表 1 rank 0

No.	expression
1	1

表 2 rank 1

No.	expression
2	x
3	y
4	z

表 3 rank 2

No.	expression
5	$-\frac{x^2}{2} - \frac{y^2}{2} + z^2$
6	$\frac{\sqrt{3}\left(x^2-y^2\right)}{2}$
7	$\sqrt{3}yz$
8	$\sqrt{3}xz$
9	$\sqrt{3}xy$

表 4 rank 3

No.	expression
10	$\sqrt{15}xyz$
11	$\frac{x(2x^2-3y^2-3z^2)}{2}$
12	$-\frac{y\left(3x^2-2y^2+3z^2\right)}{2}$
13	$-\frac{z(3x^2+3y^2-2z^2)}{2}$
14	$\frac{\sqrt{15}x(y-z)(y+z)}{2}$
15	$-\frac{\sqrt{15}y(x-z)(x+z)}{2}$
16	$\frac{\sqrt{15}z(x-y)(x+y)}{2}$

表 5 rank 4

No.	expression
17	$\frac{\sqrt{21}\left(x^4 - 3x^2y^2 - 3x^2z^2 + y^4 - 3y^2z^2 + z^4\right)}{6}$
18	$\frac{\sqrt{15}\left(-x^4+12x^2y^2-6x^2z^2-y^4-6y^2z^2+2z^4\right)}{12}$
19	$\frac{\sqrt{5}\left(x^4 - 6x^2z^2 - y^4 + 6y^2z^2\right)}{4}$
20	$\frac{\sqrt{35}yz(y-z)(y+z)}{2}$
21	$-\frac{\sqrt{35}xz(x-z)(x+z)}{2}$
22	$\frac{\sqrt{35}xy(x-y)(x+y)}{2}$
23	$\frac{\sqrt{5}yz\left(6x^2-y^2-z^2\right)}{2}$
24	$-\frac{\sqrt{5}xz\left(x^2-6y^2+z^2\right)}{2}$
25	$-\frac{\sqrt{5}xy(x^2+y^2-6z^2)}{2}$

表 6 rank 5

No.	expression
26	$\frac{3\sqrt{35}xyz(x^2-y^2)}{2}$
27	$\frac{\sqrt{105}xyz\left(x^2+y^2-2z^2\right)}{2}$
28	$\frac{x\left(8x^4 - 40x^2y^2 - 40x^2z^2 + 15y^4 + 30y^2z^2 + 15z^4\right)}{8}$
29	$\frac{y \left(15 x^4-40 x^2 y^2+30 x^2 z^2+8 y^4-40 y^2 z^2+15 z^4\right)}{8}$
30	$\frac{z(15x^4 + 30x^2y^2 - 40x^2z^2 + 15y^4 - 40y^2z^2 + 8z^4)}{8}$
31	$\frac{3\sqrt{35}x(y^2-2yz-z^2)(y^2+2yz-z^2)}{8}$
32	$\frac{3\sqrt{35}y(x^2-2xz-z^2)(x^2+2xz-z^2)}{8}$
33	$\frac{3\sqrt{35}z(x^2-2xy-y^2)(x^2+2xy-y^2)}{8}$
34	$\frac{\sqrt{105}x(y-z)(y+z)(2x^2-y^2-z^2)}{4}$
35	$\frac{\sqrt{105}y(x-z)(x+z)(x^2-2y^2+z^2)}{4}$
36	$-\frac{\sqrt{105}z(x-y)(x+y)(x^2+y^2-2z^2)}{4}$

