

Rank-73801 over GF(16)

January 15, 2021

The equation

The equation of the surface is :

$$X_1^3 + X_2^3 + X_0^2 X_3 + X_0 X_3^2 + X_0 X_1 X_2 = 0$$

(0, 1, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1, 0, 0, 0)

The point rank of the equation over GF(16) is 303108645

General information

| | |
|----------------------------|------------------------------|
| Number of lines | 9 |
| Number of points | 321 |
| Number of singular points | 0 |
| Number of Eckardt points | 4 |
| Number of double points | 6 |
| Number of single points | 129 |
| Number of points off lines | 182 |
| Number of Hesse planes | 0 |
| Number of axes | 0 |
| Type of points on lines | 17^9 |
| Type of lines on points | $3^4, 2^6, 1^{129}, 0^{182}$ |

Singular Points

The surface has 0 singular points:

The 9 Lines

The lines and their Pluecker coordinates are:

$$\begin{aligned}\ell_0 &= \left[\begin{array}{cccc} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{69921} = \left[\begin{array}{cccc} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{69921} = \mathbf{Pl}(0, 1, 0, 1, 0, 0)_{49} \\ \ell_1 &= \left[\begin{array}{cccc} 1 & 0 & 1 & \delta^5 \\ 0 & 1 & 1 & 0 \end{array} \right]_{48322} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 0 \end{array} \right]_{48322} = \mathbf{Pl}(10, 11, 1, 11, 0, 1)_{7845}\end{aligned}$$

$$\begin{aligned}
\ell_2 &= \begin{bmatrix} 1 & 0 & 1 & \delta^{10} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{43954} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{43954} = \mathbf{Pl}(11, 10, 1, 10, 0, 1)_{7621} \\
\ell_3 &= \begin{bmatrix} 0 & 1 & \delta^5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{70091} = \begin{bmatrix} 0 & 1 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{70091} = \mathbf{Pl}(0, 11, 0, 1, 0, 0)_{59} \\
\ell_4 &= \begin{bmatrix} 1 & 0 & \delta^{10} & \delta^5 \\ 0 & 1 & \delta^5 & 0 \end{bmatrix}_{50789} = \begin{bmatrix} 1 & 0 & 10 & 11 \\ 0 & 1 & 11 & 0 \end{bmatrix}_{50789} = \mathbf{Pl}(1, 1, 10, 10, 0, 1)_{7746} \\
\ell_5 &= \begin{bmatrix} 1 & 0 & \delta^{10} & \delta^{10} \\ 0 & 1 & \delta^5 & 0 \end{bmatrix}_{46421} = \begin{bmatrix} 1 & 0 & 10 & 10 \\ 0 & 1 & 11 & 0 \end{bmatrix}_{46421} = \mathbf{Pl}(10, 11, 10, 1, 0, 1)_{5730} \\
\ell_6 &= \begin{bmatrix} 0 & 1 & \delta^{10} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{70074} = \begin{bmatrix} 0 & 1 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{70074} = \mathbf{Pl}(0, 10, 0, 1, 0, 0)_{58} \\
\ell_7 &= \begin{bmatrix} 1 & 0 & \delta^5 & \delta^{10} \\ 0 & 1 & \delta^{10} & 0 \end{bmatrix}_{46693} = \begin{bmatrix} 1 & 0 & 11 & 10 \\ 0 & 1 & 10 & 0 \end{bmatrix}_{46693} = \mathbf{Pl}(1, 1, 11, 11, 0, 1)_{7986} \\
\ell_8 &= \begin{bmatrix} 1 & 0 & \delta^5 & \delta^5 \\ 0 & 1 & \delta^{10} & 0 \end{bmatrix}_{51061} = \begin{bmatrix} 1 & 0 & 11 & 11 \\ 0 & 1 & 10 & 0 \end{bmatrix}_{51061} = \mathbf{Pl}(11, 10, 11, 1, 0, 1)_{5746}
\end{aligned}$$

Rank of lines: (69921, 48322, 43954, 70091, 50789, 46421, 70074, 46693, 51061)

Rank of points on Klein quadric: (49, 7845, 7621, 59, 7746, 5730, 58, 7986, 5746)

