
& - 281625p^3q^8s - 435000q^{10}s + 6750p^{10}q^2s + 322300p^7q^4rs \\
& + 2718575p^4q^6rs + 4214250pq^8rs - 16200p^{11}r^2s - 859275p^8q^2r^2s \\
& - 8925475p^5q^4r^2s - 14427875p^2q^6r^2s + 453600p^9r^3s + 10038400p^6q^2r^3s \\
& + 17397500p^3q^4r^3s - 11333125q^6r^3s - 4451200p^7r^4s - 15850000p^4q^2r^4s \\
& + 34000000pq^4r^4s + 17984000p^5r^5s - 10000000p^2q^2r^5s - 25600000p^3r^6s \\
& - 8000000q^2r^6s + 6075p^{11}qs^2 - 83250p^8q^3s^2 - 1282500p^5q^5s^2 \\
& - 2862500p^2q^7s^2 + 724275p^9qrs^2 + 9807250p^6q^3rs^2 + 28374375p^3q^5rs^2 \\
& + 22212500q^7rs^2 - 8982000p^7qr^2s^2 - 39600000p^4q^3r^2s^2 - 61746875pq^5r^2s^2 \\
& - 1010000p^5qr^3s^2 - 1000000p^2q^3r^3s^2 + 78000000p^3qr^4s^2 + 30000000q^3r^4s^2 \\
& + 80000000pqr^5s^2 - 759375p^{10}s^3 - 9787500p^7q^2s^3 - 39062500p^4q^4s^3 \\
& - 52343750pq^6s^3 + 12301875p^8rs^3 + 98175000p^5q^2rs^3 + 225078125p^2q^4rs^3 \\
& - 54900000p^6r^2s^3 - 310000000p^3q^2r^2s^3 - 7890625q^4r^2s^3 + 51250000p^4r^3s^3 \\
& - 420000000pq^2r^3s^3 + 110000000p^2r^4s^3 - 200000000r^5s^3 + 2109375p^6qs^4 \\
& - 21093750p^3q^3s^4 - 89843750q^5s^4 + 182343750p^4qrs^4 + 733203125pq^3rs^4 \\
& - 196875000p^2qr^2s^4 + 1125000000qr^3s^4 - 158203125p^5s^5 - 566406250p^2q^2s^5 \\
& + 101562500p^3rs^5 - 1669921875q^2rs^5 + 1250000000pr^2s^5 - 1220703125pqs^6 \\
& + 6103515625s^7
\end{aligned}$$

$$\begin{aligned}
a_1 = & 1000p^5q^7 + 7250p^2q^9 - 10800p^6q^5r - 96900p^3q^7r - 52500q^9r \\
& + 37400p^7q^3r^2 + 470850p^4q^5r^2 + 640600pq^7r^2 - 39600p^8qr^3 \\
& - 983600p^5q^3r^3 - 2848100p^2q^5r^3 + 814400p^6qr^4 + 6076000p^3q^3r^4 \\
& + 2308000q^5r^4 - 5024000p^4qr^5 - 9680000pq^3r^5 + 9600000p^2qr^6 \\
& + 13800p^7q^4s + 94650p^4q^6s - 26500pq^8s - 86400p^8q^2rs \\
& - 816500p^5q^4rs - 257500p^2q^6rs + 91800p^9r^2s + 1853700p^6q^2r^2s \\
& + 630000p^3q^4r^2s - 8971250q^6r^2s - 2071200p^7r^3s - 7240000p^4q^2r^3s \\
& + 29375000pq^4r^3s + 14416000p^5r^4s - 5200000p^2q^2r^4s - 30400000p^3r^5s \\
& - 12000000q^2r^5s + 64800p^9qs^2 + 567000p^6q^3s^2 + 1655000p^3q^5s^2 \\
& + 6987500q^7s^2 + 337500p^7qrs^2 + 8462500p^4q^3rs^2 - 5812500pq^5rs^2 \\
& - 24930000p^5qr^2s^2 - 69125000p^2q^3r^2s^2 + 103500000p^3qr^3s^2 + 30000000q^3r^3s^2 \\
& + 90000000pqr^4s^2 - 708750p^8s^3 - 5400000p^5q^2s^3 + 8906250p^2q^4s^3 \\
& + 18562500p^6rs^3 - 625000p^3q^2rs^3 + 29687500q^4rs^3 - 75000000p^4r^2s^3 \\
& - 416250000pq^2r^2s^3 + 60000000p^2r^3s^3 - 300000000r^4s^3 + 71718750p^4qs^4 \\
& + 189062500pq^3s^4 + 210937500p^2qrs^4 + 1187500000qr^2s^4 - 187500000p^3s^5 \\
& - 800781250q^2s^5 - 390625000prs^5
\end{aligned}$$

$$\begin{aligned}
a_2 = & -500p^6q^5 - 6350p^3q^7 - 19800q^9 + 3750p^7q^3r + 65100p^4q^5r + 264950pq^7r \\
& - 6750p^8qr^2 - 209050p^5q^3r^2 - 1217250p^2q^5r^2 + 219000p^6qr^3 \\
& + 2510000p^3q^3r^3 + 1098500q^5r^3 - 2068000p^4qr^4 - 5060000pq^3r^4 \\
& + 5200000p^2qr^5 - 6750p^8q^2s - 96350p^5q^4s - 346000p^2q^6s \\
& + 20250p^9rs + 459900p^6q^2rs + 1828750p^3q^4rs - 2930000q^6rs \\
& - 594000p^7r^2s - 4301250p^4q^2r^2s + 10906250pq^4r^2s + 5252000p^5r^3s \\
& - 1450000p^2q^2r^3s - 12800000p^3r^4s - 6500000q^2r^4s + 74250p^7qs^2 \\
& + 1418750p^4q^3s^2 + 5956250pq^5s^2 - 4297500p^5qrs^2 - 29906250p^2q^3rs^2 \\
& + 31500000p^3qr^2s^2 + 12500000q^3r^2s^2 + 35000000pqr^3s^2 + 1350000p^6s^3 \\
& + 6093750p^3q^2s^3 + 17500000q^4s^3 - 7031250p^4rs^3 - 127812500pq^2rs^3 \\
& + 18750000p^2r^2s^3 - 162500000r^3s^3 + 107812500p^2qs^4 + 460937500qrs^4 \\
& - 214843750ps^5
\end{aligned}$$

$$\begin{aligned}
a_3 = & 1950p^4q^5 + 14100pq^7 - 14350p^5q^3r - 125600p^2q^5r + 27900p^6qr^2 \\
& + 402250p^3q^3r^2 + 288250q^5r^2 - 436000p^4qr^3 - 1345000pq^3r^3 \\
& + 1400000p^2qr^4 + 9450p^6q^2s - 1250p^3q^4s - 465000q^6s \\
& - 49950p^7rs - 302500p^4q^2rs + 1718750pq^4rs + 834000p^5r^2s \\
& + 437500p^2q^2r^2s - 3100000p^3r^3s - 1750000q^2r^3s - 292500p^5qs^2 \\
& - 1937500p^2q^3s^2 + 3343750p^3qrs^2 + 1875000q^3rs^2 + 8125000pqr^2s^2 \\
& - 1406250p^4s^3 - 12343750pq^2s^3 + 5312500p^2rs^3 - 43750000r^2s^3 \\
& + 74218750qs^4
\end{aligned}$$

$$\begin{aligned}
a_4 = & -300p^5q^3 - 2150p^2q^5 + 1350p^6qr + 21500p^3q^3r + 61500q^5r - 42000p^4qr^2 \\
& - 290000pq^3r^2 + 300000p^2qr^3 - 4050p^7s - 45000p^4q^2s \\
& - 125000pq^4s + 108000p^5rs + 643750p^2q^2rs - 700000p^3r^2s \\
& - 375000q^2r^2s - 93750p^3qs^2 - 312500q^3s^2 + 1875000pqr^2s^2 \\
& - 1406250p^2s^3 - 9375000rs^3
\end{aligned}$$

$$\begin{aligned}
a_5 = & 1250p^3q^3 + 9000q^5 - 4500p^4qr - 46250pq^3r + 50000p^2qr^2 + 6750p^5s \\
& + 43750p^2q^2s - 75000p^3rs - 62500q^2rs + 156250pqs^2 - 1562500s^3
\end{aligned}$$

$$\begin{aligned}
b_{10} = & -100p^7q^7 - 2175p^4q^9 - 10500pq^{11} + 1100p^8q^5r + 27975p^5q^7r \\
& + 152950p^2q^9r - 4125p^9q^3r^2 - 128875p^6q^5r^2 - 830525p^3q^7r^2 \\
& + 59450q^9r^2 + 5400p^{10}qr^3 + 243800p^7q^3r^3 + 2082650p^4q^5r^3 \\
& - 333925pq^7r^3 - 139200p^8qr^4 - 2406000p^5q^3r^4 - 122600p^2q^5r^4 \\
& + 1254400p^6qr^5 + 3776000p^3q^3r^5 + 1832000q^5r^5 - 4736000p^4qr^6 \\
& - 6720000pq^3r^6 + 6400000p^2qr^7 - 900p^9q^4s - 37400p^6q^6s \\
& - 281625p^3q^8s - 435000q^{10}s + 6750p^{10}q^2rs + 322300p^7q^4rs \\
& + 2718575p^4q^6rs + 4214250pq^8rs - 16200p^{11}r^2s - 859275p^8q^2r^2s \\
& - 8925475p^5q^4r^2s - 14427875p^2q^6r^2s + 453600p^9r^3s + 10038400p^6q^7r^3s \\
& + 17397500p^3q^4r^3s - 11333125q^6r^3s - 4451200p^7r^4s - 15850000p^4q^2r^4s \\
& + 34000000pq^4r^4s + 17984000p^5r^5s - 10000000p^2q^2r^5s - 25600000p^3r^6s \\
& - 8000000q^2r^6s + 6075p^{11}qs^2 - 83250p^8q^3s^2 - 1282500p^5q^5s^2 \\
& - 2862500p^2q^7s^2 + 724275p^9qrs^2 + 9807250p^6q^3rs^2 + 28374375p^3q^5rs^2 \\
& + 22212500q^7rs^2 - 8982000p^7qr^2s^2 - 39600000p^4q^3r^2s^2 - 61746875pq^5r^2s^2 \\
& - 1010000p^5qr^3s^2 - 1000000p^2q^3r^3s^2 + 78000000p^3qr^4s^2 + 30000000q^3r^4s^2 \\
& + 80000000pqr^5s^2 - 759375p^{10}s^3 - 9787500p^7q^2s^3 - 39062500p^4q^4s^3 \\
& - 52343750pq^6s^3 + 12301875p^8rs^3 + 98175000p^5q^2rs^3 + 225078125p^2q^4rs^3 \\
& - 54900000p^6r^2s^3 - 310000000p^3q^2r^2s^3 - 7890625q^4r^2s^3 + 51250000p^4r^3s^3 \\
& - 420000000pq^2r^3s^3 + 110000000p^2r^4s^3 - 200000000r^5s^3 + 2109375p^6qs^4 \\
& - 21093750p^3q^3s^4 - 89843750q^5s^4 + 182343750p^4qrs^4 + 733203125pq^3rs^4 \\
& - 196875000p^2qr^2s^4 + 1125000000qr^3s^4 - 158203125p^5s^5 - 566406250p^2q^2s^5 \\
& + 101562500p^3rs^5 - 1669921875q^2rs^5 + 1250000000pr^2s^5 - 1220703125pq^6s^6 \\
& + 6103515625s^7
\end{aligned}$$



$$\begin{aligned}
b_{11} = & 1000p^5q^7 + 7250p^2q^9 - 10800p^6q^5r - 96900p^3q^7r - 52500q^9r \\
& + 37400p^7q^3r^2 + 470850p^4q^5r^2 + 640600pq^7r^2 - 39600p^8qr^3 \\
& - 983600p^5q^3r^3 - 2848100p^2q^5r^3 + 814400p^6qr^4 + 6076000p^3q^3r^4 \\
& + 2308000q^5r^4 - 5024000p^4qr^5 - 9680000pq^3r^5 + 9600000p^2qr^6 + 13800p^7q^4r \\
& + 94650p^4q^6s - 26500pq^8s - 86400p^8q^2rs - 816500p^5q^4rs \\
& - 257500p^2q^6rs + 91800p^9r^2s + 1853700p^6q^2r^2s + 630000p^3q^4r^2s \\
& - 8971250q^6r^2s - 2071200p^7r^3s - 7240000p^4q^2r^3s + 29375000pq^4r^3s \\
& + 14416000p^5r^4s - 5200000p^2q^2r^4s - 30400000p^3r^5s - 12000000q^2r^5s \\
& + 64800p^9qs^2 + 567000p^6q^3s^2 + 1655000p^3q^5s^2 + 6987500q^7s^2 \\
& + 337500p^7qr^2s^2 + 8462500p^4q^3r^2s^2 - 5812500pq^5r^2s^2 - 24930000p^5qr^2s^2 \\
& - 69125000p^2q^3r^2s^2 + 103500000p^3qr^3s^2 + 30000000q^3r^3s^2 \\
& + 90000000pqr^4s^2 - 708750p^8s^3 - 5400000p^5q^2s^3 + 8906250p^2q^4s^3 \\
& + 18562500p^6rs^3 - 625000p^3q^2rs^3 + 29687500q^4rs^3 - 75000000p^4r^2s^3 \\
& - 416250000pq^2r^2s^3 + 60000000p^2r^3s^3 - 300000000r^4s^3 + 71718750p^4qs^4 \\
& + 189062500pq^3s^4 + 210937500p^2qr^4s^4 + 1187500000qr^2s^4 - 187500000p^3s^5 \\
& - 800781250q^2s^5 - 390625000prs^5
\end{aligned}$$

$$\begin{aligned}
b_{12} = & -500p^6q^5 - 6350p^3q^7 - 19800q^9 + 3750p^7q^3r + 65100p^4q^5r + 264950pq^7r \\
& - 6750p^8qr^2 - 209050p^5q^3r^2 - 1217250p^2q^5r^2 + 219000p^6qr^3 \\
& + 2510000p^3q^3r^3 + 1098500q^5r^3 - 2068000p^4qr^4 - 5060000pq^3r^4 \\
& + 5200000p^2qr^5 - 6750p^8q^2s - 96350p^5q^4s - 346000p^2q^6s \\
& + 20250p^9rs + 459900p^6q^2rs + 1828750p^3q^4rs - 2930000q^6rs \\
& - 594000p^7r^2s - 4301250p^4q^2r^2s + 10906250pq^4r^2s + 5252000p^5r^3s \\
& - 1450000p^2q^2r^3s - 12800000p^3r^4s - 6500000q^2r^4s + 74250p^7qs^2 \\
& + 1418750p^4q^3s^2 + 5956250pq^5s^2 - 4297500p^5qr^2s^2 - 29906250p^2q^3r^2s^2 \\
& + 31500000p^3qr^2s^2 + 12500000q^3r^2s^2 + 35000000pqr^3s^2 + 1350000p^6s^3 \\
& + 6093750p^3q^2s^3 + 17500000q^4s^3 - 7031250p^4rs^3 - 127812500pq^2rs^3 \\
& + 18750000p^2r^2s^3 - 162500000r^3s^3 + 107812500p^2qs^4 + 460937500qrs^4 \\
& - 214843750ps^5
\end{aligned}$$

$$\begin{aligned}
b_{13} = & 1950p^4q^5 + 14100pq^7 - 14350p^5q^3r - 125600p^2q^5r + 27900p^6qr^2 \\
& + 402250p^3q^3r^2 + 288250q^5r^2 - 436000p^4qr^3 - 1345000pq^3r^3 \\
& + 1400000p^2qr^4 + 9450p^6q^2s - 1250p^3q^4s - 465000q^6s \\
& - 49950p^7rs - 302500p^4q^2rs + 1718750pq^4rs + 834000p^5r^2s \\
& + 437500p^2q^2r^2s - 3100000p^3r^3s - 1750000q^2r^3s - 292500p^5qs^2 \\
& - 1937500p^2q^3s^2 + 3343750p^3qrs^2 + 1875000q^3rs^2 + 8125000pqr^2s^2 \\
& - 1406250p^4s^3 - 12343750pq^2s^3 + 5312500p^2rs^3 - 43750000r^2s^3 \\
& + 74218750qs^4
\end{aligned}$$