表7 rank 6

```
No. expression
               \sqrt{2} \cdot \left(2 x^6 - 15 x^4 y^2 - 15 x^4 z^2 - 15 x^2 y^4 + 180 x^2 y^2 z^2 - 15 x^2 z^4 + 2 y^6 - 15 y^4 z^2 - 15 y^2 z^4 + 2 z^6\right)
               \sqrt{2310}(x-y)(x+y)(x-z)(x+z)(y-z)(y+z)
               \sqrt{14}\left(-x^6+15x^4z^2-15x^2z^4-y^6+15y^4z^2-15y^2z^4+2z^6\right)
  39
               \underbrace{\sqrt{42} \left(x^6 - 10x^4y^2 - 5x^4z^2 + 10x^2y^4 + 5x^2z^4 - y^6 + 5y^4z^2 - 5y^2z^4\right)}_{\bullet}
               \frac{3\sqrt{7}yz(y-z)(y+z)(10x^2-y^2-z^2)}{}
               3\sqrt{7}xz(x-z)(x+z)(x^2-10y^2+z^2)
                 3\sqrt{7}xy(x-y)(x+y)(x^2+y^2-10z^2)
  43
               \frac{\sqrt{462}yz(y^2 - 3z^2)(3y^2 - z^2)}{16}
               \sqrt{462}xz(x^2-3z^2)(3x^2-z^2)
  45
               \sqrt{462}xy(x^2-3y^2)(3x^2-y^2)
               \frac{16}{\sqrt{210}yz\left(16x^4 - 16x^2y^2 - 16x^2z^2 + y^4 + 2y^2z^2 + z^4\right)}
  47
               \frac{\sqrt{210}x2\left(16x^{2}-16x^{2}y^{2}+2z^{2}z^{2}+16y^{4}-16y^{2}z^{2}+z^{4}\right)}{16}}{\sqrt{210}x2\left(x^{4}-16x^{2}y^{2}+2x^{2}z^{2}+16y^{4}-16y^{2}z^{2}+z^{4}\right)}
\frac{\sqrt{210}xy\left(x^{4}+2x^{2}y^{2}-16x^{2}z^{2}+y^{4}-16y^{2}z^{2}+16z^{4}\right)}{16}
```

表 8 $\operatorname{rank} 7$

No.	expression
50	$\frac{\sqrt{91}xyz(3x^4 - 5x^2y^2 - 5x^2z^2 + 3y^4 - 5y^2z^2 + 3z^4)}{2}$
51	$\frac{\sqrt{231}xyz\left(-3x^4+10x^2z^2+3y^4-10y^2z^2\right)}{4}$
52	$\frac{\sqrt{77}xyz\left(-3x^4+20x^2y^2-10x^2z^2-3y^4-10y^2z^2+6z^4\right)}{2}$
53	$x \left(16x^6 - 168x^4y^2 - 168x^4z^2 + 210x^2y^4 + 420x^2y^2z^2 + 210x^2z^4 - 35y^6 - 105y^4z^2 - 105y^2z^4 - 35z^6\right)$
	$\frac{16}{y\left(35x^{6}-210x^{4}y^{2}+105x^{4}z^{2}+168x^{2}y^{4}-420x^{2}y^{2}z^{2}+105x^{2}z^{4}-16y^{6}+168y^{4}z^{2}-210y^{2}z^{4}+35z^{6}\right)}$
54	$=\frac{16}{2\left(35x^{6}+105x^{4}y^{2}-210x^{4}z^{2}+105x^{2}y^{4}-420x^{2}y^{2}z^{2}+168x^{2}z^{4}+35y^{6}-210y^{4}z^{2}+168y^{2}z^{4}-16z^{6}\right)}$
55	16
56	$\frac{\sqrt{231}x(10x^2 - 3y^2 - 3z^2)(y^2 - 2yz - z^2)(y^2 + 2yz - z^2)}{16}$
57	$-\frac{\sqrt{231}y(x^2-2xz-z^2)(x^2+2xz-z^2)(3x^2-10y^2+3z^2)}{16}$
58	$-\frac{\sqrt{231}z(x^2-2xy-y^2)(x^2+2xy-y^2)(3x^2+3y^2-10z^2)}{16}$
59	$\frac{\sqrt{6006}x(y-z)(y+z)(y^2-4yz+z^2)(y^2+4yz+z^2)}{22}$
60	$-\frac{\sqrt{6006}y(x-z)(x+z)(x^2-4xz+z^2)(x^2+4xz+z^2)}{32}$
61	$\frac{\sqrt{6006}z(x-y)(x+y)\left(x^2-4xy+y^2\right)\left(x^2+4xy+y^2\right)}{2}$
62	$\frac{32}{\sqrt{42}x(y-z)(y+z)\left(48x^4 - 80x^2y^2 - 80x^2z^2 + 15y^4 + 30y^2z^2 + 15z^4\right)}$
	$\frac{32}{\sqrt{42}y(x-z)(x+z)\left(15x^4-80x^2y^2+30x^2z^2+48y^4-80y^2z^2+15z^4\right)}$
63	$\frac{32}{\sqrt{42}z(x-y)(x+y)\left(15x^4+30x^2y^2-80x^2z^2+15y^4-80y^2z^2+48z^4\right)}$
64	32