Eckardt Points

The surface has 4 Eckardt points:

$$0 : P_3 = \mathbf{P}(0, 0, 0, 1) = \mathbf{P}(0, 0, 0, 1),$$

$$1 : P_{35} = \mathbf{P}(0, 1, 1, 0) = \mathbf{P}(0, 1, 1, 0),$$

$$2 : P_{179} = \mathbf{P}(0, \delta^{10}, 1, 0) = \mathbf{P}(0, 10, 1, 0),$$

$$3 : P_{195} = \mathbf{P}(0, \delta^5, 1, 0) = \mathbf{P}(0, 11, 1, 0).$$

Double Points

The surface has 6 Double points:

The double points on the surface are:

$$P_{715} = (10, 11, 1, 1) = \ell_1 \cap \ell_4$$

$$P_{3115} = (10, 1, 11, 1) = \ell_1 \cap \ell_8$$

$$P_{2860} = (11, 1, 10, 1) = \ell_2 \cap \ell_5$$

$$P_{700} = (11, 10, 1, 1) = \ell_2 \cap \ell_7$$

$$P_{3003} = (10, 10, 10, 1) = \ell_4 \cap \ell_8$$

$$P_{3276} = (11, 11, 11, 1) = \ell_5 \cap \ell_7$$

Single Points

The surface has 129 single points:

The single points on the surface are:

$$0 : P_{300} = (10, 1, 0, 1) \text{ lies on line } \ell_4$$

$$1 : P_{301} = (11, 1, 0, 1) \text{ lies on line } \ell_7$$

$$2 : P_{444} = (10, 10, 0, 1) \text{ lies on line } \ell_1$$

$$3 : P_{445} = (11, 10, 0, 1) \text{ lies on line } \ell_5$$

$$4 : P_{460} = (10, 11, 0, 1) \text{ lies on line } \ell_8$$

$$5 : P_{461} = (11, 11, 0, 1) \text{ lies on line } \ell_2$$

$$6 : P_{540} = (10, 0, 1, 1) \text{ lies on line } \ell_8$$

$$7 : P_{541} = (11, 0, 1, 1) \text{ lies on line } \ell_5$$

$$8 : P_{546} = (0, 1, 1, 1) \text{ lies on line } \ell_0$$

$$9 : P_{689} = (0, 10, 1, 1) \text{ lies on line } \ell_3$$

$$10 : P_{705} = (0, 11, 1, 1) \text{ lies on line } \ell_6$$

$$11 : P_{817} = (0, 2, 2, 1) \text{ lies on line } \ell_0$$

$$12 : P_{859} = (10, 4, 2, 1) \text{ lies on line } \ell_8$$

$$13 : P_{908} = (11, 7, 2, 1) \text{ lies on line } \ell_5$$

- 14 : $P_{923} = (10, 8, 2, 1)$ lies on line ℓ_1
 15 : $P_{940} = (11, 9, 2, 1)$ lies on line ℓ_2
 16 : $P_{987} = (10, 12, 2, 1)$ lies on line ℓ_4
 17 : $P_{993} = (0, 13, 2, 1)$ lies on line ℓ_3
 18 : $P_{1020} = (11, 14, 2, 1)$ lies on line ℓ_7
 19 : $P_{1025} = (0, 15, 2, 1)$ lies on line ℓ_6
 20 : $P_{1089} = (0, 3, 3, 1)$ lies on line ℓ_0
 21 : $P_{1105} = (0, 4, 3, 1)$ lies on line ℓ_6
 22 : $P_{1132} = (11, 5, 3, 1)$ lies on line ℓ_7
 23 : $P_{1147} = (10, 6, 3, 1)$ lies on line ℓ_4
 24 : $P_{1153} = (0, 7, 3, 1)$ lies on line ℓ_3
 25 : $P_{1180} = (11, 8, 3, 1)$ lies on line ℓ_2
 26 : $P_{1195} = (10, 9, 3, 1)$ lies on line ℓ_1
 27 : $P_{1260} = (11, 13, 3, 1)$ lies on line ℓ_5
 28 : $P_{1291} = (10, 15, 3, 1)$ lies on line ℓ_8
 29 : $P_{1339} = (10, 2, 4, 1)$ lies on line ℓ_4
 30 : $P_{1345} = (0, 3, 4, 1)$ lies on line ℓ_3
 31 : $P_{1361} = (0, 4, 4, 1)$ lies on line ℓ_0
 32 : $P_{1404} = (11, 6, 4, 1)$ lies on line ℓ_7
 33 : $P_{1409} = (0, 7, 4, 1)$ lies on line ℓ_6
 34 : $P_{1452} = (11, 9, 4, 1)$ lies on line ℓ_5
 35 : $P_{1499} = (10, 12, 4, 1)$ lies on line ℓ_8
 36 : $P_{1531} = (10, 14, 4, 1)$ lies on line ℓ_1
 37 : $P_{1548} = (11, 15, 4, 1)$ lies on line ℓ_2
 38 : $P_{1612} = (11, 3, 5, 1)$ lies on line ℓ_5
 39 : $P_{1633} = (0, 5, 5, 1)$ lies on line ℓ_0
 40 : $P_{1675} = (10, 7, 5, 1)$ lies on line ℓ_8
 41 : $P_{1691} = (10, 8, 5, 1)$ lies on line ℓ_4
 42 : $P_{1697} = (0, 9, 5, 1)$ lies on line ℓ_3
 43 : $P_{1745} = (0, 12, 5, 1)$ lies on line ℓ_6
 44 : $P_{1772} = (11, 13, 5, 1)$ lies on line ℓ_7
 45 : $P_{1788} = (11, 14, 5, 1)$ lies on line ℓ_2
 46 : $P_{1803} = (10, 15, 5, 1)$ lies on line ℓ_1
 47 : $P_{1867} = (10, 3, 6, 1)$ lies on line ℓ_8
 48 : $P_{1884} = (11, 4, 6, 1)$ lies on line ℓ_5
 49 : $P_{1905} = (0, 6, 6, 1)$ lies on line ℓ_0
 50 : $P_{1937} = (0, 8, 6, 1)$ lies on line ℓ_6
 51 : $P_{1964} = (11, 9, 6, 1)$ lies on line ℓ_7
 52 : $P_{2011} = (10, 12, 6, 1)$ lies on line ℓ_1
 53 : $P_{2028} = (11, 13, 6, 1)$ lies on line ℓ_2
 54 : $P_{2033} = (0, 14, 6, 1)$ lies on line ℓ_3
 55 : $P_{2059} = (10, 15, 6, 1)$ lies on line ℓ_4
 56 : $P_{2108} = (11, 2, 7, 1)$ lies on line ℓ_7
 57 : $P_{2113} = (0, 3, 7, 1)$ lies on line ℓ_6
 58 : $P_{2129} = (0, 4, 7, 1)$ lies on line ℓ_3
 59 : $P_{2155} = (10, 5, 7, 1)$ lies on line ℓ_4