$$\begin{aligned}
b_{14} = & -300p^5q^3 - 2150p^2q^5 + 1350p^6qr + 21500p^3q^3r + 61500q^5r - 42000p^4qr^2 \\
& - 290000pq^3r^2 + 300000p^2qr^3 - 4050p^7s - 45000p^4q^2s \\
& - 125000pq^4s + 108000p^5rs + 643750p^2q^2rs - 700000p^3r^2s \\
& - 375000q^2r^2s - 93750p^3qs^2 - 312500q^3s^2 + 1875000pqr^2s^2 \\
& - 1406250p^2s^3 - 9375000rs^3
\end{aligned}$$

$$\begin{aligned}
b_{15} = & 1250p^3q^3 + 9000q^5 - 4500p^4qr - 46250pq^3r + 50000p^2qr^2 + 6750p^5s \\
& + 43750p^2q^2s - 75000p^3rs - 62500q^2rs + 156250pqs^2 - 1562500s^3
\end{aligned}$$

$$\begin{aligned}
b_{20} = & 200p^6q^{11} - 250p^3q^{13} - 10800q^{15} - 3900p^7q^9r - 3325p^4q^{11}r \\
& + 181800pq^{13}r + 26950p^8q^7r^2 + 69625p^5q^9r^2 - 1214450p^2q^{11}r^2 \\
& - 78725p^9q^5r^3 - 368675p^6q^7r^3 + 4166325p^3q^9r^3 + 1131100q^{11}r^3 \\
& + 73400p^{10}q^3r^4 + 661950p^7q^5r^4 - 9151950p^4q^7r^4 - 16633075pq^9r^4 \\
& + 36000p^{11}qr^5 + 135600p^8q^3r^5 + 17321400p^5q^5r^5 + 85338300p^2q^7r^5 \\
& - 832000p^9qr^6 - 21379200p^6q^3r^6 - 176044000p^3q^5r^6 - 1410000q^7r^6 \\
& + 6528000p^7qr^7 + 129664000p^4q^3r^7 + 47344000pq^5r^7 - 21504000p^5qr^8 \\
& - 115200000p^2q^3r^8 + 25600000p^3qr^9 + 64000000q^3r^9 + 15700p^8q^8s \\
& + 120525p^5q^{10}s + 113250p^2q^{12}s - 196900p^9q^6rs - 1776925p^6q^8rs \\
& - 3062475p^3q^{10}rs - 4153500q^{12}rs + 857925p^{10}q^4r^2s + 10562775p^7q^6r^2s \\
& + 34866250p^4q^8r^2s + 73486750pq^{10}r^2s - 1333800p^{11}q^2r^3s - 29212625p^8q^4r^3s \\
& - 168729675p^5q^6r^3s - 427230750p^2q^8r^3s + 108000p^{12}r^4s + 30384200p^9q^2r^4s \\
& + 324535100p^6q^4r^4s + 952666750p^3q^6r^4s - 38076875q^8r^4s - 4296000p^{10}r^5s \\
& - 213606400p^7q^2r^5s - 84206000p^4q^4r^5s - 95285000pq^6r^5s + 61184000p^8r^6s \\
& + 567520000p^5q^2r^6s + 547000000p^2q^4r^6s - 390912000p^6r^7s - 812800000p^3q^2r^7s \\
& - 924000000q^4r^7s + 1152000000p^4r^8s + 800000000pq^2r^8s - 1280000000p^2r^9s \\
& + 141750p^{10}q^5s^2 - 31500p^7q^7s^2 - 11325000p^4q^9s^2 - 31687500pq^{11}s^2 \\
& - 1293975p^{11}q^3rs^2 - 4803800p^8q^5rs^2 + 71398250p^5q^7rs^2 \\
& + 227625000p^2q^9rs^2 + 3256200p^{12}qr^2s^2 + 43870125p^9q^3r^2s^2 + 64581500p^6q^5r^2s^2 \\
& + 56090625p^3q^7r^2s^2 + 260218750q^9r^2s^2 - 74610000p^{10}qr^3s^2 - 662186500p^7q^3r^3s^2 \\
& - 1987747500p^4q^5r^3s^2 - 811928125pq^7r^3s^2 + 471286000p^8qr^4s^2 + 2106040000p^5q^3r^3s^2 \\
& + 792687500p^2q^5r^4s^2 - 135120000p^6qr^5s^2 + 2479000000p^3q^3r^5s^2 + 5242250000q^5r^5s^2 \\
& - 6400000000p^4qr^6s^2 - 8620000000pq^3r^6s^2 + 13280000000p^2qr^7s^2 + 1600000000qr^8s^2 \\
& + 273375p^{12}q^2s^3 - 13612500p^9q^4s^3 - 177250000p^6q^6s^3 - 511015625p^3q^8s^3 \\
& - 320937500q^{10}s^3 - 2770200p^{13}rs^3 + 12595500p^{10}q^2rs^3 + 543950000p^7q^4rs^3 \\
& + 1612281250p^4q^6rs^3 + 968125000pq^8rs^3 + 77031000p^{11}r^2s^3 \\
& + 373218750p^8q^2r^2s^3 + 1839765625p^5q^4r^2s^3 + 1818515625p^2q^6r^2s^3 - 776745000p^9r^2s^3 \\
& - 6861075000p^6q^2r^3s^3 - 20014531250p^3q^4r^3s^3 - 13747812500q^6r^3s^3 + 3768000000pq^8r^3s^3 \\
& + 35365000000p^4q^2r^4s^3 + 34441875000pq^4r^4s^3 - 9628000000p^5r^5s^3 - 63230000000p^2r^6s^3 \\
& + 13600000000p^3r^6s^3 - 15000000000r^6s^3 - 10400000000pr^7s^3 - 45562500p^{11}qs^4 \\
& - 525937500p^8q^3s^4 - 1364218750p^5q^5s^4 - 1382812500p^2q^7s^4 + 572062500p^9qr^4s^4 \\
& + 2473515625p^6q^3rs^4 + 13192187500p^3q^5rs^4 + 12703125000q^7rs^4 - 451406250p^7qr^2s^4
\end{aligned}$$

( $b_{20}$  cont.)

$$\begin{aligned} & - 18153906250p^4q^3r^2s^4 - 36908203125pq^5r^2s^4 - 9069375000p^5qr^3s^4 + 79957812500p^2q^3 \\ & + 5512500000p^3qr^4s^4 + 50656250000q^3r^4s^4 + 74750000000pqr^5s^4 + 56953125p^{10}s^5 \\ & + 1381640625p^7q^2s^5 - 781250000p^4q^4s^5 + 878906250pq^6s^5 - 2655703125p^8rs^5 \\ & - 3223046875p^5q^2rs^5 - 35117187500p^2q^4rs^5 + 26573437500p^6r^2s^5 + 14785156250p^3q \\ & - 52050781250q^4r^2s^5 - 103062500000p^4r^3s^5 - 281796875000pq^2r^3s^5 + 146875000000 \\ & - 37500000000r^5s^5 - 8789062500p^6qs^6 - 3906250000p^3q^3s^6 + 1464843750q^5s^6 \\ & + 102929687500p^4qrs^6 + 297119140625pq^3rs^6 - 217773437500p^2qr^2s^6 + 16796875000 \\ & + 10986328125p^5s^7 + 98876953125p^2q^2s^7 - 188964843750p^3rs^7 - 278320312500q^2rs^7 \\ & + 51757812500pr^2s^7 - 610351562500pqs^8 + 762939453125s^9 \end{aligned}$$

$$\begin{aligned}
b_{21} = & -200p^7q^9 + 1850p^4q^{11} + 21600pq^{13} + 3200p^8q^7r - 19200p^5q^9r \\
& - 316350p^2q^{11}r - 19050p^9q^5r^2 + 37400p^6q^7r^2 + 1759250p^3q^9r^2 \\
& + 440100q^{11}r^2 + 48750p^{10}q^3r^3 + 190200p^7q^5r^3 - 4604200p^4q^7r^3 \\
& - 6072800pq^9r^3 - 43200p^{11}qr^4 - 834500p^8q^3r^4 + 4916000p^5q^5r^4 \\
& + 27926850p^2q^7r^4 + 969600p^9qr^5 + 2467200p^6q^3r^5 - 45393200p^3q^5r^5 \\
& - 5399500q^7r^5 - 7283200p^7qr^6 + 10536000p^4q^3r^6 + 41656000p^5q^5r^6 \\
& + 22784000p^5qr^7 - 35200000p^2q^3r^7 - 25600000p^3qr^8 + 96000000q^3r^8 \\
& - 3000p^9q^6s + 40400p^6q^8s + 136550p^3q^{10}s - 1647000q^{12}s \\
& + 40500p^{10}q^4rs - 173600p^7q^6rs - 126500p^4q^8rs + 23969250pq^{10}rs \\
& - 153900p^{11}q^2r^2s - 456150p^8q^4r^2s - 4115800p^5q^6r^2s - 112653250p^2q^8r^2s \\
& + 129600p^{12}r^3s + 2683350p^9q^2r^3s + 10906650p^6q^4r^3s + 187289500p^3q^6r^3s \\
& + 44098750q^8r^3s - 4384800p^{10}r^4s - 35660800p^7q^2r^4s - 175420000p^4q^4r^4s \\
& - 426538750p^6q^4r^4s + 60857600p^8r^5s + 349436000p^5q^2r^5s + 900600000p^2q^4r^5s \\
& - 429568000p^6r^6s - 1511200000p^3q^2r^6s - 1286000000q^4r^6s + 1472000000p^4r^7s \\
& + 1440000000pq^2r^7s - 1920000000p^2r^8s - 36450p^{11}q^3s^2 - 188100p^8q^5s^2 \\
& - 5504750p^5q^7s^2 - 37968750p^2q^9s^2 + 255150p^{12}qrs^2 + 2754000p^9q^3rs^2 \\
& + 49196500p^6q^5rs^2 + 323587500p^3q^7rs^2 - 83250000q^9rs^2 - 465750p^{10}qr^2s^2 \\
& - 31881500p^7q^3r^2s^2 - 415585000p^4q^5r^2s^2 + 1054775000pq^7r^2s^2 - 96823500p^8qr^3s \\
& - 701490000p^5q^3r^3s^2 - 2953531250p^2q^5r^3s^2 + 1454560000p^6qr^4s^2 + 7670500000p^3 \\
& + 5661062500q^5r^4s^2 - 7785000000p^4qr^5s^2 - 9450000000pq^3r^5s^2 + 14000000000p^2q \\
& + 2400000000qr^7s^2 - 437400p^{13}s^3 - 10145250p^{10}q^2s^3 - 121912500p^7q^4s^3 \\
& - 576531250p^4q^6s^3 - 528593750pq^8s^3 + 12939750p^{11}rs^3 + 313368750p^8q^2rs^3 \\
& + 2171812500p^5q^4rs^3 + 2381718750p^2q^6rs^3 - 124638750p^9r^2s^3 - 3001575000p^6q^2r \\
& - 12259375000p^3q^4r^2s^3 - 9985312500q^6r^2s^3 + 384000000p^7r^3s^3 + 13997500000p^4q
\end{aligned}$$

( $b_{21}$  cont.)

$$\begin{aligned} &+ 20749531250pq^4r^3s^3 - 55500000p^5r^4s^3 - 4183500000p^2q^2r^4s^3 + 5420000000p^3r^5s^3 \\ &\quad - 16300000000q^2r^5s^3 - 17600000000pr^6s^3 - 7593750p^9qs^4 + 289218750p^6q^3s^4 \\ &\quad + 3591406250p^3q^5s^4 + 5992187500q^7s^4 + 658125000p^7qrs^4 - 269531250p^4q^3rs^4 \\ &\quad - 15882812500pq^5rs^4 - 4785000000p^5qr^2s^4 + 54375781250p^2q^3r^2s^4 - 5668750000p^3q^2r^2s^4 \\ &\quad + 35867187500q^3r^3s^4 + 113875000000pqr^4s^4 - 544218750p^8s^5 - 5407031250p^5q^2s^5 \\ &\quad - 14277343750p^2q^4s^5 + 5421093750p^6rs^5 - 24941406250p^3q^2rs^5 - 25488281250q^4rs^5 \\ &\quad - 11500000000p^4r^2s^5 - 231894531250pq^2r^2s^5 - 6250000000p^2r^3s^5 - 43750000000q^4rs^5 \\ &\quad + 35449218750p^4qs^6 + 137695312500pq^3s^6 + 34667968750p^2qrs^6 + 202148437500qr^2s^6 \\ &\quad - 33691406250p^3s^7 - 21484375000q^2s^7 - 31738281250prs^7 \end{aligned}$$

$$\begin{aligned}
b_{22} = & -800p^5q^9 - 5400p^2q^{11} + 5800p^6q^7r + 48750p^3q^9r + 16200q^{11}r \\
& - 3000p^7q^5r^2 - 108350p^4q^7r^2 - 263250pq^9r^2 - 60700p^8q^3r^3 \\
& - 386250p^5q^5r^3 + 253100p^2q^7r^3 + 127800p^9qr^4 + 2326700p^6q^3r^4 \\
& + 6565550p^3q^5r^4 - 705750q^7r^4 - 2903200p^7qr^5 - 21218000p^4q^3r^5 + 1057000pq^5r^5 \\
& + 20368000p^5qr^6 + 33000000p^2q^3r^6 - 43200000p^3qr^7 + 52000000q^3r^7 \\
& + 5200p^7q^6s + 188250p^4q^8s + 931500pq^{10}s - 73800p^8q^4rs - 1466850p^5q^6rs \\
& - 6894000p^2q^8rs + 315900p^9q^2r^2s + 4547000p^6q^4r^2s + 20362500p^3q^6r^2s \\
& + 15018750q^8r^2s - 653400p^{10}r^3s - 13897550p^7q^2r^3s - 76757500p^4q^4r^3s \\
& - 124207500pq^6r^3s + 18567600p^8r^4s + 175911000p^5q^2r^4s + 253787500p^2q^4r^4s \\
& - 183816000p^9r^5s - 706900000p^3q^2r^5s - 665750000q^4r^5s + 740000000p^4r^6s \\
& + 890000000pq^2r^6s - 1040000000p^2r^7s - 763000p^6q^5s^2 - 12375000p^3q^7s^2 \\
& - 40500000q^9s^2 + 364500p^{10}qrs^2 + 15537000p^7q^3rs^2 + 154392500p^4q^5rs^2 \\
& + 372206250pq^7r^2s^2 - 25481250p^8qr^2s^2 - 386300000p^5q^3r^2s^2 - 996343750p^2q^5r^2s^2 \\
& + 459872500p^6qr^3s^2 + 2943937500p^3q^3r^3s^2 + 2437781250q^5r^3s^2 - 2883750000p^4qr^4s^2 \\
& - 4343750000pq^3r^4s^2 + 5495000000p^2qr^5s^2 + 1300000000qr^6s^2 - 364500p^{11}s^3 \\
& - 13668750p^8q^2s^3 - 113406250p^5q^4s^3 - 159062500p^2q^6s^3 + 13972500p^9rs^3 \\
& + 61537500p^6q^2rs^3 - 1622656250p^3q^4rs^3 - 2720625000q^6rs^3 - 201656250p^7r^2s^3 \\
& + 1949687500p^4q^2r^2s^3 + 4979687500pq^4r^2s^3 + 497125000p^5r^3s^3 - 11150625000p^2 \\
& + 2982500000p^3r^4s^3 - 6612500000q^2r^4s^3 - 10450000000pr^5s^3 + 126562500p^7qs^4 \\
& + 1443750000p^4q^3s^4 + 281250000pq^5s^4 - 1648125000p^5qrs^4 + 11271093750p^2q^3rs^4 \\
& - 4785156250p^3qr^2s^4 + 8808593750q^3r^2s^4 + 52390625000pqr^3s^4 - 611718750p^6s^5 \\
& - 13027343750p^3q^2s^5 - 1464843750q^4s^5 + 6492187500p^4rs^5 - 65351562500pq^2r^5 \\
& - 13476562500p^2r^2s^5 - 24218750000r^3s^5 + 41992187500p^2qs^6 + 69824218750qrs^6 \\
& - 34179687500ps^7
\end{aligned}$$