表 9 rank 8

```
No. expression
            \sqrt{33} \left(x^8 - 14x^6y^2 - 14x^6z^2 + 35x^4y^4 + 35x^4z^4 - 14x^2y^6 - 14x^2z^6 + y^8 - 14y^6z^2 + 35y^4z^4 - 14y^2z^6 + z^8\right)
65
             \sqrt{286} \left(x^8 - 14x^6y^2 - 14x^6z^2 + 210x^4y^2z^2 - 14x^2y^6 + 210x^2y^4z^2 - 420x^2y^2z^4 + 28x^2z^6 + y^8 - 14y^6z^2 + 28y^2z^6 - 2z^8\right)
 66
             \sqrt{858} \left(-x^8 + 14x^6y^2 + 14x^6z^2 - 210x^4y^2z^2 - 14x^2y^6 + 210x^2y^4z^2 + y^8 - 14y^6z^2\right)
 67
             \frac{\sqrt{210} \left(x^{8} - 62x^{6}y^{2} + 34x^{6}z^{2} + 160x^{4}y^{4} - 30x^{4}y^{2}z^{2} - 80x^{4}z^{4} - 62x^{2}y^{6} - 30x^{2}y^{4}z^{2} + 60x^{2}y^{2}z^{4} + 28x^{2}z^{6} + y^{8} + 34y^{6}z^{2} - 80y^{4}z^{4} + 28y^{2}z^{6} - 2z^{8}\right)}{64}
 68
           3\sqrt{70}\left(-x^8 - 2x^6y^2 + 30x^6z^2 + 30x^4y^2z^2 - 80x^4z^4 + 2x^2y^6 - 30x^2y^4z^2 + 32x^2z^6 + y^8 - 30y^6z^2 + 80y^4z^4 - 32y^2z^6\right)
 69
            3\sqrt{715}yz(y-z)(y+z)\!\left(y^2\!-\!2yz\!-\!z^2\right)\!\left(y^2\!+\!2yz\!-\!z^2\right)
 70
              3\sqrt{715}xz(x-z)(x+z)(x^2-2xz-z^2)(x^2+2xz-z^2)
 71
            3\sqrt{715}xy(x-y)(x+y)\Big(x^2-2xy-y^2\Big)\Big(x^2+2xy-y^2\Big)
 72
            3\sqrt{77}yz(y-z)(y+z)\left(40x^4-24x^2y^2-24x^2z^2+y^4+2y^2z^2+z^4\right)
 73
               3\sqrt{77}xz(x-z)(x+z)\Big(x^4-24x^2y^2+2x^2z^2+40y^4-24y^2z^2+z^4\Big)
 74
            3\sqrt{77}xy(x-y)(x+y)\left(x^4+2x^2y^2-24x^2z^2+y^4-24y^2z^2+40z^4\right)
 75
            \sqrt{858}yz \left(y^2 - 3z^2\right) \left(3y^2 - z^2\right) \left(14x^2 - y^2 - z^2\right)
 76
               \sqrt{858}xz(x^2-3z^2)(3x^2-z^2)(x^2-14y^2+z^2)
 77
               \sqrt{858}xy(x^2-3y^2)(3x^2-y^2)(x^2+y^2-14z^2)
 78
            3\sqrt{70}yz\left(32x^{6} - 80x^{4}y^{2} - 80x^{4}z^{2} + 30x^{2}y^{4} + 60x^{2}y^{2}z^{2} + 30x^{2}z^{4} - y^{6} - 3y^{4}z^{2} - 3y^{2}z^{4} - z^{6}\right)
 79
               3\sqrt{70}xz\left(x^{6} - 30x^{4}y^{2} + 3x^{4}z^{2} + 80x^{2}y^{4} - 60x^{2}y^{2}z^{2} + 3x^{2}z^{4} - 32y^{6} + 80y^{4}z^{2} - 30y^{2}z^{4} + z^{6}\right)
               3\sqrt{70}xy\left(x^{6} + 3x^{4}y^{2} - 30x^{4}z^{2} + 3x^{2}y^{4} - 60x^{2}y^{2}z^{2} + 80x^{2}z^{4} + y^{6} - 30y^{4}z^{2} + 80y^{2}z^{4} - 32z^{6}z^{4}\right)
 81
```