 60 : $P_{2177} = (0, 7, 7, 1)$ lies on line ℓ_0
 61 : $P_{2203} = (10, 8, 7, 1)$ lies on line ℓ_8
 62 : $P_{2268} = (11, 12, 7, 1)$ lies on line ℓ_2
 63 : $P_{2283} = (10, 13, 7, 1)$ lies on line ℓ_1
 64 : $P_{2300} = (11, 14, 7, 1)$ lies on line ℓ_5
 65 : $P_{2363} = (10, 2, 8, 1)$ lies on line ℓ_1
 66 : $P_{2380} = (11, 3, 8, 1)$ lies on line ℓ_2
 67 : $P_{2411} = (10, 5, 8, 1)$ lies on line ℓ_8
 68 : $P_{2417} = (0, 6, 8, 1)$ lies on line ℓ_3
 69 : $P_{2443} = (10, 7, 8, 1)$ lies on line ℓ_4
 70 : $P_{2449} = (0, 8, 8, 1)$ lies on line ℓ_0
 71 : $P_{2524} = (11, 12, 8, 1)$ lies on line ℓ_5
 72 : $P_{2545} = (0, 14, 8, 1)$ lies on line ℓ_6
 73 : $P_{2572} = (11, 15, 8, 1)$ lies on line ℓ_7
 74 : $P_{2620} = (11, 2, 9, 1)$ lies on line ℓ_2
 75 : $P_{2635} = (10, 3, 9, 1)$ lies on line ℓ_1
 76 : $P_{2652} = (11, 4, 9, 1)$ lies on line ℓ_7
 77 : $P_{2657} = (0, 5, 9, 1)$ lies on line ℓ_6
 78 : $P_{2684} = (11, 6, 9, 1)$ lies on line ℓ_5
 79 : $P_{2721} = (0, 9, 9, 1)$ lies on line ℓ_0
 80 : $P_{2769} = (0, 12, 9, 1)$ lies on line ℓ_3
 81 : $P_{2795} = (10, 13, 9, 1)$ lies on line ℓ_4
 82 : $P_{2811} = (10, 14, 9, 1)$ lies on line ℓ_8
 83 : $P_{2843} = (10, 0, 10, 1)$ lies on line ℓ_1
 84 : $P_{2844} = (11, 0, 10, 1)$ lies on line ℓ_7
 85 : $P_{2849} = (0, 1, 10, 1)$ lies on line ℓ_6
 86 : $P_{2993} = (0, 10, 10, 1)$ lies on line ℓ_0
 87 : $P_{3009} = (0, 11, 10, 1)$ lies on line ℓ_3
 88 : $P_{3099} = (10, 0, 11, 1)$ lies on line ℓ_4
 89 : $P_{3100} = (11, 0, 11, 1)$ lies on line ℓ_2
 90 : $P_{3105} = (0, 1, 11, 1)$ lies on line ℓ_3
 91 : $P_{3249} = (0, 10, 11, 1)$ lies on line ℓ_6
 92 : $P_{3265} = (0, 11, 11, 1)$ lies on line ℓ_0
 93 : $P_{3387} = (10, 2, 12, 1)$ lies on line ℓ_8
 94 : $P_{3419} = (10, 4, 12, 1)$ lies on line ℓ_4
 95 : $P_{3425} = (0, 5, 12, 1)$ lies on line ℓ_3
 96 : $P_{3451} = (10, 6, 12, 1)$ lies on line ℓ_1
 97 : $P_{3468} = (11, 7, 12, 1)$ lies on line ℓ_2
 98 : $P_{3484} = (11, 8, 12, 1)$ lies on line ℓ_7
 99 : $P_{3489} = (0, 9, 12, 1)$ lies on line ℓ_6
 100 : $P_{3537} = (0, 12, 12, 1)$ lies on line ℓ_0
 101 : $P_{3596} = (11, 15, 12, 1)$ lies on line ℓ_5
 102 : $P_{3633} = (0, 2, 13, 1)$ lies on line ℓ_6
 103 : $P_{3660} = (11, 3, 13, 1)$ lies on line ℓ_7
 104 : $P_{3692} = (11, 5, 13, 1)$ lies on line ℓ_5
 105 : $P_{3708} = (11, 6, 13, 1)$ lies on line ℓ_2
 106 : $P_{3723} = (10, 7, 13, 1)$ lies on line ℓ_1
 107 : $P_{3755} = (10, 9, 13, 1)$ lies on line ℓ_8
 108 : $P_{3809} = (0, 13, 13, 1)$ lies on line ℓ_0
 109 : $P_{3835} = (10, 14, 13, 1)$ lies on line ℓ_4
 110 : $P_{3841} = (0, 15, 13, 1)$ lies on line ℓ_3
 111 : $P_{3900} = (11, 2, 14, 1)$ lies on line ℓ_5
 112 : $P_{3931} = (10, 4, 14, 1)$ lies on line ℓ_1
 113 : $P_{3948} = (11, 5, 14, 1)$ lies on line ℓ_2
 114 : $P_{3953} = (0, 6, 14, 1)$ lies on line ℓ_6
 115 : $P_{3980} = (11, 7, 14, 1)$ lies on line ℓ_7
 116 : $P_{3985} = (0, 8, 14, 1)$ lies on line ℓ_3
 117 : $P_{4011} = (10, 9, 14, 1)$ lies on line ℓ_4
 118 : $P_{4075} = (10, 13, 14, 1)$ lies on line ℓ_8
 119 : $P_{4081} = (0, 14, 14, 1)$ lies on line ℓ_0
 120 : $P_{4145} = (0, 2, 15, 1)$ lies on line ℓ_3
 121 : $P_{4171} = (10, 3, 15, 1)$ lies on line ℓ_4