$$\begin{aligned}
b_{23} = & -1000p^6q^7 - 5150p^3q^9 + 10800q^{11} + 11000p^7q^5r + 66450p^4q^7r \\
& - 127800pq^9r - 41250p^8q^3r^2 - 368400p^5q^5r^2 + 204200p^2q^7r^2 \\
& + 54000p^9qr^3 + 1040950p^6q^3r^3 + 2096500p^3q^5r^3 + 200000q^7r^3 \\
& - 1140000p^7qr^4 - 7691000p^4q^3r^4 - 2281000pq^5r^4 + 7296000p^5qr^5 \\
& + 13300000p^2q^3r^5 - 14400000p^3qr^6 + 14000000q^3r^6 - 9000p^8q^4s \\
& + 52100p^5q^6s + 710250p^2q^8s + 67500p^9q^2rs - 256100p^6q^4rs \\
& - 5753000p^3q^6rs + 292500q^8rs - 162000p^{10}r^2s - 1432350p^7q^2r^2s \\
& + 5410000p^4q^4r^2s - 7408750pq^6r^2s + 4401000p^8r^3s + 24185000p^5q^2r^3s \\
& + 20781250p^2q^4r^3s - 43012000p^6r^4s - 146300000p^3q^2r^4s - 165875000q^4r^4s \\
& + 182000000p^4r^5s + 250000000pq^2r^5s - 280000000p^2r^6s + 60750p^{10}qs^2 \\
& + 2414250p^7q^3s^2 + 15770000p^4q^5s^2 + 15825000pq^7s^2 - 6021000p^8qrs^2 \\
& - 62252500p^5q^3rs^2 - 74718750p^2q^5rs^2 + 90888750p^6qr^2s^2 + 471312500p^3q^3r^2s^2 \\
& + 525875000q^5r^2s^2 - 539375000p^4qr^3s^2 - 1030000000pq^3r^3s^2 + 1142500000p^2qr^4s^2 \\
& + 350000000qr^5s^2 - 303750p^9s^3 - 35943750p^6q^2s^3 - 331875000p^3q^4s^3 \\
& - 505937500q^6s^3 + 8437500p^7rs^3 + 530781250p^4q^2rs^3 + 1150312500pq^4rs^3 \\
& - 154500000p^5r^2s^3 - 2059062500p^2q^2r^2s^3 + 1150000000p^3r^3s^3 - 1343750000q^2r^2s^3 \\
& - 2900000000pr^4s^3 + 30937500p^5qs^4 + 1166406250p^2q^3s^4 - 1496875000p^3qrs^4 \\
& + 1296875000q^3rs^4 + 10640625000pqr^2s^4 - 281250000p^4s^5 - 9746093750pq^2s^5 \\
& + 1269531250p^2rs^5 - 7421875000r^2s^5 + 15625000000qs^6
\end{aligned}$$

$$\begin{aligned}
b_{24} = & -1600p^4q^7 - 10800pq^9 + 9800p^5q^5r + 80550p^2q^7r - 4600p^6q^3r^2 \\
& - 112700p^3q^5r^2 + 40500q^7r^2 - 34200p^7qr^3 - 279500p^4q^3r^3 \\
& - 665750pq^5r^3 + 632000p^5qr^4 + 3200000p^2q^3r^4 - 2800000p^3qr^5 \\
& + 3000000q^3r^5 - 18600p^6q^4s - 51750p^3q^6s + 405000q^8s \\
& + 21600p^7q^2rs - 122500p^4q^4rs - 2891250pq^6rs + 156600p^8r^2s \\
& + 1569750p^5q^2r^2s + 6943750p^2q^4r^2s - 3774000p^6r^3s - 27100000p^3q^2r^3s \\
& - 30187500q^4r^3s + 28000000p^4r^4s + 52500000pq^2r^4s - 60000000p^2r^5s \\
& - 81000p^8qs^2 - 240000p^5q^3s^2 + 937500p^2q^5s^2 + 3273750p^6qrs^2 \\
& + 30406250p^3q^3rs^2 + 556875000q^5rs^2 - 42187500p^4qr^2s^2 - 112812500pq^3r^2s^2 \\
& + 152500000p^2qr^3s^2 + 75000000qr^4s^2 - 4218750p^4q^2s^3 + 15156250pq^4s^3 \\
& + 5906250p^5rs^3 - 206562500p^2q^2rs^3 + 107500000p^3r^2s^3 - 159375000q^2r^2s^3 \\
& - 612500000pr^3s^3 + 135937500p^3qs^4 + 46875000q^3s^4 + 1175781250pqr^4s^4 \\
& - 292968750p^2s^5 - 1367187500rs^5
\end{aligned}$$



$$\begin{aligned}
b_{2s} = & -800p^5q^5 - 5400p^2q^7 + 6000p^6q^3r + 51700p^3q^5r + 27000q^7r \\
& - 10800p^7qr^2 - 163250p^4q^3r^2 - 285750pq^5r^2 + 192000p^5qr^3 \\
& + 1000000p^2q^3r^3 - 800000p^3qr^4 + 500000q^3r^4 - 10800p^7q^2s \\
& - 57500p^4q^4s + 67500pq^6s + 32400p^8rs + 279000p^5q^2rs \\
& - 131250p^2q^4rs - 729000p^6r^2s - 4100000p^3q^2r^2s - 5343750q^4r^2s \\
& + 5000000p^4r^3s + 10000000pq^2r^3s - 10000000p^2r^4s + 641250p^6qs^2 \\
& + 5812500p^3q^3s^2 + 10125000q^5s^2 - 7031250p^4qrs^2 - 20625000pq^3rs^2 \\
& + 17500000p^2qr^2s^2 + 12500000qr^3s^2 - 843750p^5s^3 - 19375000p^2q^2s^3 \\
& + 30000000p^3rs^3 - 20312500q^2rs^3 - 112500000pr^2s^3 + 183593750pqs^4 \\
& - 292968750s^5
\end{aligned}$$

$$\begin{aligned}
b_{30} = & 500p^{11}q^6 + 9875p^8q^8 + 42625p^5q^{10} - 35000p^2q^{12} - 4500p^{12}q^4r \\
& - 108375p^9q^6r - 516750p^6q^8r + 1110500p^3q^{10}r \\
& + 2730000q^{12}r + 10125p^{13}q^2r^2 + 358250p^{10}q^4r^2 + 1908625p^7q^6r^2 \\
& - 11744250p^4q^8r^2 - 43383250pq^{10}r^2 - 313875p^{11}q^2r^3 - 2074875p^8q^4r^3 \\
& + 52094750p^5q^6r^3 + 264567500p^2q^8r^3 + 796125p^9q^2r^4 - 92486250p^6q^4r^4 \\
& - 757957500p^3q^6r^4 - 29354375q^8r^4 + 60970000p^7q^2r^5 + 1112462500p^4q^4r^5 \\
& + 571094375pq^6r^5 - 685290000p^5q^2r^6 - 2037800000p^2q^4r^6 + 2279600000p^3q^2r^7 \\
& + 849000000q^4r^7 - 1480000000pq^2r^8 + 13500p^{13}q^3s + 363000p^{10}q^5s \\
& + 2861250p^7q^7s + 8493750p^4q^9s + 17031250pq^{11}s - 60750p^{14}qrs \\
& - 2319750p^{11}q^3rs - 22674250p^8q^5rs - 74368750p^5q^7rs - 170578125p^2q^9rs \\
& + 2760750p^{12}qr^2s + 46719000p^9q^3r^2s + 163356375p^6q^5r^2s + 360295625p^3q^7r^2s \\
& - 195990625q^9r^2s - 37341750p^{10}qr^3s - 194739375p^7q^3r^3s - 105463125p^4q^5r^3s \\
& - 415825000pq^7r^3s + 90180000p^8qr^4s - 990552500p^5q^3r^4s + 3519212500p^2q^5r^4s \\
& + 1112220000p^6qr^5s - 4508750000p^3q^3r^5s - 8159500000q^5r^5s - 4356000000p^4qr^6s \\
& + 14615000000pq^3r^6s - 2160000000p^2qr^7s + 91125p^{15}s^2 + 3290625p^{12}q^2s^2 \\
& + 35100000p^9q^4s^2 + 175406250p^6q^6s^2 + 629062500p^3q^8s^2 + 910937500q^{10}s^2 \\
& - 5710500p^{13}rs^2 - 100423125p^{10}q^2rs^2 - 604743750p^7q^4rs^2 - 2954843750p^4q^6rs^2 \\
& - 4587578125p^8rs^2 + 116194500p^{11}r^2s^2 + 1280716250p^8q^2r^2s^2 + 7401190625p^5q^4r^2s^2 \\
& + 1161993750p^2q^6r^2s^2 - 952173125p^9r^3s^2 - 6519712500p^6q^2r^3s^2 - 10238593750p^3q^4r^3s^2 \\
& + 29984609375q^6r^3s^2 + 2558300000p^7r^4s^2 + 16225000000p^4q^2r^4s^2 - 64994140625pq^4r^4s^2 \\
& + 4202250000p^5r^5s^2 + 46925000000p^2q^2r^5s^2 - 28950000000p^3r^6s^2 - 1000000000q^2r^6s^2 \\
& + 37000000000pr^7s^2 - 48093750p^{11}qs^3 - 673359375p^8q^3s^3 - 2170312500p^5q^5s^3 \\
& - 2466796875p^2q^7s^3 + 647578125p^9qrs^3 + 597031250p^6q^3rs^3 - 7542578125p^3q^5rs^3 \\
& - 41125000000q^7rs^3 - 2175828125p^7qr^2s^3 - 7101562500p^4q^3r^2s^3 + 100596875000pq^4r^2s^3 \\
& - 8984687500p^5qr^3s^3 - 120070312500p^2q^3r^3s^3 + 57343750000p^3qr^4s^3 + 95000000000p^4qr^5s^3 \\
& - 342875000000pqr^5s^3 + 400781250p^{10}s^4 + 8531250000p^7q^2s^4 + 34033203125p^4q^4s^4 \\
& + 42724609375pq^6s^4 - 6289453125p^3rs^4 - 24037109375p^5q^2rs^4 - 62626953125p^2q^4rs^4 \\
& + 17299218750p^6r^2s^4 + 108357421875p^3q^2r^2s^4 - 55380859375q^4r^2s^4 + 105648437500p^5r^3s^4 \\
& + 1204228515625pq^2r^3s^4 - 365000000000p^2r^4s^4 + 184375000000r^5s^4 - 320800781250p^3r^6s^4 \\
& - 98144531250p^3q^3s^5 + 93994140625q^5s^5 - 178955078125p^4qrs^5 - 1299804687500pq^2r^2s^5 \\
& + 332421875000p^2qr^2s^5 - 119531250000qr^3s^5 + 72021484375p^5s^6 + 323486328125p^4qr^4s^5 \\
& + 682373046875p^3rs^6 + 2447509765625q^2rs^6 - 3011474609375pr^2s^6 + 305175781250p^2r^3s^6 \\
& - 7629394531250s^8
\end{aligned}$$

$$\begin{aligned}
b_{31} = & 1500p^9q^6 + 69625p^6q^8 + 590375p^3q^{10} + 1035000q^{12} - 13500p^{10}q^4r \\
& - 760625p^7q^6r - 7904500p^4q^8r - 18169250pq^{10}r + 30375p^{11}q^2r^2 \\
& + 2628625p^8q^4r^2 + 37879000p^5q^6r^2 + 121367500p^2q^8r^2 - 2699250p^9q^2r^3 \\
& - 76776875p^6q^4r^3 - 403583125p^3q^6r^3 - 78865625q^8r^3 + 60907500p^7q^2r^4 \\
& + 735291250p^4q^4r^4 + 781142500pq^6r^4 - 558270000p^5q^2r^5 - 2150725000p^2q^4r^5 \\
& + 2015400000p^3q^2r^6 + 1181000000q^4r^6 - 2220000000pq^2r^7 + 40500p^{11}q^3s \\
& + 1376500p^8q^5s + 9953125p^5q^7s + 9765625p^2q^9s - 182250p^{12}qrs \\
& - 8859000p^9q^3rs - 82854500p^6q^5rs - 71511250p^3q^7rs + 273631250q^9rs \\
& + 10233000p^{10}qr^2s + 179627500p^7q^3r^2s + 25164375p^4q^5r^2s - 2927290625pq^7r^2s \\
& - 171305000p^8qr^3s - 544768750p^5q^3r^3s + 7583437500p^2q^5r^3s + 1139860000p^6qr^4s \\
& - 6489375000p^3q^3r^4s - 9625375000q^5r^4s - 1838000000p^4qr^5s + 19835000000pq^3r^5s \\
& - 3240000000p^2qr^6s + 273375p^{13}s^2 + 9753750p^{10}q^2s^2 + 82575000p^7q^4s^2 \\
& + 202265625p^4q^6s^2 + 556093750pq^8s^2 - 11552625p^{11}rs^2 - 115813125p^8q^2rs^2 \\
& + 630590625p^5q^4rs^2 + 1347015625p^2q^6rs^2 + 157578750p^9r^2s^2 - 689206250p^6q^2r^2s^2 \\
& - 4299609375p^3q^4r^2s^2 + 23896171875q^6r^2s^2 - 1022437500p^7r^3s^2 + 6648125000p^4q^7s^2 \\
& - 52895312500pq^4r^3s^2 + 4401750000p^5r^4s^2 + 26500000000p^2q^2r^4s^2 - 22125000000 \\
& - 1500000000q^2r^5s^2 + 55500000000pr^6s^2 - 137109375p^9qs^3 - 1955937500p^6q^3s^3 \\
& - 6790234375p^3q^5s^3 - 16996093750q^7s^3 + 2146218750p^7qrs^3 + 6570312500p^4q^3rs^3 \\
& + 39918750000pq^5rs^3 - 7673281250p^5qr^2s^3 - 52000000000p^2q^3r^2s^3 + 50796875000 \\
& + 18750000000q^3r^3s^3 - 399875000000pqr^4s^3 + 780468750p^8s^4 + 14455078125p^5q^2s^4 \\
& + 10048828125p^2q^4s^4 - 15113671875p^6rs^4 + 39298828125p^3q^2rs^4 - 52138671875q^4s^4 \\
& + 45964843750p^4r^2s^4 + 914414062500pq^2r^2s^4 + 1953125000p^2r^3s^4 + 33437500000 \\
& - 149169921875p^4qs^5 - 459716796875pq^3s^5 - 325585937500p^2qrs^5 - 146289062500 \\
& + 296630859375p^3s^6 + 1324462890625q^2s^6 + 307617187500prs^6
\end{aligned}$$

$$\begin{aligned}
b_{32} = & -20750p^7q^6 - 290125p^4q^8 - 993000pq^{10} + 146125p^8q^4r + 2721500p^5q^6r \\
& + 11833750p^2q^8r - 237375p^9q^2r^2 - 8167500p^6q^4r^2 - 54605625p^3q^6r^2 \\
& - 23802500q^8r^2 + 8927500p^7q^2r^3 + 131184375p^4q^4r^3 + 254695000pq^6r^3 \\
& - 121561250p^5q^2r^4 - 728003125p^2q^4r^4 + 702550000p^3q^2r^5 + 597312500q^4r^5 \\
& - 1202500000pq^2r^6 - 194625p^9q^3s - 1568875p^6q^5s + 9685625p^3q^7s \\
& + 74662500q^9s + 327375p^{10}qrs + 1280000p^7q^3rs - 123703750p^4q^5rs \\
& - 850121875pq^7rs - 7436250p^8qr^2s + 164820000p^5q^3r^2s + 2336659375p^2q^5r^2s \\
& + 32202500p^6qr^3s - 2429765625p^3q^3r^3s - 4318609375q^5r^3s + 148000000p^4qr^4s \\
& + 9902812500pq^3r^4s - 1755000000p^2qr^5s + 1154250p^{11}s^2 + 36821250p^8q^2s^2 \\
& + 372825000p^5q^4s^2 + 1170921875p^2q^6s^2 - 38913750p^9rs^2 - 797071875p^6q^2rs^2 \\
& - 2848984375p^3q^4rs^2 + 7651406250q^6rs^2 + 415068750p^7r^2s^2 + 3151328125p^4q^2r^2s^2 \\
& - 17696875000pq^4r^2s^2 - 725968750p^5r^3s^2 + 5295312500p^2q^2r^3s^2 - 8581250000p^3q^2r^3s^2 \\
& - 812500000q^2r^4s^2 + 30062500000pr^5s^2 - 110109375p^7qs^3 - 1976562500p^4q^3s^3 \\
& - 6329296875pq^5s^3 + 2256328125p^5qrs^3 + 8554687500p^2q^3rs^3 + 12947265625p^3qr^3s^3 \\
& + 7984375000q^3r^2s^3 - 167039062500pqr^3s^3 + 1181250000p^6s^4 + 17873046875p^3q^2s^4 \\
& - 20449218750q^4s^4 - 16265625000p^4rs^4 + 260569140625pq^2rs^4 + 21025390625p^2r^2s^4 \\
& + 207617187500r^3s^4 - 207177734375p^2qs^5 - 615478515625qrs^5 + 301513671875p^2rs^5
\end{aligned}$$