表 10 rank 9

```
expression
No.
                    \sqrt{510510}xyz(x-y)(x+y)(x-z)(x+z)(y-z)(y+z)
                    \sqrt{330}xyz\left(6x^{6} - 21x^{4}y^{2} - 21x^{4}z^{2} - 21x^{2}y^{4} + 140x^{2}y^{2}z^{2} - 21x^{2}z^{4} + 6y^{6} - 21y^{4}z^{2} - 21y^{2}z^{4} + 6z^{6}\right)
                    \sqrt{4290}xyz \left(3 x^6 - 14 x^4 y^2 - 7 x^4 z^2 + 14 x^2 y^4 + 7 x^2 z^4 - 3 y^6 + 7 y^4 z^2 - 7 y^2 z^4\right)
                    3\sqrt{1430}xyz\left(x^{6}-7x^{4}z^{2}+7x^{2}z^{4}+y^{6}-7y^{4}z^{2}+7y^{2}z^{4}-2z^{6}\right)
                    x \left(128x^8 - 2304x^6y^2 - 2304x^6z^2 + 6048x^4y^4 + 12096x^4y^2z^2 + 6048x^4z^4 - 3360x^2y^6 - 10080x^2y^4z^2 - 10080x^2y^2z^4 - 3360x^2z^6 + 315y^8 + 1260y^6z^2 + 1890y^4z^4 + 1260y^2z^6 + 315z^8\right)
  86
                    y \left(315x^8 - 3360x^6y^2 + 1260x^6z^2 + 6048x^4y^4 - 10080x^4y^2z^2 + 1890x^4z^4 - 2304x^2y^6 + 12096x^2y^4z^2 - 10080x^2y^2z^4 + 1260x^2z^6 + 128y^8 - 2304y^6z^2 + 6048y^4z^4 - 3360y^2z^6 + 315z^8\right)
 87
                    z \left(315x^{8} + 1260x^{6}y^{2} - 3360x^{6}z^{2} + 1890x^{4}y^{4} - 10080x^{4}y^{2}z^{2} + 6048x^{4}z^{4} + 1260x^{2}y^{6} - 10080x^{2}y^{4}z^{2} + 12096x^{2}y^{2}z^{4} - 2304x^{2}z^{6} + 315y^{8} - 3360y^{6}z^{2} + 6048y^{4}z^{4} - 2304y^{2}z^{6} + 128z^{8}\right)
                    3\sqrt{12155}x \left(y^4 - 4y^3z - 6y^2z^2 + 4yz^3 + z^4\right) \left(y^4 + 4y^3z - 6y^2z^2 - 4yz^3 + z^4\right)
  89
                    3\sqrt{12155}y\left(x^4-4x^3z-6x^2z^2+4xz^3+z^4\right)\left(x^4+4x^3z-6x^2z^2-4xz^3+z^4\right)
  90
                   3\sqrt{12155}z\left(x^{4}-4x^{3}y-6x^{2}y^{2}+4xy^{3}+y^{4}\right)\left(x^{4}+4x^{3}y-6x^{2}y^{2}-4xy^{3}+y^{4}\right)
 91
                    3\sqrt{5005}x \left(y^2-2yz-z^2\right) \left(y^2+2yz-z^2\right) \left(8x^4-8x^2y^2-8x^2z^2+y^4+2y^2z^2+z^4\right) + 2y^2z^2+z^4 + 2y^2z^2+z^2 + 2y^2+z^2 + 2y^2z^2+z^2 + 2y^2+z^2 + 2y^2 +
 92
                    3\sqrt{5005}y\left(x^2-2xz-z^2\right)\left(x^2+2xz-z^2\right)\left(x^4-8x^2y^2+2x^2z^2+8y^4-8y^2z^2+z^4\right)
  93
                    3\sqrt{5005}z\big(x^2-2xy-y^2\big)\big(x^2+2xy-y^2\big)\big(x^4+2x^2y^2-8x^2z^2+y^4-8y^2z^2+8z^4\big)
  94
                     \sqrt{4290}x(y-z)(y+z)\left(14x^2-3y^2-3z^2\right)\left(y^2-4yz+z^2\right)\left(y^2+4yz+z^2\right)
  95
                      \sqrt{4290}y(x-z)(x+z)(x^2-4xz+z^2)(x^2+4xz+z^2)(3x^2-14y^2+3z^2)
  96
                          \sqrt{4290}z(x-y)(x+y)\left(x^2-4xy+y^2\right)\!\left(x^2+4xy+y^2\right)\!\left(3x^2+3y^2-14z^2\right)
 97
                    3\sqrt{110}x(y-z)(y+z)\left(32x^6-112x^4y^2-112x^4z^2+70x^2y^4+140x^2y^2z^2+70x^2z^4-7y^6-21y^4z^2-21y^2z^4-7z^6\right)
                    3\sqrt{110}y(x-z)(x+z)\left(7x^6-70x^4y^2+21x^4z^2+112x^2y^4-140x^2y^2z^2+21x^2z^4-32y^6+112y^4z^2-70y^2z^4+7z^6\right)
  99
                         3\sqrt{110}z(x-y)(x+y)\left(7x^6+21x^4y^2-70x^4z^2+21x^2y^4-140x^2y^2z^2+112x^2z^4+7y^6-70y^4z^2+112y^2z^4-32z^6\right)
100
```