$$\begin{aligned}
b_{33} = & 53125p^5q^6 + 425000p^2q^8 - 394375p^6q^4r - 4301875p^3q^6r - 3225000q^8r \\
& + 851250p^7q^2r^2 + 16910625p^4q^4r^2 + 44210000pq^6r^2 - 20474375p^5q^2r^3 \\
& - 147190625p^2q^4r^3 + 163975000p^3q^2r^4 + 156812500q^4r^4 - 323750000pq^2r^5 \\
& - 99375p^7q^3s - 6395000p^4q^5s - 49243750pq^7s - 1164375p^8qrs \\
& + 4465625p^5q^3rs + 205546875p^2q^5rs + 12163750p^6qr^2s - 315546875p^3q^3r^2s \\
& - 946453125q^5r^2s - 23500000p^4qr^3s + 2313437500pq^3r^3s - 472500000p^2qr^4s \\
& + 1316250p^9s^2 + 22715625p^6q^2s^2 + 206953125p^3q^4s^2 + 1220000000q^6s^2 \\
& - 20953125p^7rs^2 - 277656250p^4q^2rs^2 - 3317187500pq^4rs^2 + 293734375p^5r^2s^2 \\
& + 1351562500p^2q^2r^2s^2 - 2278125000p^3r^3s^2 - 218750000q^2r^3s^2 + 8093750000pr^4s^2 \\
& - 9609375p^5qs^3 + 240234375p^2q^3s^3 + 2310546875p^3qrs^3 + 1171875000q^3rs^3 \\
& - 33460937500pqr^2s^3 + 2185546875p^4s^4 + 32578125000pq^2s^4 - 8544921875p^2rs^4 \\
& + 58398437500r^2s^4 - 114013671875qs^5
\end{aligned}$$

$$\begin{aligned}
b_{34} = & -16250p^6q^4 - 191875p^3q^6 - 495000q^8 + 73125p^7q^2r + 1437500p^4q^4r \\
& + 5866250pq^6r - 2043125p^5q^2r^2 - 17218750p^2q^4r^2 + 19106250p^3q^2r^3 \\
& + 34015625q^4r^3 - 69375000pq^2r^4 - 219375p^8qs - 2846250p^5q^3s \\
& - 8021875p^2q^5s + 3420000p^6qrs - 1640625p^3q^3rs - 152468750q^5rs \\
& + 3062500p^4qr^2s + 381171875pq^3r^2s - 101250000p^2qr^3s + 2784375p^7s^2 \\
& + 43515625p^4q^2s^2 + 115625000pq^4s^2 - 48140625p^5rs^2 - 307421875p^2q^2rs^2 \\
& - 25781250p^3r^2s^2 - 46875000q^2r^2s^2 + 1734375000pr^3s^2 - 128906250p^3qs^3 \\
& + 339843750q^3s^3 - 4583984375pqrs^3 + 2236328125p^2s^4 + 12255859375rs^4
\end{aligned}$$

$$\begin{aligned}
b_{35} = & 31875p^4q^4 + 255000pq^6 - 82500p^5q^2r - 1106250p^2q^4r + 1653125p^3q^2r^2 \\
& + 5187500q^4r^2 - 11562500pq^2r^3 - 118125p^6qs - 3593750p^3q^3s \\
& - 23812500q^5s + 4656250p^4qrs + 67109375pq^3rs - 16875000p^2qr^2s \\
& - 984375p^5s^2 - 19531250p^2q^2s^2 - 37890625p^3rs^2 - 7812500q^2rs^2 \\
& + 289062500pr^2s^2 - 529296875pq s^3 + 2343750000s^4
\end{aligned}$$

$$\begin{aligned}
b_{40} = & 600p^{10}q^{10} + 13850p^7q^{12} + 106150p^4q^{14} + 270000pq^{16} - 9300p^{11}q^8r \\
& - 234075p^8q^{10}r - 1942825p^5q^{12}r - 5319900p^2q^{14}r + 52050p^{12}q^6r^2 \\
& + 1481025p^9q^8r^2 + 13594450p^6q^{10}r^2 + 40062750p^3q^{12}r^2 - 3569400q^{14}r^2 \\
& - 122175p^{13}q^4r^3 - 4260350p^{10}q^6r^3 - 45052375p^7q^8r^3 - 142634900p^4q^{10}r^3 \\
& + 54186350p^{12}r^3 + 97200p^{14}q^2r^4 + 5284225p^{11}q^4r^4 + 70389525p^8q^6r^4 \\
& + 232732850p^5q^8r^4 - 318849400p^2q^{10}r^4 - 2046000p^{12}q^2r^5 - 43874125p^9q^4r^5 \\
& - 107411850p^6q^6r^5 + 948310700p^3q^8r^5 - 34763575q^{10}r^5 + 5915600p^{10}q^2r^6 \\
& - 115887800p^7q^4r^6 - 1649542400p^4q^6r^6 + 224468875pq^8r^6 + 120252800p^8q^2r^7 \\
& + 1779902000p^5q^4r^7 - 288250000p^2q^6r^7 - 915200000p^6q^2r^8 - 1164000000p^3q^4r^8 \\
& - 444200000q^6r^8 + 2502400000p^4q^2r^9 + 1984000000pq^4r^9 - 2880000000p^2q^2r^{10} \\
& + 20700p^{12}q^7s + 551475p^9q^9s + 5194875p^6q^{11}s + 18985000p^3q^{13}s \\
& + 16875000q^{15}s - 218700p^{13}q^5rs - 6606475p^{10}q^7rs - 69770850p^7q^9rs \\
& - 285325500p^4q^{11}rs - 292005000pq^{13}rs + 694575p^{14}q^3r^2s + 26187750p^{11}q^5r^2s \\
& + 328992825p^8q^7r^2s + 1573292400p^5q^9r^2s + 1930043875p^2q^{11}r^2s - 583200p^{15}qr^3s \\
& - 37263225p^{12}q^3r^3s - 638579425p^9q^5r^3s - 3920212225p^6q^7r^3s - 6327336875p^3q^9r^3s \\
& + 440969375q^{11}r^3s + 13446000p^{13}qr^4s + 462330325p^{10}q^3r^4s + 4509088275p^7q^5r^4s \\
& + 11709795625p^4q^7r^4s - 3579565625pq^9r^4s - 85033600p^{11}qr^5s - 2136801600p^8q^3r^5s \\
& - 12221575800p^5q^5r^5s + 9431044375p^2q^7r^5s + 10643200p^9qr^6s + 4565594000p^6q^3r^6s \\
& - 1778590000p^3q^5r^6s + 4842175000q^7r^6s + 712320000p^7qr^7s - 1618200000p^4q^3r^7s \\
& - 2191800000pq^5r^7s - 742400000p^5qr^8s + 3104000000p^2q^3r^8s + 1280000000p^3qr^8s \\
& + 4800000000q^3r^9s + 230850p^{14}q^4s^2 + 7373250p^{11}q^6s^2 + 85045625p^8q^8s^2 \\
& + 399140625p^5q^{10}s^2 + 565031250p^2q^{12}s^2 - 1257525p^{15}q^2rs^2 - 52728975p^{12}q^4rs^2 \\
& - 743466375p^9q^6rs^2 - 4144915000p^6q^8rs^2 - 7102690625p^3q^{10}rs^2 - 1389937500q^{12}s^2 \\
& + 874800p^{16}r^2s^2 + 89851275p^{13}q^2r^2s^2 + 1897236775p^{10}q^4r^2s^2 \\
& + 14144163000p^7q^6r^2s^2 + 31942921875p^4q^8r^2s^2 + 13305118750pq^{10}r^2s^2 \\
& - 23004000p^{14}r^3s^2 - 1450715475p^{11}q^2r^3s^2 - 19427105000p^8q^4r^3s^2 \\
& - 70634028750p^5q^6r^3s^2 - 47854218750p^2q^8r^3s^2 + 204710400p^{12}r^4s^2 \\
& + 10875135000p^9q^2r^4s^2 + 83618806250p^6q^4r^4s^2 + 62744500000p^3q^6r^4s^2 \\
& - 19806718750q^8r^4s^2 - 757094800p^{10}r^5s^2 - 37718030000p^7q^2r^5s^2 \\
& - 22479500000p^4q^4r^5s^2 + 91556093750pq^6r^5s^2 + 2306320000p^8r^6s^2 \\
& + 55539600000p^5q^2r^6s^2 - 112551250000p^2q^4r^6s^2 - 10720000000p^6r^7s^2 \\
& - 64720000000p^3q^2r^7s^2 - 59925000000q^4r^7s^2 + 28000000000p^4r^8s^2
\end{aligned}$$

( $b_{40}$  cont.)

$$\begin{aligned} &+ 28000000000pq^2r^8s^2 - 24000000000p^2r^9s^2 + 820125p^{16}q^3s^3 \\ &+ 36804375p^{13}q^3s^3 + 552225000p^{10}q^5s^3 + 3357593750p^7q^7s^3 \\ &+ 7146562500p^4q^9s^3 + 3851562500pq^{11}s^3 - 92400750p^{14}qrs^3 \\ &- 2350175625p^{11}r^3rs^3 - 19470640625p^8q^5rs^3 - 52820593750p^5q^7rs^3 \\ &- 45447734375p^2q^9rs^3 + 1824363000p^{12}qr^2s^3 + 31435234375p^9q^3r^2s^2 \\ &+ 141717537500p^6q^5r^2s^3 + 228370781250p^3q^7r^2s^3 + 34610078125q^9r^2s^3 \\ &- 17591825625p^{10}qr^3s^3 - 188927187500p^7q^3r^3s^3 - 502088984375p^4q^5r^3s^3 \\ &- 187849296875pq^7r^3s^3 + 75577750000p^8qr^4s^3 + 342800000000p^5q^3r^4s^3 \\ &+ 295384296875p^2q^5r^4s^3 - 107681250000p^6qr^5s^3 + 533300000000p^3q^3r^5s^3 \\ &+ 271586875000q^5r^5s^3 - 264100000000p^4qr^6s^3 - 188200000000pq^3r^6s^3 \\ &+ 92000000000p^2qr^7s^3 + 120000000000qr^8s^3 + 47840625p^{15}s^4 \\ &+ 1150453125p^{12}q^2s^4 + 9229453125p^9q^4s^4 + 24954687500p^6q^6s^4 \\ &+ 22978515625p^3q^8s^4 + 1367187500q^{10}s^4 - 1193737500p^{13}rs^4 \\ &- 20817843750p^{10}q^2rs^4 - 98640000000p^7q^4rs^4 - 225767187500p^4q^6rs^4 \\ &- 74707031250pq^8rs^4 + 13431318750p^{11}r^2s^4 + 188709843750p^8q^2r^2s^4 \\ &+ 875157656250p^5q^4r^2s^4 + 593812890625p^2q^6r^2s^4 - 69869296875p^9r^3s^4 \\ &- 854811093750p^6q^2r^3s^4 - 1730658203125p^3q^4r^3s^4 - 570867187500q^6r^3s^4 \\ &+ 162075625000p^7r^4s^4 + 1536375000000p^4q^2r^4s^4 + 765156250000pq^4r^4s^4 \\ &- 165988750000p^5r^5s^4 - 728968750000p^2q^2r^5s^4 + 121500000000p^3r^6s^4 \\ &- 1039375000000q^2r^6s^4 - 100000000000pr^7s^4 - 379687500p^{11}qs^5 \\ &- 11607421875p^8q^3s^5 - 20830078125p^5q^5s^5 - 33691406250p^2q^7s^5 \\ &- 41491406250p^9qrs^5 - 419054687500p^6q^3rs^5 - 129511718750p^3q^5rs^5 \\ &+ 311767578125q^7rs^5 + 620116015625p^7qr^2s^5 + 1154687500000p^4q^3r^2s^5 \\ &+ 36455078125pq^5r^2s^5 - 2265953125000p^5qr^3s^5 - 1509521484375p^2q^3r^3s^5 \\ &+ 2530468750000p^3qr^4s^5 + 3259765625000q^3r^4s^5 + 937500000000pqr^5s^5 \\ &+ 23730468750p^{10}s^6 + 243603515625p^7q^2s^6 + 341552734375p^4q^4s^6 \\ &- 12207031250pq^6s^6 - 357099609375p^8rs^6 - 298193359375p^5q^2rs^6 \\ &+ 406738281250p^2q^4rs^6 + 1615683593750p^6r^2s^6 + 558593750000p^3q^2r^2s^6 \\ &- 2811035156250q^4r^2s^6 - 2960937500000p^4r^3s^6 - 3802246093750pq^2r^3s^6 \\ &+ 2347656250000p^2r^4s^6 - 671875000000r^5s^6 - 651855468750p^6qs^7 \\ &- 1458740234375p^3q^3s^7 - 152587890625q^5s^7 + 1628417968750p^4qrs^7 \\ &+ 3948974609375pq^3rs^7 - 916748046875p^2qr^2s^7 + 1611328125000qr^3s^7 \end{aligned}$$

( $b_{40}$  cont.)

$$\begin{aligned} &+ 640869140625p^5s^8 + 1068115234375p^2q^2s^8 - 2044677734375p^3rs^8 \\ &- 3204345703125q^2rs^8 + 1739501953125pr^2s^8 \end{aligned}$$



$$\begin{aligned}
l_{41} = & -600p^{11}q^8 - 14050p^8q^{10} - 109100p^5q^{12} - 280800p^2q^{14} + 7200p^{12}q^6r \\
& + 188700p^9q^8r + 1621725p^6q^{10}r + 4577075p^3q^{12}r + 5400q^{14}r \\
& - 28350p^{13}q^4r^2 - 910600p^{10}q^6r^2 - 9237975p^7q^8r^2 - 30718900p^4q^{10}r^2 \\
& - 5575950p^2q^{12}r^2 + 36450p^{14}q^2r^3 + 1848125p^{11}q^4r^3 + 25137775p^8q^6r^3 \\
& + 109591450p^5q^8r^3 + 70627650p^2q^{10}r^3 - 1317150p^{12}q^2r^4 - 32857100p^9q^4r^4 \\
& - 219125575p^6q^6r^4 - 327565875p^3q^8r^4 - 13011875q^{10}r^4 + 16484150p^{10}q^2r^5 \\
& + 222242250p^7q^4r^5 + 642173750p^4q^6r^5 + 101263750pq^8r^5 - 79345000p^8q^2r^6 \\
& - 433180000p^5q^4r^6 - 93731250p^2q^6r^6 - 74300000p^6q^2r^7 - 1057900000p^3q^4r^7 \\
& - 591175000q^6r^7 + 1891600000p^4q^2r^8 + 2796000000pq^4r^8 - 4320000000p^2q^2r^9 \\
& - 16200p^{13}q^5s - 359500p^{10}q^7s - 2603825p^7q^9s - 4590375p^4q^{11}s \\
& + 12352500pq^{13}s + 121500p^{14}q^3rs + 3227400p^{11}q^5rs + 27301725p^8q^7rs \\
& + 59480975p^5q^9rs - 137308875p^2q^{11}rs - 218700p^{15}qr^2s - 8903925p^{12}q^3r^2s \\
& - 100918225p^9q^5r^2s - 325291300p^6q^7r^2s + 365705000p^3q^9r^2s + 94342500q^{11}r^2s \\
& + 7632900p^{13}qr^3s + 162995400p^{10}q^3r^3s + 974558975p^7q^5r^3s + 930991250p^4q^7r^3s \\
& - 495368750pq^9r^3s - 97344900p^{11}qr^4s - 1406739250p^8q^3r^4s - 5572526250p^5q^5r^4s \\
& - 1903987500p^2q^7r^4s + 678550000p^9qr^5s + 8176215000p^6q^3r^5s + 18082050000p^3q^5r^5s \\
& + 5435843750q^7r^5s - 2979800000p^7qr^6s - 29163500000p^4q^3r^6s - 27417500000pq^5r^6s \\
& + 6282400000p^5qr^7s + 48690000000p^2q^3r^7s - 2880000000p^3qr^8s + 7200000000q^3r^8s \\
& - 109350p^{15}q^2s^2 - 2405700p^{12}q^4s^2 - 16125250p^9q^6s^2 - 4930000p^6q^8s^2 \\
& + 201150000p^3q^{10}s^2 - 243000000q^{12}s^2 + 328050p^{16}rs^2 + 10552275p^{13}q^2rs^2 \\
& + 88019100p^{10}q^4rs^2 - 4208625p^7q^6rs^2 - 1920390625p^4q^8rs^2 + 1759537500pq^{10}rs^2 \\
& - 11955600p^{14}r^2s^2 - 196375050p^{11}q^2r^2s^2 - 555196250p^8q^4r^2s^2 + 4213270000p^5q^6r^2s^2 \\
& - 157468750p^2q^8r^2s^2 + 162656100p^{12}r^3s^2 + 1880870000p^9q^2r^3s^2 + 753684375p^6q^4r^3s^2 \\
& - 25423062500p^3q^6r^3s^2 - 14142031250q^8r^3s^2 - 1251948750p^{10}r^4s^2 - 12524475000p \\
& + 18067656250p^4q^4r^4s^2 + 60531875000pq^6r^4s^2 + 6827725000p^8r^5s^2 + 57157000000p \\
& - 75844531250p^2q^4r^5s^2 - 24452500000p^6r^6s^2 - 144950000000p^3q^2r^6s^2 \\
& - 82109375000q^4r^6s^2 + 46950000000p^4r^7s^2 + 60000000000pq^2r^7s^2 \\
& - 36000000000p^2r^8s^2 + 1549125p^{14}q^3s^3 + 51873750p^{11}q^3s^3 \\
& + 599781250p^8q^5s^3 + 2421156250p^5q^7s^3 - 1693515625p^2q^9s^3 \\
& - 104884875p^{12}qr^3s^3 - 1000437500p^9q^3r^3s^3 - 11461053125p^6q^5r^3s^3
\end{aligned}$$

( $b_{41}$  cont.)

$$\begin{aligned} &+ 10299375000p^3q^7rs^3 + 10551250000q^8rs^3 + 1336263750p^{10}qr^2s^3 \\ &+ 23737250000p^7q^3r^2s^3 + 57136718750p^4q^5r^2s^3 - 8288906250pq^7r^2s^3 \\ &- 10907218750p^8qr^3s^3 - 160615000000p^5q^3r^3s^3 - 111134687500p^2q^5r^3s^3 \\ &+ 46743125000p^6qr^4s^3 + 570509375000p^3q^3r^4s^3 + 274839843750q^5r^4s^3 \\ &- 73312500000p^4qr^5s^3 - 145437500000pq^3r^5s^3 + 8750000000p^2qr^6s^3 \\ &+ 18000000000qr^7s^3 + 15946875p^{13}s^4 + 1265625p^{10}q^2s^4 \\ &- 3282343750p^7q^4s^4 - 38241406250p^4q^6s^4 - 40136718750pq^8s^4 \\ &- 113146875p^{11}rs^4 - 2302734375p^8q^2rs^4 + 68450156250p^5q^4rs^4 \\ &+ 177376562500p^2q^6rs^4 + 3164062500p^9r^2s^4 + 14392890625p^6q^2r^2s^4 \\ &- 543781250000p^3q^4r^2s^4 - 319769531250q^6r^2s^4 - 21048281250p^7r^3s^4 \\ &- 240687500000p^4q^2r^3s^4 - 228164062500pq^4r^3s^4 + 23062500000p^5r^4s^4 \\ &+ 300410156250p^2q^2r^4s^4 + 93437500000p^3r^5s^4 - 114101562500q^2r^5s^4 \\ &- 187500000000pr^6s^4 + 1761328125p^9qs^5 - 3177734375p^6q^3s^5 \\ &+ 60019531250p^3q^5s^5 + 108398437500q^7s^5 + 24106640625p^7qrs^5 \\ &+ 429589843750p^4q^3rs^5 + 410371093750pq^5rs^5 - 23582031250p^5qr^2s^5 \\ &+ 202441406250p^2q^3r^2s^5 - 383203125000p^3qr^3s^5 + 2232910156250q^3r^3s^5 \\ &+ 1500000000000pqr^4s^5 - 13710937500p^8s^6 - 202832031250p^5q^2s^6 \\ &- 531738281250p^2q^4s^6 + 73330078125p^6rs^6 - 3906250000p^3q^2rs^6 \\ &- 1275878906250q^4rs^6 - 121093750000p^4r^2s^6 - 3308593750000pq^2r^2s^6 \\ &+ 18066406250p^2r^3s^6 - 244140625000r^4s^6 + 327148437500p^4qs^7 \\ &+ 1672363281250pq^3s^7 + 446777343750p^2qrs^7 + 1232910156250qr^2s^7 \\ &- 274658203125p^3s^8 - 1068115234375q^2s^8 - 61035156250prs^8 \end{aligned}$$

$$\begin{aligned}
b_{42} = & 200p^9q^8 + 7550p^6q^{10} + 78650p^3q^{12} + 248400q^{14} - 4800p^{10}q^6r \\
& - 164300p^7q^8r - 1709575p^4q^{10}r - 5566500pq^{12}r + 31050p^{11}q^4r^2 \\
& + 1116175p^8q^6r^2 + 12674650p^5q^8r^2 + 45333850p^2q^{10}r^2 - 60750p^{12}q^2r^3 \\
& - 2872725p^9q^4r^3 - 40403050p^6q^6r^3 - 173564375p^3q^8r^3 - 11242250q^{10}r^3 \\
& + 2174100p^{10}q^2r^4 + 54010000p^7q^4r^4 + 331074875p^4q^6r^4 + 114173750pq^8r^4 \\
& - 24858500p^8q^2r^5 - 300875000p^5q^4r^5 - 319430625p^2q^6r^5 + 69810000p^6q^2r^6 \\
& - 23900000p^3q^4r^6 - 294662500q^6r^6 + 524200000p^4q^2r^7 + 1432000000pq^4r^7 \\
& - 2340000000p^2q^2r^8 + 5400p^{11}q^5s + 310400p^8q^7s + 3591725p^5q^9s \\
& + 11556750p^2q^{11}s - 105300p^{12}q^3rs - 4234650p^9q^5rs - 49928875p^6q^7rs \\
& - 174078125p^3q^9rs + 18000000q^{11}rs + 364500p^{13}qr^2s + 15763050p^{10}q^3r^2s \\
& + 220187400p^7q^5r^2s + 929609375p^4q^7r^2s - 43653125pq^9r^2s - 13427100p^{11}qr^3s \\
& - 346066250p^8q^3r^3s - 2287673375p^5q^5r^3s - 1403903125p^2q^7r^3s + 184586000p^9qr^4s \\
& + 2983460000p^6q^3r^4s + 8725818750p^3q^5r^4s + 2527734375q^7r^4s - 1284480000p^7qr^5s \\
& - 13138250000p^4q^3r^5s - 14001625000pq^5r^5s + 4224800000p^5qr^6s + 27460000000p^2q^2 \\
& - 3760000000p^3qr^7s + 3900000000q^3r^7s + 36450p^{13}q^2s^2 + 2765475p^{10}q^4s^2 \\
& + 34027625p^7q^6s^2 + 97375000p^4q^8s^2 - 88275000pq^{10}s^2 - 16750p^{14}rs^2 \\
& - 21961125p^{11}q^2rs^2 - 273059375p^8q^4rs^2 - 761562500p^5q^6rs^2 + 1869656250p^2q^8rs^2 \\
& + 20545650p^{12}r^2s^2 + 473934375p^9q^2r^2s^2 + 1758053125p^6q^4r^2s^2 - 8743359375p^3q^6r^2s^2 \\
& - 4154375000q^8r^2s^2 - 296559000p^{10}r^3s^2 - 4065056250p^7q^2r^3s^2 - 186328125p^4q^4r^3s^2 \\
& + 19419453125pq^6r^3s^2 + 2326262500p^8r^4s^2 + 21189375000p^5q^2r^4s^2 - 26301953125p^2 \\
& - 10513250000p^6r^5s^2 - 69937500000p^3q^2r^5s^2 - 42257812500q^4r^5s^2 + 23375000000p \\
& + 40750000000pq^2r^6s^2 - 19500000000p^2r^7s^2 + 4009500p^{12}qs^3 + 36140625p^9q^3s^3 \\
& - 335459375p^6q^5s^3 - 2695312500p^3q^7s^3 - 1486250000q^9s^3 + 102515625p^{10}qrs^3 \\
& + 4006812500p^7q^3rs^3 + 27589609375p^4q^5rs^3 + 20195312500pq^7rs^3 - 2792812500p^8q \\
& - 44115156250p^5q^3r^2s^3 - 72609453125p^2q^5r^2s^3 + 18752500000p^6qr^3s^3 \\
& + 21814062500p^3q^3r^3s^3 + 109940234375q^5r^3s^3 - 21893750000p^4qr^4s^3 \\
& - 65187500000pq^3r^4s^3 - 31000000000p^2qr^5s^3 + 97500000000qr^6s^3 \\
& - 86568750p^{11}s^4 - 1955390625p^8q^2s^4 - 8960781250p^5q^4s^4 \\
& - 1357812500p^2q^6s^4 + 1657968750p^9rs^4 + 10467187500p^6q^2rs^4 \\
& - 55292968750p^3q^4rs^4 - 60683593750q^6rs^4 - 11473593750p^7r^2s^4
\end{aligned}$$

( $b_{42}$  cont.)

$$\begin{aligned} & - 123281250000p^4q^2r^2s^4 - 164912109375pq^4r^2s^4 \\ & + 13150000000p^5r^3s^4 + 190751953125p^2q^2r^3s^4 + 61875000000p^3r^4s^4 \\ & - 467773437500q^2r^4s^4 - 118750000000pr^5s^4 + 7583203125p^7qs^5 \\ & + 54638671875p^4q^3s^5 + 39423828125pq^5s^5 + 32392578125p^5qrs^5 \\ & + 278515625000p^2q^3rs^5 - 298339843750p^3qr^2s^5 + 560791015625q^3r^2s^5 \\ & + 720703125000pqr^3s^5 - 19687500000p^6s^6 - 159667968750p^3q^2s^6 \\ & - 72265625000q^4s^6 + 116699218750p^4rs^6 - 924072265625pq^2rs^6 \\ & - 156005859375p^2r^2s^6 - 112304687500r^3s^6 + 349121093750p^2qs^7 \\ & + 396728515625qrs^7 - 213623046875ps^8 \end{aligned}$$

$$\begin{aligned}
b_{43} = & -600p^{10}q^6 - 18450p^7q^8 - 174000p^4q^{10} - 518400pq^{12} + 5400p^{11}q^4r \\
& + 197550p^8q^6r + 2147775p^5q^8r + 7219800p^2q^{10}r - 12150p^{12}q^2r^2 \\
& - 662200p^9q^4r^2 - 9274775p^6q^6r^2 - 38330625p^3q^8r^2 - 5508000q^{10}r^2 \\
& + 656550p^{10}q^2r^3 + 16233750p^7q^4r^3 + 97335875p^4q^6r^3 + 58271250pq^8r^3 \\
& - 9845500p^8q^2r^4 - 119464375p^5q^4r^4 - 194431875p^2q^6r^4 + 49465000p^6q^2r^5 \\
& + 166000000p^3q^4r^5 - 80793750q^6r^5 + 54400000p^4q^2r^6 + 377750000pq^4r^6 \\
& - 630000000p^2q^2r^7 - 16200p^{12}q^3s - 459300p^9q^5s - 4207225p^6q^7s \\
& - 10827500p^3q^9s + 13635000q^{11}s + 72900p^{13}qrs + 2877300p^{10}q^3rs \\
& + 33239700p^7q^5rs + 107080625p^4q^7rs - 114975000pq^9rs - 3601800p^{11}qr^2s \\
& - 75214375p^8q^3r^2s - 387073250p^5q^5r^2s + 55540625p^2q^7r^2s + 53793000p^9qr^3s \\
& + 687176875p^6q^3r^3s + 1670018750p^3q^5r^3s + 665234375q^7r^3s - 391570000p^7qr^4s \\
& - 3420125000p^4q^3r^4s - 3609625000pq^5r^4s + 1365600000p^5qr^5s + 7236250000p^2q^3r^5 \\
& - 1220000000p^3qr^6s + 1050000000q^3r^6s - 109350p^{14}s^2 - 3065850p^{11}q^2s^2 \\
& - 26908125p^8q^4s^2 - 44606875p^5q^6s^2 + 269812500p^2q^8s^2 + 5200200p^{12}rs^2 \\
& + 81826875p^9q^2rs^2 + 155378125p^6q^4rs^2 - 1936203125p^3q^6rs^2 - 998437500q^8rs^2 \\
& - 77145750p^{10}r^2s^2 - 745528125p^7q^2r^2s^2 + 683437500p^4q^4r^2s^2 + 4083359375pq^6r^2s^2 \\
& + 593287500p^8r^3s^2 + 4799375000p^5q^2r^3s^2 - 4167578125p^2q^4r^3s^2 - 2731125000p^6r^4s^2 \\
& - 18668750000p^3q^2r^4s^2 - 10480468750q^4r^4s^2 + 6200000000p^4r^5s^2 + 11750000000pq^6r^4s^2 \\
& - 5250000000p^2r^6s^2 + 26527500p^{10}qs^3 + 526031250p^7q^3s^3 + 3160703125p^4q^5s^3 \\
& + 2650312500pq^7s^3 - 448031250p^8qrs^3 - 6682968750p^5q^3rs^3 - 11642812500p^2q^5rs^3 \\
& + 2553203125p^6qr^2s^3 + 37234375000p^3q^3r^2s^3 + 21871484375q^5r^2s^3 + 2803125000pq^7r^2s^3 \\
& - 10796875000pq^3r^3s^3 - 16656250000p^2qr^4s^3 + 26250000000qr^5s^3 - 75937500p^9s^4 \\
& - 704062500p^6q^2s^4 - 8363281250p^3q^4s^4 - 10398437500q^6s^4 + 197578125p^7rs^4 \\
& - 16441406250p^4q^2rs^4 - 24277343750pq^4rs^4 - 5716015625p^5r^2s^4 + 31728515625p^2r^3s^4 \\
& + 27031250000p^3r^3s^4 - 92285156250q^2r^3s^4 - 33593750000pr^4s^4 + 10394531250p^5q^2r^3s^4 \\
& + 38037109375p^2q^3s^5 - 48144531250p^3qrs^5 + 74462890625q^3rs^5 + 121093750000pq^5rs^5 \\
& - 2197265625p^4s^6 - 92529296875pq^2s^6 + 15380859375p^2rs^6 - 31738281250r^2s^6 \\
& + 54931640625qs^7
\end{aligned}$$

$$\begin{aligned}
b_{44} = & 200p^8q^6 + 2950p^5q^8 + 10800p^2q^{10} - 1800p^9q^4r - 49650p^6q^6r \\
& - 403375p^3q^8r - 999000q^{10}r + 4050p^{10}q^2r^2 + 236625p^7q^4r^2 \\
& + 3109500p^4q^6r^2 + 11463750pq^8r^2 - 331500p^8q^2r^3 - 7818125p^5q^4r^3 \\
& - 41411250p^2q^6r^3 + 4782500p^6q^2r^4 + 47475000p^3q^4r^4 - 16728125q^6r^4 \\
& - 8700000p^4q^2r^5 + 81750000pq^4r^5 - 135000000p^2q^2r^6 + 5400p^{10}q^3s \\
& + 144200p^7q^5s + 939375p^4q^7s + 1012500pq^9s - 24300p^{11}qrs \\
& - 1169250p^8q^3rs - 14027250p^5q^5rs - 44446875p^2q^7rs + 2011500p^9qr^2s \\
& + 49330625p^6q^3r^2s + 272009375p^3q^5r^2s + 104062500q^7r^2s - 34660000p^7qr^3s \\
& - 455062500p^4q^3r^3s - 625906250pq^5r^3s + 210200000p^5qr^4s + 1298750000p^2q^3r^4s \\
& - 240000000p^3qr^5s + 225000000q^3r^5s + 36450p^{12}s^2 + 1231875p^9q^2s^2 \\
& + 10712500p^6q^4s^2 + 21718750p^3q^6s^2 + 16875000q^8s^2 - 2814750p^{10}rs^2 \\
& - 67612500p^7q^2rs^2 - 345156250p^4q^4rs^2 - 283125000pq^6rs^2 + 51300000p^8r^2s^2 \\
& + 734531250p^5q^2r^2s^2 + 1267187500p^2q^4r^2s^2 - 384312500p^6r^3s^2 - 3912500000p^3q^3rs^2 \\
& - 1822265625q^4r^3s^2 + 1112500000p^4r^4s^2 + 2437500000pq^2r^4s^2 - 1125000000p^2r^5s^2 \\
& - 72578125p^5q^3s^3 - 189296875p^2q^5s^3 + 127265625p^6qrs^3 + 1415625000p^3q^3rs^3 \\
& + 1229687500q^5rs^3 + 1448437500p^4qr^2s^3 + 2218750000pq^3r^2s^3 - 4031250000p^2qr^2s^3 \\
& + 5625000000qr^4s^3 - 132890625p^7s^4 - 529296875p^4q^2s^4 - 175781250pq^4s^4 \\
& - 401953125p^5rs^4 - 4482421875p^2q^2rs^4 + 4140625000p^3r^2s^4 - 10498046875q^2r^2s^4 \\
& - 7031250000pr^3s^4 + 1220703125p^3qs^5 + 1953125000q^3s^5 + 14160156250pqr s^5 \\
& - 1708984375p^2s^6 - 3662109375rs^6
\end{aligned}$$