表 11 rank 10

```
No.
        expression
           \sqrt{390} \cdot \left(2x^{10} - 45x^8y^2 - 45x^8z^2 + 42x^6y^4 + 1008x^6y^2z^2 + 42x^6z^4 + 42x^4y^6 - 1260x^4y^4z^2 - 1260x^4y^2z^4 + 42x^4z^6 - 45x^2y^8 + 1008x^2y^6z^2 - 1260x^2y^4z^4 + 1008x^2y^2z^6 - 45x^2z^8 + 2y^{10} - 45y^8z^2 + 42y^6z^4 + 42y^4z^6 - 45y^2z^8 + 2z^{10}\right)
           \sqrt{27170}(x-y)(x+y)(x-z)(x+z)(y-z)(y+z)\left(3x^4-11x^2y^2-11x^2z^2+3y^4-11y^2z^2+3z^4\right)
102
           \sqrt{420189} \left(-22x^{10} - 45x^8y^2 + 1035x^8z^2 + 105x^6y^4 + 630x^6y^2z^2 - 4935x^6z^4 + 105x^4y^6 - 3150x^4y^4z^2 + 1575x^4y^2z^4 + 4830x^4z^6 - 45x^2y^8 + 630x^2y^6z^2 + 1575x^2y^4z^4 - 1260x^2y^2z^6 - 990x^2z^8 - 22y^{10} + 1035y^8z^2 - 4935y^6z^4 + 4830y^4z^6 - 990y^2z^8 + 44z^{10}\right)
103
           \sqrt{140063} \cdot \left(22x^{10} - 675x^8y^2 - 315x^8z^2 + 3255x^6y^4 - 630x^6y^2z^2 + 1575x^6z^4 - 3255x^4y^6 + 1575x^4y^2z^4 - 1680x^4z^6 + 675x^2y^8 + 630x^2y^6z^2 - 1575x^2y^4z^4 + 360x^2z^8 - 22y^{10} + 315y^8z^2 - 1575y^6z^4 + 1680y^4z^6 - 360y^2z^8 \right)
104
           \sqrt{3213210} \left(-3x^{10} + 96x^8y^2 + 39x^8z^2 - 224x^6y^4 - 1344x^6y^2z^2 + 42x^6z^4 - 224x^4y^6 + 6720x^4y^4z^2 - 3360x^4y^2z^4 + 182x^4z^6 + 96x^2y^8 - 1344x^2y^6z^2 - 3360x^2y^4z^4 + 2688x^2y^2z^6 - 135x^2z^8 - 3y^{10} + 39y^8z^2 + 42y^6z^4 - 135y^2z^8 + 6z^{10}\right)
105
           \sqrt{1071070} \cdot \left(9x^{10} - 174x^8y^2 - 231x^8z^2 + 140x^6y^4 + 4032x^6y^2z^2 + 406x^6z^4 - 140x^4y^6 - 10080x^4y^2z^4 + 266x^4z^6 + 174x^2y^8 - 4032x^2y^6z^2 + 10080x^2y^4z^4 - 57x^2z^8 - 9y^{10} + 231y^8z^2 - 406y^6z^4 - 266y^4z^6 + 57y^2z^8\right)
106
           \sqrt{12155}yz(y-z)(y+z)\left(18x^2-y^2-z^2\right)\left(y^2-2yz-z^2\right)\left(y^2+2yz-z^2\right)
107
           \sqrt{12155}xz(x-z)(x+z)(x^2-18y^2+z^2)(x^2-2xz-z^2)(x^2+2xz-z^2)
108
             \sqrt{12155}xy(x-y)(x+y)\Big(x^2+y^2-18z^2\Big)\Big(x^2-2xy-y^2\Big)\Big(x^2+2xy-y^2\Big)
109
           \sqrt{2145}yz(y-z)(y+z)\left(112x^{6}-168x^{4}y^{2}-168x^{4}z^{2}+42x^{2}y^{4}+84x^{2}y^{2}z^{2}+42x^{2}z^{4}-y^{6}-3y^{4}z^{2}-3y^{2}z^{4}-z^{6}\right)
110
           \sqrt{2145}xz(x-z)(x+z)\left(x^{6}-42x^{4}y^{2}+3x^{4}z^{2}+168x^{2}y^{4}-84x^{2}y^{2}z^{2}+3x^{2}z^{4}-112y^{6}+168y^{4}z^{2}-42y^{2}z^{4}+z^{6}\right)
111