$$\begin{aligned}
b_{45} = & -4600p^6q^6 - 67850p^3q^8 - 248400q^{10} + 38900p^7q^4r + 679575p^4q^6r \\
& + 2866500pq^8r - 81900p^8q^2r^2 - 2009750p^5q^4r^2 - 10783750p^2q^6r^2 \\
& + 1478750p^6q^2r^3 + 14165625p^3q^4r^3 - 2743750q^6r^3 - 5450000p^4q^2r^4 \\
& + 12687500pq^4r^4 - 22500000p^2q^2r^5 - 101700p^8q^3s - 1700975p^5q^5s \\
& - 7061250p^2q^7s + 423900p^9qrs + 9292375p^6q^3rs + 50438750p^3q^5rs \\
& + 20475000q^7rs - 7852500p^7qr^2s - 87765625p^4q^3r^2s - 121609375pq^5r^2s \\
& + 47700000p^5qr^3s + 264687500p^2q^3r^3s - 65000000p^3qr^4s + 37500000q^3r^4s \\
& - 534600p^{10}s^2 - 10344375p^7q^2s^2 - 54859375p^4q^4s^2 - 40312500pq^6s^2 \\
& + 10158750p^8rs^2 + 11778125p^5q^2rs^2 + 192421875p^2q^4rs^2 - 70593750p^6r^2s^2 \\
& - 685312500p^3q^2r^2s^2 - 334375000q^4r^2s^2 + 193750000p^4r^3s^2 + 500000000pq^2r^3s^2 \\
& - 187500000p^2r^4s^2 + 8437500p^6qs^3 + 159218750p^3q^3s^3 + 220625000q^5s^3 \\
& + 353828125p^4qrs^3 + 412500000pq^3rs^3 - 1023437500p^2qr^2s^3 + 937500000qrs^3 \\
& - 206015625p^5s^4 - 701171875p^2q^2s^4 + 998046875p^3rs^4 - 1308593750q^2rs^4 \\
& - 1367187500pr^2s^4 + 1708984375pqs^5 - 976562500s^6
\end{aligned}$$

$$\begin{aligned}
c_0 = & -40p^5q^{11} - 270p^2q^{13} + 700p^6q^9r + 5165p^3q^{11}r + 540q^{13}r - 4230p^7q^7r^2 \\
& - 31845p^4q^9r^2 + 20880pq^{11}r^2 + 9645p^8q^5r^3 + 57615p^5q^7r^3 \\
& - 358255p^2q^9r^3 - 1880p^9q^3r^4 + 114020p^6q^5r^4 + 2012190p^3q^7r^4 \\
& - 26855q^9r^4 - 14400p^{10}qr^5 - 470400p^7q^3r^5 - 5088640p^4q^5r^5 \\
& + 920pq^7r^5 + 332800p^8qr^6 + 5797120p^5q^3r^6 + 1608000p^2q^5r^6 \\
& - 2611200p^6qr^7 - 7424000p^3q^3r^7 - 2323200q^5r^7 + 8601600p^4qr^8 \\
& + 9472000pq^3r^8 - 10240000p^2qr^9 - 3060p^7q^8s - 39085p^4q^{10}s \\
& - 132300pq^{12}s + 36580p^8q^6rs + 520185p^5q^8rs + 1969860p^2q^{10}rs \\
& - 144045p^9q^4r^2s - 2438425p^6q^6r^2s - 10809475p^3q^8r^2s + 518850q^{10}r^2s \\
& + 182520p^{10}q^2r^3s + 4533930p^7q^4r^3s + 26196770p^4q^6r^3s - 4542325pq^8r^3s \\
& + 21600p^{11}r^4s - 2208080p^8q^2r^4s - 24787960p^5q^4r^4s + 10813900p^2q^6r^4s \\
& - 499200p^9r^5s + 3827840p^6q^2r^5s + 9596000p^3q^4r^5s + 22662000q^6r^5s \\
& + 3916800p^7r^6s - 29952000p^4q^2r^6s - 90800000pq^4r^6s - 12902400p^5r^7s \\
& + 87040000p^2q^2r^7s + 15360000p^3r^8s + 12800000q^2r^8s - 38070p^9q^5s^2 \\
& - 566700p^6q^7s^2 - 2574375p^3q^9s^2 - 1822500q^{11}s^2 + 292815p^{10}q^3rs^2 \\
& + 5170280p^7q^5rs^2 + 27918125p^4q^7rs^2 + 21997500pq^9rs^2 - 573480p^{11}qr^2s^2 \\
& - 14566350p^8q^3r^2s^2 - 104851575p^5q^5r^2s^2 - 96448750p^2q^7r^2s^2 + 11001240p^9qr^3s^2 \\
& + 147798600p^6q^3r^3s^2 + 158632750p^3q^5r^3s^2 - 78222500q^7r^3s^2 - 62819200p^7qr^4s^2 \\
& - 136160000p^4q^3r^4s^2 + 317555000pq^5r^4s^2 + 160224000p^5qr^5s^2 - 267600000p^2q^3r^5s^2 \\
& - 153600000p^3qr^6s^2 - 120000000q^3r^6s^2 - 32000000pqr^7s^2 - 127575p^{11}q^2s^3 \\
& - 2148750p^8q^4s^3 - 13652500p^5q^6s^3 - 19531250p^2q^8s^3 + 495720p^{12}rs^3 \\
& + 11856375p^9q^2rs^3 + 107807500p^6q^4rs^3 + 222334375p^3q^6rs^3 + 105062500q^8rs^3 \\
& - 11566800p^{10}r^2s^3 - 216787500p^7q^2r^2s^3 - 633437500p^4q^4r^2s^3 - 504484375pq^6r^2s^3 \\
& + 90918000p^8r^3s^3 + 567080000p^5q^2r^3s^3 + 692937500p^2q^4r^3s^3 - 326640000p^6r^4s^3 \\
& - 339000000p^3q^2r^4s^3 + 369250000q^4r^4s^3 + 560000000p^4r^5s^3 + 508000000pq^2r^5s^3 \\
& - 480000000p^2r^6s^3 + 320000000r^7s^3 - 455625p^{10}qs^4 - 27562500p^7q^3s^4 \\
& - 120593750p^4q^5s^4 - 60312500pq^7s^4 + 110615625p^8qrs^4 + 662984375p^5q^3rs^4 \\
& + 528515625p^2q^5rs^4 - 541687500p^6qr^2s^4 - 1262343750p^3q^3r^2s^4 - 466406250q^5r^2s^4 \\
& + 633000000p^4qr^3s^4 - 1264375000pq^3r^3s^4 + 1085000000p^2qr^4s^4 - 2700000000qr^5s^4 \\
& - 68343750p^9s^5 - 478828125p^6q^2s^5 - 355468750p^3q^4s^5 - 11718750q^6s^5 \\
& + 718031250p^7rs^5 + 1658593750p^4q^2rs^5 + 2212890625pq^4rs^5 - 2855625000p^5r^2s^5 \\
& - 4273437500p^2q^2r^2s^5 + 4537500000p^3r^3s^5 + 8031250000q^2r^3s^5 - 1750000000pr^4
\end{aligned}$$



( $c_0$  cont.)

$$\begin{aligned} &+ 1353515625p^5qs^6 + 1562500000p^2q^3s^6 - 3964843750p^3qrs^6 - 7226562500q^3rs^6 \\ &+ 1953125000pqr^2s^6 - 1757812500p^4s^7 - 3173828125pq^2s^7 + 6445312500p^2rs^7 \\ &- 3906250000r^2s^7 + 6103515625qs^8 \end{aligned}$$

$$\begin{aligned} c_1 = &40p^6q^9 + 110p^3q^{11} - 1080q^{13} - 560p^7q^7r - 1780p^4q^9r + 17370pq^{11}r \\ &+ 2850p^8q^5r^2 + 10520p^5q^7r^2 - 115910p^2q^9r^2 - 6090p^9q^3r^3 \\ &- 25330p^6q^5r^3 + 448740p^3q^7r^3 + 128230q^9r^3 + 4320p^{10}qr^4 \\ &+ 16960p^7q^3r^4 - 1143600p^4q^5r^4 - 1410310pq^7r^4 + 3840p^8qr^5 \\ &+ 1744480p^5q^3r^5 + 5619520p^2q^5r^5 - 1198080p^6qr^6 - 10579200p^3q^3r^6 \\ &- 2940800q^5r^6 + 8294400p^4qr^7 + 13568000pq^3r^7 - 15360000p^2qr^8 \\ &+ 840p^8q^6s + 7580p^5q^8s + 24420p^2q^{10}s - 8100p^9q^4rs \\ &- 94100p^6q^6rs - 473000p^3q^8rs - 473400q^{10}rs + 22680p^{10}q^2r^2s \\ &+ 374370p^7q^4r^2s + 388020p^4q^6r^2s + 5561050pq^8r^2s - 12960p^{11}r^3s \\ &- 485820p^8q^2r^3s - 6723440p^5q^4r^3s - 23561400p^2q^6r^3s + 190080p^9r^4s \\ &+ 5894880p^6q^2r^4s + 50882000p^3q^4r^4s + 22411500q^6r^4s - 258560p^7r^5s \\ &- 46248000p^4q^2r^5s - 103800000pq^4r^5s - 3737600p^5r^6s + 119680000p^2q^2r^6s \\ &+ 10240000p^3r^7s + 19200000q^2r^7s + 7290p^{10}q^3s^2 + 117360p^7q^5s^2 \\ &+ 691250p^4q^7s^2 - 198750pq^9s^2 - 36450p^{11}qrs^2 - 854550p^8q^3rs^2 \\ &- 7340700p^5q^5rs^2 - 2028750p^2q^7rs^2 + 995490p^9qr^2s^2 + 18896600p^6q^3r^2s^2 \\ &+ 5026500p^3q^5r^2s^2 - 52272500q^7r^2s^2 - 16636800p^7qr^3s^2 - 43200000p^4q^3r^3s^2 \\ &+ 223426250pq^5r^3s^2 + 112068000p^5qr^4s^2 - 177000000p^2q^3r^4s^2 - 244000000p^3qr^5s^2 \\ &- 156000000q^3r^5s^2 + 43740p^{12}s^3 + 1032750p^9q^2s^3 + 8602500p^6q^4s^3 \\ &+ 15606250p^3q^6s^3 + 39625000q^8s^3 - 1603800p^{10}rs^3 - 26932500p^7q^2rs^3 \\ &- 19562500p^4q^4rs^3 - 152000000pq^6rs^3 + 25555500p^8r^2s^3 + 16230000p^5q^2r^2s^3 \\ &+ 42187500p^2q^4r^2s^3 - 165660000p^6r^3s^3 + 373500000p^3q^2r^3s^3 + 332937500q^4r^3s^3 \\ &+ 465000000p^4r^4s^3 + 586000000pq^2r^4s^3 - 592000000p^2r^5s^3 + 480000000r^6s^3 \\ &- 1518750p^8qs^4 - 62531250p^5q^3s^4 + 7656250p^2q^5s^4 + 184781250p^6qrs^4 \\ &- 15781250p^3q^3rs^4 - 135156250q^5rs^4 - 1148250000p^4qr^2s^4 - 2121406250pq^3r^2s^4 \\ &+ 1990000000p^2qr^3s^4 - 3150000000q, \quad - 2531250p^7s^5 + 660937500p^4q^2s^5 \\ &+ 1339843750pq^4s^5 - 33750000p^5rs^5 - 679687500p^2q^2rs^5 + 6250000p^3r^2s^5 \end{aligned}$$

(c<sub>1</sub> cont.)

$$+ 6195312500q^2r^2s^5 + 1125000000pr^3s^5 - 996093750p^3qs^6 - 3125000000q^3s^6 \\ - 3222656250pqr s^6 + 1171875000p^2s^7 + 976562500rs^7$$

$$c_2 = 80p^4q^9 + 540pq^{11} - 600p^5q^7r - 4770p^2q^9r + 1230p^6q^5r^2 + 20900p^3q^7r^2 \\ + 47250q^9r^2 - 710p^7q^3r^3 - 84950p^4q^5r^3 - 526310pq^7r^3 \\ + 720p^8qr^4 + 216280p^5q^3r^4 + 2068020p^2q^5r^4 - 198080p^6qr^5 \\ - 3703200p^3q^3r^5 - 1423600q^5r^5 + 2860800p^4qr^6 + 7056000pq^3r^6 \\ - 8320000p^2qr^7 - 2720p^6q^6s - 46350p^3q^8s - 178200q^{10}s \\ + 25740p^7q^4rs + 480190p^4q^6rs + 2152350pq^8rs - 61560p^8q^2r^2s \\ - 1568150p^5q^4r^2s - 9060500p^2q^6r^2s + 24840p^9r^3s + 1692380p^6q^2r^3s \\ + 18098250p^3q^4r^3s + 9387750q^6r^3s - 382560p^7r^4s - 16818000p^4q^2r^4s \\ - 49325000pq^4r^4s + 1212800p^5r^5s + 64840000p^2q^2r^5s - 320000p^3r^6s \\ + 10400000q^2r^6s - 36450p^8q^3s^2 - 588350p^5q^5s^2 - 2156250p^2q^7s^2 \\ + 123930p^9qrs^2 + 2879700p^6q^3rs^2 + 12548000p^3q^5rs^2 - 14445000q^7rs^2 \\ - 3233250p^7qr^2s^2 - 28485000p^4q^3r^2s^2 + 72231250pq^5r^2s^2 + 32093000p^5qr^3s^2 \\ - 61275000p^2q^3r^3s^2 - 107500000p^3qr^4s^2 - 78500000q^3r^4s^2 + 22000000pqr^5s^2 \\ - 72900p^{10}s^3 - 1215000p^7q^2s^3 - 2937500p^4q^4s^3 + 9156250pq^6s^3 \\ + 2612250p^8rs^3 + 16560000p^5r^2rs^3 - 75468750p^2q^4rs^3 - 32737500p^6r^2s^3 \\ + 169062500p^3q^2r^2s^3 + 121718750q^4r^2s^3 + 160250000p^4r^3s^3 + 219750000pq^2r^3s^3 \\ - 317000000p^2r^4s^3 + 260000000r^5s^3 + 2531250p^6qs^4 + 22500000p^3q^3s^4 \\ + 39843750q^5s^4 - 266343750p^4qrs^4 - 776406250pq^3rs^4 + 789062500p^2qr^2s^4 \\ - 1368750000qr^3s^4 + 67500000p^5s^5 + 441406250p^2q^2s^5 - 311718750p^3rs^5 \\ + 1785156250q^2rs^5 + 546875000pr^2s^5 - 1269531250pqs^6 + 488281250s^7$$

$$\begin{aligned}
c_3 = & 120p^5q^7 + 810p^2q^9 - 1280p^6q^5r - 9160p^3q^7r + 3780q^9r + 4530p^7q^3r^2 \\
& + 36640p^4q^5r^2 - 45270pq^7r^2 - 5400p^8qr^3 - 60920p^5q^3r^3 \\
& + 200050p^2q^5r^3 + 31200p^6qr^4 - 476000p^3q^3r^4 - 378200q^5r^4 \\
& + 521600p^4qr^5 + 1872000pq^3r^5 - 2240000p^2qr^6 + 1440p^7q^4s \\
& + 15310p^4q^6s + 59400pq^8s - 9180p^8q^2rs - 115240p^5q^4rs \\
& - 589650p^2q^6rs + 16200p^9r^2s + 316710p^6q^2r^2s + 2547750p^3q^4r^2s \\
& + 2178000q^6r^2s - 259200p^7r^3s - 4123000p^4q^2r^3s - 11700000pq^4r^3s \\
& + 937600p^5r^4s + 16340000p^2q^2r^4s - 640000p^3r^5s + 2800000q^2r^5s \\
& - 2430p^9qs^2 - 54450p^6q^3s^2 - 285500p^3q^5s^2 - 2767500q^7s^2 \\
& + 43200p^7qrs^2 - 916250p^4q^3rs^2 + 14482500pq^5rs^2 + 4806000p^5qr^2s^2 \\
& - 13212500p^2q^3r^2s^2 - 25400000p^3qr^3s^2 - 18750000q^3r^3s^2 + 8000000pqr^4s^2 \\
& + 121500p^8s^3 + 2058750p^5q^2s^3 - 6656250p^2q^4s^3 - 6716250p^6rs^3 \\
& + 24125000p^3q^2rs^3 + 23875000q^4rs^3 + 43125000p^4r^2s^3 + 45750000pq^2r^2s^3 \\
& - 87500000p^2r^3s^3 + 70000000r^4s^3 - 44437500p^4qs^4 - 107968750pq^3s^4 \\
& + 159531250p^2qrs^4 - 284375000qr^2s^4 + 7031250p^3s^5 + 265625000q^2s^5 \\
& + 31250000prs^5
\end{aligned}$$

$$\begin{aligned}
c_4 = & 160p^3q^7 + 1080q^9 - 1080p^4q^5r - 8730pq^7r + 1510p^5q^3r^2 + 20420p^2q^5r^2 \\
& + 720p^6qr^3 - 23200p^3q^3r^3 - 79900q^5r^3 + 35200p^4qr^4 \\
& + 404000pq^3r^4 - 480000p^2qr^5 + 960p^5q^4s + 2850p^2q^6s \\
& + 540p^6q^2rs + 63500p^3q^4rs + 319500q^6rs - 7560p^7r^2s \\
& - 253500p^4q^2r^2s - 1806250pq^4r^2s + 91200p^5r^3s + 2600000p^2q^2r^3s \\
& - 80000p^3r^4s + 600000q^2r^4s - 4050p^7qs^2 - 120000p^4q^3s^2 \\
& - 273750pq^5s^2 + 425250p^5qrs^2 + 2325000p^2q^3rs^2 - 5400000p^3qr^2s^2 \\
& - 2875000q^3r^2s^2 + 1500000pqr^3s^2 - 303750p^6s^3 - 843750p^3q^2s^3 \\
& - 812500q^4s^3 + 5062500p^4rs^3 + 13312500pq^2rs^3 - 14500000p^2r^2s^3 \\
& + 15000000r^3s^3 - 3750000p^2qs^4 - 35937500qrs^4 + 11718750ps^5
\end{aligned}$$

$$\begin{aligned}c_5 = & 80p^4q^5 + 540pq^7 - 600p^5q^3r - 4770p^2q^5r + 1080p^6qr^2 + 11200p^3q^3r^2 \\ & - 12150q^5r^2 - 4800p^4qr^3 + 64000pq^3r^3 - 80000p^2qr^4 \\ & + 1080p^6q^2s + 13250p^3q^4s + 54000q^6s - 3240p^7rs \\ & - 56250p^4q^2rs - 337500pq^4rs + 43200p^5r^2s + 560000p^2q^2r^2s \\ & - 80000p^3r^3s + 100000q^2r^3s + 6750p^5qs^2 + 225000p^2q^3s^2 \\ & - 900000p^3qrs^2 - 562500q^3rs^2 + 500000pqr^2s^2 + 843750p^4s^3 \\ & + 1937500pq^2s^3 - 3000000p^2rs^3 + 2500000r^2s^3 - 5468750qs^4\end{aligned}$$

$$\begin{aligned}
o_6 = & -1600p^{10}q^{10} - 23600p^7q^{12} - 86400p^4q^{14} + 24800p^{11}q^8r + 419200p^8q^{10}r \\
& + 1850450p^5q^{12}r + 896400p^2q^{14}r - 138800p^{12}q^6r^2 - 2921900p^9q^8r^2 \\
& - 17295200p^6q^{10}r^2 - 27127750p^3q^{12}r^2 - 26076600q^{14}r^2 + 325800p^{13}q^4r^3 \\
& + 9993850p^{10}q^6r^3 + 88010500p^7q^8r^3 + 274047650p^4q^{10}r^3 + 410171400pq^{12}r^3 \\
& - 259200p^{14}q^2r^4 - 17147100p^{11}q^4r^4 - 254289150p^8q^6r^4 - 1318548225p^5q^8r^4 \\
& - 2633598475p^2q^{10}r^4 + 12636000p^{12}q^2r^5 + 388911000p^9q^4r^5 + 3269704725p^6q^6r^5 \\
& + 8791192300p^3q^8r^5 + 93560575q^{10}r^5 - 228361600p^{10}q^2r^6 - 3951199200p^7q^4r^6 \\
& - 16276981100p^4q^6r^6 - 1597227000pq^8r^6 + 1947899200p^8q^2r^7 + 17037648000p^5q^4r^7 \\
& + 8919740000p^2q^6r^7 - 7672160000p^6q^2r^8 - 15496000000p^3q^4r^8 + 4224000000q^6r^8 \\
& + 9968000000p^4q^2r^9 - 8640000000pq^4r^9 + 4800000000p^2q^2r^{10} - 55200p^{12}q^7s \\
& - 685600p^9q^9s + 1028250p^6q^{11}s + 37650000p^3q^{13}s + 111375000q^{15}s \\
& + 583200p^{13}q^5rs + 9075600p^{10}q^7rs - 883150p^7q^9rs - 506830750p^4q^{11}rs \\
& - 1793137500pq^{13}rs - 1852200p^{14}q^3r^2s - 41435250p^{11}q^5r^2s - 80566700p^8q^7r^2s \\
& + 2485673600p^5q^9r^2s + 11442286125p^2q^{11}r^2s + 1555200p^{15}qr^3s + 80846100p^{12}q^3r^3 \\
& + 564906800p^9q^5r^3s - 4493012400p^6q^7r^3s - 35492391250p^3q^9r^3s - 789931875q^{11}r^3 \\
& - 71766000p^{13}qr^4s - 1551149200p^{10}q^3r^4s - 1773437900p^7q^5r^4s + 51957593125p^4q^7 \\
& + 14964765625pq^9r^4s + 1231569600p^{11}qr^5s + 12042977600p^8q^3r^5s - 27151011200p \\
& - 88080610000p^2q^7r^5s - 9912995200p^9qr^6s - 29448104000p^6q^3r^6s \\
& + 144954840000p^3q^5r^6s - 44601300000q^7r^6s + 35453760000p^7qr^7s \\
& - 63264000000p^4q^3r^7s + 60544000000pq^5r^7s - 30048000000p^5qr^8s \\
& + 37040000000p^2q^3r^8s - 60800000000p^3qr^9s - 48000000000q^3r^9s \\
& - 615600p^{14}q^4s^2 - 10524500p^{11}q^6s^2 - 33831250p^8q^8s^2 \\
& + 222806250p^5q^{10}s^2 + 1099687500p^2q^{12}s^2 + 3353400p^{15}q^2rs^2 \\
& + 74269350p^{12}q^4rs^2 \\
& + 276445750p^9q^6rs^2 - 2618600000p^6q^8rs^2 - 14473243750p^3q^{10}rs^2 \\
& + 1383750000q^{12}rs^2 - 2332800p^{16}r^2s^2 - 132750900p^{13}q^2r^2s^2 \\
& - 900775150p^{10}q^4r^2s^2 + 8249244500p^7q^6r^2s^2 + 59525796875p^4q^8r^2s^2 \\
& - 40292868750pq^{10}r^2s^2 + 128304000p^{14}r^3s^2 + 3160232100p^{11}q^2r^3s^2 \\
& + 8329580000p^8q^4r^3s^2 - 45558458750p^5q^6r^3s^2 + 297252890625p^2q^8r^3s^2 \\
& - 2769854400p^{12}r^4s^2 - 37065970000p^9q^2r^4s^2 - 90812546875p^6q^4r^4s^2
\end{aligned}$$

( $o_0$  cont.)

$$\begin{aligned} & - 627902000000p^3q^6r^4s^2 + 181347421875q^8r^4s^2 + 30946932800p^{10}r^5s^2 \\ & + 249954680000p^7q^2r^5s^2 + 802954812500p^4q^4r^5s^2 - 80900000000pq^6r^5s^2 \\ & - 192137320000p^6r^6s^2 - 932641600000p^5q^2r^6s^2 - 943242500000p^2q^4r^6s^2 \\ & + 658412000000p^6r^7s^2 + 1930720000000p^3q^2r^7s^2 + 593800000000q^4r^7s^2 \\ & - 1162800000000p^4r^8s^2 - 280000000000pq^2r^8s^2 + 840000000000p^2r^9s^2 \\ & - 2187000p^{16}qs^3 - 47418750p^{13}q^3s^3 - 180618750p^{10}q^5s^3 \\ & + 2231250000p^7q^7s^3 + 17857734375p^4q^9s^3 + 29882812500pq^{11}s^3 \\ & + 24664500p^{14}qrs^3 - 853368750p^{11}q^3rs^3 - 25939693750p^8q^5rs^3 \\ & - 177541562500p^5q^7rs^3 - 297978828125p^2q^9rs^3 - 153468000p^{12}qr^2s^3 \\ & + 30188125000p^9q^3r^2s^3 + 344049821875p^6q^5r^2s^3 + 534026875000p^3q^7r^2s^3 \\ & - 340726484375q^9r^2s^3 - 9056190000p^{10}qr^3s^3 - 322314687500p^7q^3r^3s^3 \\ & - 767632109375p^4q^5r^3s^3 - 83276875000pq^7r^3s^3 + 164061000000p^8qr^4s^3 \\ & + 1381358750000p^5q^3r^4s^3 + 3088020000000p^2q^5r^4s^3 - 1267655000000p^6qr^5s^3 \\ & - 7642630000000p^3q^3r^5s^3 - 2759877500000q^5r^5s^3 + 4597760000000p^4qr^6s^3 \\ & + 1846200000000pq^3r^6s^3 - 7006000000000p^2qr^7s^3 - 1200000000000qr^8s^3 \\ & + 18225000p^{15}s^4 + 1328906250p^{12}q^2s^4 + 24729140625p^9q^4s^4 \\ & + 169467187500p^6q^6s^4 + 413281250000p^3q^8s^4 + 223828125000q^{10}s^4 \\ & + 710775000p^{13}rs^4 - 18611015625p^{10}q^2rs^4 - 314344375000p^7q^4rs^4 \\ & - 828439843750p^4q^6rs^4 + 460937500000pq^8rs^4 - 25674975000p^{11}r^2s^4 \\ & - 52223515625p^8q^2r^2s^4 - 387160000000p^5q^4r^2s^4 - 4733680078125p^2q^6r^2s^4 \\ & + 343911875000p^9r^3s^4 + 3328658359375p^6q^2r^3s^4 + 16532406250000p^3q^4r^3s^4 \\ & + 5980613281250q^6r^3s^4 - 2295497500000p^7r^4s^4 - 14809820312500p^4q^2r^4s^4 \\ & - 6491406250000pq^4r^4s^4 + 7768470000000p^5r^5s^4 + 34192562500000p^2q^2r^5s^4 \\ & - 11859000000000p^3r^6s^4 + 10530000000000q^2r^6s^4 + 6000000000000pr^7s^4 \\ & + 11453906250p^{11}qs^5 + 149765625000p^8q^3s^5 + 545537109375p^5q^5s^5 \\ & + 527343750000p^2q^7s^5 - 371313281250p^9qrs^5 - 3461455078125p^6q^3rs^5 \\ & - 7920878906250p^3q^5rs^5 - 4747314453125q^7rs^5 + 2417815625000p^7qr^2s^5 \\ & + 5465576171875p^4q^3r^2s^5 + 5937128906250pq^5r^2s^5 - 10661156250000p^5qr^3s^5 \\ & - 63574218750000p^2q^3r^3s^5 + 24059375000000p^3qr^4s^5 - 33023437500000q^3r^4s^5 \\ & - 43125000000000pqr^5s^5 + 94394531250p^{10}s^6 + 1097167968750p^7q^2s^6 \end{aligned}$$

( $o_0$  cont.)

$$\begin{aligned} &+ 2829833984375p^4q^4s^6 - 1525878906250pq^6s^6 + 2724609375p^8rs^6 \\ &+ 13998535156250p^5q^2rs^6 + 57094482421875p^2q^4rs^6 - 8512509765625p^6r^2s^6 \\ &- 37941406250000p^3q^2r^2s^6 + 33191894531250q^4r^2s^6 + 50534179687500p^4r^3s^6 \\ &+ 15665625000000pq^2r^3s^6 - 85023437500000p^2r^4s^6 + 1012500000000r^5s^6 \\ &- 2717285156250p^6qs^7 - 11352539062500p^3q^3s^7 - 2593994140625q^5s^7 \\ &- 47154541015625p^4qrs^7 - 160644531250000pq^3rs^7 + 14250000000000p^2qr^2s^7 \\ &- 26757812500000qr^3s^7 - 4364013671875p^5s^8 - 94604492187500p^2q^2s^8 \\ &+ 114379882812500p^3rs^8 + 51116943359375q^2rs^8 - 346435546875000pr^2s^8 \\ &+ 476837158203125pqs^9 - 476837158203125s^{10} \end{aligned}$$

$$\begin{aligned}
o_1 = & 1600p^{11}q^8 + 20800p^8q^{10} + 45100p^5q^{12} - 151200p^2q^{14} - 19200p^{12}q^6r \\
& - 293200p^9q^8r - 794600p^6q^{10}r + 2634675p^3q^{12}r + 2640600q^{14}r \\
& + 75600p^{13}q^4r^2 + 1529100p^{10}q^6r^2 + 6233350p^7q^8r^2 - 12013350p^4q^{10}r^2 \\
& - 29069550pq^{12}r^2 - 97200p^{14}q^2r^3 - 3562500p^{11}q^4r^3 - 26984900p^8q^6r^3 \\
& - 15900325p^5q^8r^3 + 76267100p^2q^{10}r^3 + 3272400p^{12}q^2r^4 + 59486850p^9q^4r^4 \\
& + 221270075p^6q^6r^4 + 74065250p^3q^8r^4 - 300564375q^{10}r^4 - 45569400p^{10}q^2r^5 \\
& - 438666000p^7q^4r^5 - 444821250p^4q^6r^5 + 2448256250pq^8r^5 + 290640000p^8q^2r^6 \\
& + 855850000p^5q^4r^6 - 5741875000p^2q^6r^6 - 644000000p^6q^2r^7 + 5574000000p^3q^4r^7 \\
& + 4643000000q^6r^7 - 1696000000p^4q^2r^8 - 12660000000pq^4r^8 + 7200000000p^2q^2r^9 \\
& + 43200p^{13}q^5s + 572000p^{10}q^7s - 59800p^7q^9s - 24174625p^4q^{11}s \\
& - 74587500pq^{13}s - 324000p^{14}q^3rs - 5531400p^{11}q^5rs - 3712100p^8q^7rs \\
& + 293009275p^5q^9rs + 1115548875p^2q^{11}rs + 583200p^{15}qr^2s + 18343800p^{12}q^3r^2s \\
& + 77911100p^9q^5r^2s - 957488825p^6q^7r^2s - 5449661250p^3q^9r^2s + 960120000q^{11}r^2s \\
& - 23684400p^{13}qr^3s - 373761900p^{10}q^3r^3s - 27944975p^7q^5r^3s + 10375740625p^4q^7r^3s \\
& - 4649093750pq^9r^3s + 395816400p^{11}qr^4s + 2910968000p^8q^3r^4s - 9126162500p^5q^5r^4s \\
& - 11696118750p^2q^7r^4s - 3028640000p^9qr^5s - 3251550000p^6q^3r^5s + 47914250000p^3q^5r^5s \\
& - 30255625000q^7r^5s + 9304000000p^7qr^6s - 42970000000p^4q^3r^6s + 31475000000pq^5r^6s \\
& + 2176000000p^5qr^7s + 62100000000p^2q^3r^7s - 43200000000p^3qr^8s - 72000000000q^3r^8s \\
& + 291600p^{15}q^2s^2 + 2702700p^{12}q^4s^2 - 38692250p^9q^6s^2 - 538903125p^6q^8s^2 \\
& - 1613112500p^3q^{10}s^2 + 320625000q^{12}s^2 - 874800p^{16}rs^2 - 14166900p^{13}q^2rs^2 \\
& + 193284900p^{10}q^4rs^2 + 3688520500p^7q^6rs^2 + 11613390625p^4q^8rs^2 - 15609881250p \\
& + 44031600p^{14}r^2s^2 + 482345550p^{11}q^2r^2s^2 - 2020881875p^8q^4r^2s^2 - 7407026250p^5q^6r^2s^2 \\
& + 136175750000p^2q^8r^2s^2 - 1000884600p^{12}r^3s^2 - 8888950000p^9q^2r^3s^2 \\
& - 30101703125p^6q^4r^3s^2 - 319761000000p^3q^6r^3s^2 + 51519218750q^8r^3s^2 \\
& + 12622395000p^{10}r^4s^2 + 97032450000p^7q^2r^4s^2 + 469929218750p^4q^4r^4s^2 \\
& + 291342187500pq^6r^4s^2 - 96382000000p^8r^5s^2 - 598070000000p^5q^2r^5s^2 \\
& - 1165021875000p^2q^4r^5s^2 + 446500000000p^6r^6s^2 + 1651500000000p^3q^2r^6s^2 \\
& + 789375000000q^4r^6s^2 - 1152000000000p^4r^7s^2 - 600000000000pq^2r^7s^2 \\
& + 1260000000000p^2r^8s^2 - 24786000p^{14}qs^3 - 660487500p^{11}q^3s^3 \\
& - 5886356250p^8q^5s^3 - 18137187500p^5q^7s^3 - 5120546875p^2q^9s^3 \\
& + 827658000p^{12}qrs^3 + 13343062500p^9q^3rs^3 + 39782068750p^6q^5rs^3
\end{aligned}$$