             \sqrt{2145}xy(x-y)(x+y)\left(x^{6}+3x^{4}y^{2}-42x^{4}z^{2}+3x^{2}y^{4}-84x^{2}y^{2}z^{2}+168x^{2}z^{4}+y^{6}-42y^{4}z^{2}+168y^{2}z^{4}-112z^{6}\right)
112
           \sqrt{92378}yz(y^4-10y^2z^2+5z^4)(5y^4-10y^2z^2+z^4)
113
           \sqrt{92378}xz(x^4-10x^2z^2+5z^4)(5x^4-10x^2z^2+z^4)
114
           \sqrt{92378}xy(x^4-10x^2y^2+5y^4)(5x^4-10x^2y^2+y^4)
115
           \sqrt{4290}yz(y^2-3z^2)(3y^2-z^2)(224x^4-96x^2y^2-96x^2z^2+3y^4+6y^2z^2+3z^4)
116
           \sqrt{4290}xz(x^2-3z^2)(3x^2-z^2)(3x^4-96x^2y^2+6x^2z^2+224y^4-96y^2z^2+3z^4)
117
           \sqrt{4290}xy(x^2-3y^2)(3x^2-y^2)(3x^4+6x^2y^2-96x^2z^2+3y^4-96y^2z^2+224z^4)
118
           \sqrt{165}yz(384x^8 - 1792x^6y^2 - 1792x^6z^2 + 1680x^4y^4 + 3360x^4y^2z^2 + 1680x^4z^4 - 336x^2y^6 - 1008x^2y^4z^2 - 1008x^2y^2z^4 - 336x^2z^6 + 7y^8 + 28y^6z^2 + 42y^4z^4 + 28y^2z^6 + 7z^8)
119
           \sqrt{165}xz\left(7x^8 - 336x^6y^2 + 28x^6z^2 + 1680x^4y^4 - 1008x^4y^2z^2 + 42x^4z^4 - 1792x^2y^6 + 3360x^2y^4z^2 - 1008x^2y^2z^4 + 28x^2z^6 + 384y^8 - 1792y^6z^2 + 1680y^4z^4 - 336y^2z^6 + 7z^8\right)
120
                                                                                                           128
           \sqrt{165}xy\left(7x^8 + 28x^6y^2 - 336x^6z^2 + 42x^4y^4 - 1008x^4y^2z^2 + 1680x^4z^4 + 28x^2y^6 - 1008x^2y^4z^2 + 3360x^2y^2z^4 - 1792x^2z^6 + 7y^8 - 336y^6z^2 + 1680y^4z^4 - 1792y^2z^6 + 384z^8\right)
121
```

```
No.
                expression
                     \sqrt{2431}xyz\big(5x^8 - 30x^6y^2 - 30x^6z^2 + 63x^4y^4 + 63x^4z^4 - 30x^2y^6 - 30x^2z^6 + 5y^8 - 30y^6z^2 + 63y^4z^4 - 30y^2z^6 + 5z^8\big)
 122
                      \sqrt{692835}xyz\left(-x^8+6x^6y^2+6x^6z^2-42x^4y^2z^2-6x^2y^6+42x^2y^4z^2+y^8-6y^6z^2\right)
 123
                     \sqrt{230945}xyz\left(-x^8+6x^6y^2+6x^6z^2-42x^4y^2z^2+6x^2y^6-42x^2y^4z^2+84x^2y^2z^4-12x^2z^6-y^8+6y^6z^2-12y^2z^6+2z^8\right)
 124
                    3\sqrt{1001}xyz\left(-5x^{8}-10x^{6}y^{2}+70x^{6}z^{2}+70x^{4}y^{2}z^{2}-168x^{4}z^{4}+10x^{2}y^{6}-70x^{2}y^{4}z^{2}+80x^{2}z^{6}+5y^{8}-70y^{6}z^{2}+168y^{4}z^{4}-80y^{2}z^{6}\right)
 125
                     \sqrt{3003}xyz\left(-5x^8+150x^6y^2-90x^6z^2-336x^4y^4+70x^4y^2z^2+168x^4z^4+150x^2y^6+70x^2y^4z^2-140x^2y^2z^4-60x^2z^6-5y^8-90y^6z^2+168y^4z^4-60y^2z^6+10z^8\right)
 126
                     x\left(256x^{10} - 7040x^8y^2 - 7040x^8y^2 - 7040x^8z^2 + 31680x^6y^4 + 63360x^6y^2z^2 + 31680x^6z^4 - 36960x^4y^6 - 110880x^4y^2z^4 - 36960x^4z^6 + 11550x^2y^8 + 46200x^2y^6z^2 + 69300x^2y^4z^4 + 46200x^2y^2z^6 + 11550x^2z^8 - 693y^{10} - 3465y^8z^2 - 6930y^6z^4 - 6930y^4z^6 - 3465y^2z^8 - 693z^{10}\right)
 127
                         y(693x^{10} - 11550x^8y^2 + 3465x^8z^2 + 36960x^6y^4 - 46200x^6y^2z^2 + 6930x^6z^4 - 31680x^4y^6 + 110880x^4y^4z^2 - 69300x^4y^2z^4 + 6930x^4z^6 + 7040x^2y^8 - 63360x^2y^6z^2 + 110880x^2y^4z^4 - 46200x^2y^2z^6 + 3465x^2z^8 - 256y^{10} + 7040y^8z^2 - 31680y^6z^4 + 36960y^4z^6 - 11550y^2z^8 + 693z^{10}) + 1050y^2z^2 + 11080y^2z^2 + 1108
 128
                         z\left(693x^{10} + 3465x^{8}y^{2} - 11550x^{8}z^{2} + 6930x^{6}y^{4} - 46200x^{6}y^{2}z^{2} + 36960x^{6}z^{4} + 6930x^{4}y^{6} - 69300x^{4}y^{4}z^{2} + 110880x^{4}y^{2}z^{4} - 31680x^{4}y^{6}z^{2} + 110880x^{2}y^{8}z^{2} + 67040x^{2}z^{8} + 693y^{10} - 11550y^{8}z^{2} + 36960y^{6}z^{4} - 31680y^{4}z^{6} + 7040y^{2}z^{8} - 256z^{10}y^{2}z^{2} + 36960y^{6}z^{4} - 31680y^{4}z^{6} + 7040y^{2}z^{8} - 256z^{10}y^{2}z^{6} + 7040y^{2}z^{8} + 7040y^{2}z^{
 129
                                                                                                                                                                                                                                                                                                                               256
                     \sqrt{692835}x(6x^2-y^2-z^2)(y^4-4y^3z-6y^2z^2+4yz^3+z^4)(y^4+4y^3z-6y^2z^2-4yz^3+z^4)
 130
                         \sqrt{692835}y \left(x^2 - 6y^2 + z^2\right) \left(x^4 - 4x^3z - 6x^2z^2 + 4xz^3 + z^4\right) \left(x^4 + 4x^3z - 6x^2z^2 - 4xz^3 + z^4\right)
 131
                         \sqrt{692835}z \left(x^2 + y^2 - 6z^2\right) \left(x^4 - 4x^3y - 6x^2y^2 + 4xy^3 + y^4\right) \left(x^4 + 4x^3y - 6x^2y^2 - 4xy^3 + y^4\right)
 132
                    3\sqrt{1001}x \left(y^2 - 2yz - z^2\right) \left(y^2 + 2yz - z^2\right) \left(80x^6 - 168x^4y^2 - 168x^4z^2 + 70x^2y^4 + 140x^2y^2z^2 + 70x^2z^4 - 5y^6 - 15y^4z^2 - 15y^2z^4 - 5z^6\right)
 133