( $o_1$  cont.)

$$\begin{aligned} & - 111288437500p^3q^7rs^3 - 15438750000q^9rs^3 - 14540782500p^{10}qr^2s^3 \\ & - 135889750000p^7q^3r^2s^3 - 176892578125p^4q^5r^2s^3 - 934462656250pq^7r^2s^3 \\ & + 171669250000p^8qr^3s^3 + 1164538125000p^5q^3r^3s^3 + 3192346406250p^2q^5r^3s^3 \\ & - 1295476250000p^6qr^4s^3 - 6540712500000p^3q^3r^4s^3 - 2957828125000q^5r^4s^3 \\ & + 5366750000000p^4qr^5s^3 + 3165000000000pq^3r^5s^3 - 886250000000p^2qr^6s^3 \\ & - 1800000000000qr^7s^3 + 236925000p^{13}s^4 + 8895234375p^{10}q^2s^4 \\ & + 106180781250p^7q^4s^4 + 474221875000p^4q^6s^4 + 616210937500pq^8s^4 \\ & - 6995868750p^{11}rs^4 - 184190625000p^8q^2rs^4 - 1299254453125p^5q^4rs^4 \\ & - 2475458593750p^2q^6rs^4 + 63049218750p^9r^2s^4 + 1646791484375p^6q^2r^2s^4 \\ & + 9086886718750p^3q^4r^2s^4 + 4673421875000q^6r^2s^4 - 215665000000p^7r^3s^4 \\ & - 7864589843750p^4q^2r^3s^4 - 5987890625000pq^4r^3s^4 + 594843750000p^5r^4s^4 \\ & + 27791171875000p^2q^2r^4s^4 - 3881250000000p^3r^5s^4 + 12203125000000q^2r^5s^4 \\ & + 10312500000000pr^6s^4 - 34720312500p^9qs^5 - 545126953125p^6q^3s^5 \\ & - 2176425781250p^3q^5s^5 - 2792968750000q^7s^5 - 1395703125p^7qrs^5 \\ & - 1957568359375p^4q^3rs^5 + 5122636718750pq^5rs^5 + 858210937500p^5qr^2s^5 \\ & - 42050097656250p^2q^3r^2s^5 + 7088281250000p^3qr^3s^5 - 25974609375000q^3r^3s^5 \\ & - 69296875000000pqr^4s^5 + 384697265625p^8s^6 + 6403320312500p^5q^2s^6 \\ & + 16742675781250p^2q^4s^6 - 3467080078125p^6rs^6 + 11009765625000p^3q^2rs^6 \\ & + 16451660156250q^4rs^6 + 6979003906250p^4r^2s^6 + 145403320312500pq^2r^2s^6 \\ & + 4076171875000p^2r^3s^6 + 22265625000000r^4s^6 - 21915283203125p^4qs^7 \\ & - 86608886718750pq^3s^7 - 22785644531250p^2qrs^7 - 103466796875000qr^2s^7 \\ & + 18798828125000p^3s^8 + 106048583984375q^2s^8 + 17761230468750prs^8 \end{aligned}$$

$$\begin{aligned}
o_2 = & 2800p^9q^8 + 55700p^6q^{10} + 363600p^3q^{12} + 777600q^{14} - 27200p^{10}q^6r \\
& - 700200p^7q^8r - 5726550p^4q^{10}r - 15066000pq^{12}r + 74700p^{11}q^4r^2 \\
& + 2859575p^8q^6r^2 + 31175725p^5q^8r^2 + 103147650p^2q^{10}r^2 - 40500p^{12}q^2r^3 \\
& - 4274400p^9q^4r^3 - 76065825p^6q^6r^3 - 365623750p^3q^8r^3 - 132264000q^{10}r^3 \\
& + 2192400p^{10}q^2r^4 + 92562500p^7q^4r^4 + 799193875p^4q^6r^4 + 1188193125pq^8r^4 \\
& - 41231500p^8q^2r^5 - 914210000p^5q^4r^5 - 3318853125p^2q^6r^5 + 398850000p^6q^2r^6 \\
& + 3944000000p^3q^4r^6 + 2211312500q^6r^6 - 1817000000p^4q^2r^7 - 6720000000pq^4r^7 \\
& + 3900000000p^2q^2r^8 + 75600p^{11}q^5s + 1823100p^8q^7s + 14534150p^5q^9s \\
& + 38265750p^2q^{11}s - 394200p^{12}q^3rs - 11453850p^9q^5rs - 101213000p^6q^7rs \\
& - 223565625p^3q^9rs + 415125000q^{11}rs + 243000p^{13}qr^2s + 13654575p^{10}q^3r^2s \\
& + 163811725p^7q^5r^2s + 173461250p^4q^7r^2s - 3008671875pq^9r^2s - 2016900p^{11}qr^3s \\
& - 86576250p^8q^3r^3s - 324146625p^5q^5r^3s + 3378506250p^2q^7r^3s - 89211000p^9qr^4s \\
& - 55207500p^6q^3r^4s + 1493950000p^3q^5r^4s - 12573609375q^7r^4s + 1140100000p^7qr^5s \\
& + 42500000p^4q^3r^5s + 21511250000pq^5r^5s - 4058000000p^5qr^6s + 6725000000p^2q^3r^6 \\
& - 1400000000p^3qr^7s - 39000000000q^3r^7s + 510300p^{13}q^2s^2 + 4814775p^{10}q^4s^2 \\
& - 70265125p^7q^6s^2 - 1016484375p^4q^8s^2 - 3221100000pq^{10}s^2 - 364500p^{14}rs^2 \\
& + 30314250p^{11}q^2rs^2 + 1106765625p^8q^4rs^2 + 10984203125p^5q^6rs^2 + 33905812500p^2 \\
& - 37980900p^{12}r^2s^2 - 2142905625p^9q^2r^2s^2 - 26896125000p^6q^4r^2s^2 - 95551328125p \\
& + 11320312500q^8r^2s^2 + 1743781500p^{10}r^3s^2 + 35432262500p^7q^2r^3s^2 \\
& + 177855859375p^4q^4r^3s^2 + 121260546875pq^6r^3s^2 - 25943162500p^8r^4s^2 \\
& - 249165500000p^5q^2r^4s^2 - 461739453125p^2q^4r^4s^2 + 177823750000p^6r^5s^2 \\
& + 726225000000p^3q^2r^5s^2 + 404195312500q^4r^5s^2 - 565875000000p^4r^6s^2 \\
& - 407500000000pq^2r^6s^2 + 682500000000p^2r^7s^2 - 59140125p^{12}qs^3 \\
& - 1290515625p^9q^3s^3 - 8785071875p^6q^5s^3 - 15588281250p^3q^7s^3 \\
& + 17505000000q^9s^3 + 896062500p^{10}qr^3s^3 + 2589750000p^7q^3rs^3 \\
& - 82700156250p^4q^5rs^3 - 347683593750pq^7rs^3 + 17022656250p^8qr^2s^3 \\
& + 320923593750p^5q^3r^2s^3 + 1042116875000p^2q^5r^2s^3 - 353262812500p^6qr^3s^3 \\
& - 2212664062500p^3q^3r^3s^3 - 1252408984375q^5r^3s^3 + 1967362500000p^4qr^4s^3 \\
& + 1583343750000pq^3r^4s^3 - 3560625000000p^2qr^5s^3 - 975000000000qr^6s^3 \\
& + 462459375p^{11}s^4 + 14210859375p^8q^2s^4 + 99521718750p^5q^4s^4 \\
& + 114955468750p^2q^6s^4 - 17720859375p^9rs^4 - 100320703125p^6q^2rs^4
\end{aligned}$$

( $o_2$  cont.)

$$\begin{aligned} &+ 1021943359375p^3q^4rs^4 + 1193203125000q^6rs^4 + 171371250000p^7r^2s^4 \\ &\quad - 1113390625000p^4q^2r^2s^4 - 1211474609375pq^4r^2s^4 - 274056250000p^5r^3s^4 \\ &\quad + 8285166015625p^2q^2r^3s^4 - 2079375000000p^3r^4s^4 + 5137304687500q^2r^4s^4 \\ &\quad + 6187500000000pr^5s^4 - 135675000000p^7qs^5 - 1275244140625p^4q^3s^5 \\ &\quad - 28388671875pq^5s^5 + 1015166015625p^5qrs^5 - 10584423828125p^2q^3rs^5 \\ &\quad + 3559570312500p^3qr^2s^5 - 6929931640625q^3r^2s^5 - 3230468750000pqr^3s^5 \\ &\quad + 430576171875p^6s^6 + 9397949218750p^3q^2s^6 + 575195312500q^4s^6 \\ &\quad - 4086425781250p^4rs^6 + 42183837890625pq^2rs^6 + 8156494140625p^2r^2s^6 \\ &\quad + 12612304687500r^3s^6 - 25513916015625p^2qs^7 - 37017822265625qrs^7 \\ &\quad + 18981933593750ps^8 \end{aligned}$$

$$\begin{aligned}
o_3 = & 1600p^{10}q^6 + 9200p^7q^8 - 126000p^4q^{10} - 777600pq^{12} - 14400p^{11}q^4r \\
& - 119300p^8q^6r + 1203225p^5q^8r + 9412200p^2q^{10}r + 32400p^{12}q^2r^2 \\
& + 417950p^9q^4r^2 - 4543725p^6q^6r^2 - 49008125p^3q^8r^2 - 24192000q^{10}r^2 \\
& - 292050p^{10}q^2r^3 + 8760000p^7q^4r^3 + 137506625p^4q^6r^3 + 225438750pq^8r^3 \\
& - 4213250p^8q^2r^4 - 173595625p^5q^4r^4 - 653003125p^2q^6r^4 + 82575000p^6q^2r^5 \\
& + 838125000p^3q^4r^5 + 578562500q^6r^5 - 421500000p^4q^2r^6 - 1796250000pq^4r^6 \\
& + 1050000000p^2q^2r^7 + 43200p^{12}q^3s + 807300p^9q^5s + 5328225p^6q^7s \\
& + 16946250p^3q^9s + 29565000q^{11}s - 194400p^{13}qrs - 5505300p^{10}q^3rs \\
& - 49886700p^7q^5rs - 178821875p^4q^7rs - 222750000pq^9rs + 6814800p^{11}qr^2s \\
& + 120525625p^8q^3r^2s + 526694500p^5q^5r^2s + 84065625p^2q^7r^2s - 123670500p^9qr^3s \\
& - 1106731875p^6q^3r^3s - 669556250p^3q^5r^3s - 2869265625q^7r^3s + 1004350000p^7qr^4s \\
& + 3384375000p^4q^3r^4s + 5665625000pq^5r^4s - 3411000000p^5qr^5s - 418750000p^2q^3r^5s \\
& + 1700000000p^3qr^6s - 10500000000q^3r^6s + 291600p^{14}s^2 + 9829350p^{11}q^2s^2 \\
& + 114151875p^8q^4s^2 + 522169375p^5q^6s^2 + 716906250p^2q^8s^2 - 18625950p^{12}rs^2 \\
& - 387703125p^9q^2rs^2 - 2056109375p^6q^4rs^2 - 760203125p^3q^6rs^2 + 3071250000q^8rs^2 \\
& + 512419500p^{10}r^2s^2 + 5859053125p^7q^2r^2s^2 + 12154062500p^4q^4r^2s^2 + 15931640625p \\
& - 6598393750p^8r^3s^2 - 43549625000p^5q^2r^3s^2 - 82011378125p^2q^4r^3s^2 + 43538125000 \\
& + 160831250000p^3q^2r^4s^2 + 99070312500q^4r^4s^2 - 141812500000p^4r^5s^2 \\
& - 117500000000pq^2r^5s^2 + 183750000000p^2r^6s^2 - 154608750p^{10}qs^3 \\
& - 3309468750p^7q^3s^3 - 20834140625p^4q^5s^3 - 34731562500pq^7s^3 \\
& + 5970375000p^8qrs^3 + 68533281250p^5q^3rs^3 + 142698281250p^2q^5rs^3 \\
& - 74509140625p^6qr^2s^3 - 389148437500p^3q^3r^2s^3 - 270937890625q^5r^2s^3 \\
& + 366696875000p^4qr^3s^3 + 400031250000pq^3r^3s^3 - 735156250000p^2qr^4s^3 \\
& - 262500000000qr^5s^3 + 371250000p^9s^4 + 21315000000p^6q^2s^4 + 179515625000p^3q^4s^4 \\
& + 238406250000q^6s^4 - 9071015625p^7rs^4 - 268945312500p^4q^2rs^4 \\
& - 379785156250pq^4rs^4 + 140262890625p^5r^2s^4 + 1486259765625p^2q^2r^2s^4 \\
& - 806484375000p^3r^3s^4 + 1066210937500q^2r^3s^4 + 1722656250000pr^4s^4 \\
& - 125648437500p^5qs^5 - 1236279296875p^2q^3s^5 + 1267871093750p^3qrs^5 \\
& - 1044677734375q^3rs^5 - 6630859375000pqr^2s^5 + 160888671875p^4s^6 \\
& + 6352294921875pq^2s^6 - 708740234375p^2rs^6 + 3901367187500r^2s^6 \\
& - 8050537109375qs^7
\end{aligned}$$

$$\begin{aligned}
o_4 = & 2800p^8q^6 + 41300p^5q^8 + 151200p^2q^{10} - 25200p^9q^4r - 542600p^6q^6r \\
& - 3397875p^3q^8r - 5751000q^{10}r + 56700p^{10}q^2r^2 + 1972125p^7q^4r^2 \\
& + 18624250p^4q^6r^2 + 50253750pq^8r^2 - 1701000p^8q^2r^3 - 32630625p^5q^4r^3 \\
& - 139868750p^2q^6r^3 + 18162500p^6q^2r^4 + 177125000p^3q^4r^4 + 121734375q^6r^4 \\
& - 100500000p^4q^2r^5 - 386250000pq^4r^5 + 225000000p^2q^2r^6 + 75600p^{10}q^3s \\
& + 1708800p^7q^5s + 12836875p^4q^7s + 32062500pq^9s - 340200p^{11}qrs \\
& - 10185750p^8q^3rs - 97502750p^5q^5rs - 301640625p^2q^7rs + 7168500p^9qr^2s \\
& + 135960625p^6q^3r^2s + 587471875p^3q^5r^2s - 384750000q^7r^2s - 29325000p^7qr^3s \\
& - 320625000p^4q^3r^3s + 523437500pq^5r^3s - 42000000p^5qr^4s + 343750000p^2q^3r^4s \\
& + 150000000p^3qr^5s - 225000000q^3r^5s + 510300p^{12}s^2 + 12808125p^9q^2s^2 \\
& + 107062500p^6q^4s^2 + 270312500p^3q^6s^2 - 168750000q^8s^2 - 2551500p^{10}rs^2 \\
& - 5062500p^7q^2rs^2 + 712343750p^4q^4rs^2 + 4788281250pq^6rs^2 - 256837500p^8r^2s^2 \\
& - 3574812500p^5q^2r^2s^2 - 14967968750p^2q^4r^2s^2 + 4040937500p^6r^3s^2 + 26400000000 \\
& + 17083984375q^4r^3s^2 - 21812500000p^4r^4s^2 - 24375000000pq^2r^4s^2 + 39375000000p \\
& - 127265625p^5q^3s^3 - 680234375p^2q^5s^3 - 2048203125p^6qrs^3 - 18794531250p^3q^3rs^3 \\
& - 25050000000q^5rs^3 + 26621875000p^4qr^2s^3 + 37007812500pq^3r^2s^3 - 105468750000 \\
& - 56250000000qr^4s^3 + 1124296875p^7s^4 + 9251953125p^4q^2s^4 - 8007812500pq^4s^4 \\
& - 4004296875p^5rs^4 + 179931640625p^2q^2rs^4 - 75703125000p^3r^2s^4 + 133447265625q \\
& + 363281250000pr^3s^4 - 91552734375p^3qs^5 - 19531250000q^3s^5 - 75195312500pqr \\
& + 157958984375p^2s^6 + 748291015625rs^6
\end{aligned}$$