                         3\sqrt{1001}y\left(x^2 - 2xz - z^2\right)\left(x^2 + 2xz - z^2\right)\left(5x^6 - 70x^4y^2 + 15x^4z^2 + 168x^2y^4 - 140x^2y^2z^2 + 15x^2z^4 - 80y^6 + 168y^4z^2 - 70y^2z^4 + 5z^6\right)
 134
                         3\sqrt{1001}z\left(x^2-2xy-y^2\right)\left(x^2+2xy-y^2\right)\left(5x^6+15x^4y^2-70x^4z^2+15x^2y^4-140x^2y^2z^2+168x^2z^4+5y^6-70y^4z^2+168y^2z^4-80z^6\right)
 135
                     \sqrt{1939938}x(y-z)(y+z)(y^4-4y^3z-14y^2z^2-4yz^3+z^4)(y^4+4y^3z-14y^2z^2+4yz^3+z^4)
 136
                         \sqrt{1939938}y(x-z)(x+z)\left(x^{4}-4x^{3}z-14x^{2}z^{2}-4xz^{3}+z^{4}\right)\left(x^{4}+4x^{3}z-14x^{2}z^{2}+4xz^{3}+z^{4}\right)
 137
                     \sqrt{1939938}z(x-y)(x+y)(x^4-4x^3y-14x^2y^2-4xy^3+y^4)(x^4+4x^3y-14x^2y^2+4xy^3+y^4)
 138
                     \sqrt{14586}x(y-z)(y+z)(y^2-4yz+z^2)(y^2+4yz+z^2)(224x^4-160x^2y^2-160x^2z^2+15y^4+30y^2z^2+15z^4)
 139
                         \frac{\sqrt{14586}y(x-z)(x+z)\left(x^2-4xz+z^2\right)\left(x^2+4xz+z^2\right)\left(15x^4-160x^2y^2+30x^2z^2+224y^4-160y^2z^2+15z^4\right)}{512}
 140
                     \sqrt{14586}z(x-y)(x+y)\left(x^2-4xy+y^2\right)\left(x^2+4xy+y^2\right)\left(15x^4+30x^2y^2-160x^2z^2+15y^4-160y^2z^2+224z^4\right)
 141
                      \sqrt{2145}x(y-z)(y+z)\left(128x^8-768x^6y^2-768x^6z^2+1008x^4y^4+2016x^4y^2z^2+1008x^4z^4-336x^2y^6-1008x^2y^4z^2-1008x^2y^2z^4-336x^2z^6+21y^8+84y^6z^2+126y^4z^4+84y^2z^6+21z^8\right)
142
                                                                                                                                                                                                                      256
                         \sqrt{2145}y(x-z)(x+z)\left(21x^8-336x^6y^2+84x^6z^2+1008x^4y^4-1008x^4y^2z^2+126x^4z^4-768x^2y^6+2016x^2y^4z^2-1008x^2y^2z^4+84x^2z^6+128y^8-768y^6z^2+1008y^4z^4-336y^2z^6+21z^8\right)
 143
                                                                                                                                                                                                                          256
                     \sqrt{2145}z(x-y)(x+y)\left(21x^8+84x^6y^2-336x^6z^2+126x^4y^4-1008x^4y^2z^2+1008x^4z^4+84x^2y^6-1008x^2y^4z^2+2016x^2y^2z^4-768x^2z^6+21y^8-336y^6z^2+1008y^4z^4-768y^2z^6+128z^8\right)
 144
```