122 : $P_{4188} = (11, 4, 15, 1)$ lies on line ℓ_2
123 : $P_{4203} = (10, 5, 15, 1)$ lies on line ℓ_1
124 : $P_{4219} = (10, 6, 15, 1)$ lies on line ℓ_8
125 : $P_{4252} = (11, 8, 15, 1)$ lies on line ℓ_5

126 : $P_{4316} = (11, 12, 15, 1)$ lies on line ℓ_7
127 : $P_{4321} = (0, 13, 15, 1)$ lies on line ℓ_6
128 : $P_{4353} = (0, 15, 15, 1)$ lies on line ℓ_0

The single points on the surface are:

Points on surface but on no line

The surface has 182 points not on any line:

The points on the surface but not on lines are:

| | |
|----------------------------------|----------------------------------|
| 0 : $P_0 = (1, 0, 0, 0)$ | 40 : $P_{1219} = (2, 11, 3, 1)$ |
| 1 : $P_{59} = (8, 2, 1, 0)$ | 41 : $P_{1224} = (7, 11, 3, 1)$ |
| 2 : $P_{80} = (13, 3, 1, 0)$ | 42 : $P_{1253} = (4, 13, 3, 1)$ |
| 3 : $P_{98} = (15, 4, 1, 0)$ | 43 : $P_{1269} = (4, 14, 3, 1)$ |
| 4 : $P_{106} = (7, 5, 1, 0)$ | 44 : $P_{1279} = (14, 14, 3, 1)$ |
| 5 : $P_{124} = (9, 6, 1, 0)$ | 45 : $P_{1284} = (3, 15, 3, 1)$ |
| 6 : $P_{133} = (2, 7, 1, 0)$ | 46 : $P_{1315} = (2, 1, 4, 1)$ |
| 7 : $P_{159} = (12, 8, 1, 0)$ | 47 : $P_{1320} = (7, 1, 4, 1)$ |
| 8 : $P_{166} = (3, 9, 1, 0)$ | 48 : $P_{1332} = (3, 2, 4, 1)$ |
| 9 : $P_{215} = (4, 12, 1, 0)$ | 49 : $P_{1358} = (13, 3, 4, 1)$ |
| 10 : $P_{241} = (14, 13, 1, 0)$ | 50 : $P_{1369} = (8, 4, 4, 1)$ |
| 11 : $P_{248} = (5, 14, 1, 0)$ | 51 : $P_{1413} = (4, 7, 4, 1)$ |
| 12 : $P_{265} = (6, 15, 1, 0)$ | 52 : $P_{1429} = (4, 8, 4, 1)$ |
| 13 : $P_{275} = (1, 0, 0, 1)$ | 53 : $P_{1439} = (14, 8, 4, 1)$ |
| 14 : $P_{574} = (13, 2, 1, 1)$ | 54 : $P_{1446} = (5, 9, 4, 1)$ |
| 15 : $P_{575} = (14, 2, 1, 1)$ | 55 : $P_{1498} = (9, 12, 4, 1)$ |
| 16 : $P_{595} = (2, 4, 1, 1)$ | 56 : $P_{1522} = (1, 14, 4, 1)$ |
| 17 : $P_{600} = (7, 4, 1, 1)$ | 57 : $P_{1541} = (4, 15, 4, 1)$ |
| 18 : $P_{677} = (4, 9, 1, 1)$ | 58 : $P_{1587} = (2, 2, 5, 1)$ |
| 19 : $P_{685} = (12, 9, 1, 1)$ | 59 : $P_{1594} = (9, 2, 5, 1)$ |
| 20 : $P_{759} = (6, 14, 1, 1)$ | 60 : $P_{1606} = (5, 3, 5, 1)$ |
| 21 : $P_{762} = (9, 14, 1, 1)$ | 61 : $P_{1642} = (9, 5, 5, 1)$ |
| 22 : $P_{814} = (13, 1, 2, 1)$ | 62 : $P_{1674} = (9, 7, 5, 1)$ |
| 23 : $P_{815} = (14, 1, 2, 1)$ | 63 : $P_{1689} = (8, 8, 5, 1)$ |
| 24 : $P_{822} = (5, 2, 2, 1)$ | 64 : $P_{1704} = (7, 9, 5, 1)$ |
| 25 : $P_{852} = (3, 4, 2, 1)$ | 65 : $P_{1717} = (4, 10, 5, 1)$ |
| 26 : $P_{867} = (2, 5, 2, 1)$ | 66 : $P_{1725} = (12, 10, 5, 1)$ |
| 27 : $P_{874} = (9, 5, 2, 1)$ | 67 : $P_{1760} = (15, 12, 5, 1)$ |
| 28 : $P_{901} = (4, 7, 2, 1)$ | 68 : $P_{1762} = (1, 13, 5, 1)$ |
| 29 : $P_{915} = (2, 8, 2, 1)$ | 69 : $P_{1791} = (14, 14, 5, 1)$ |
| 30 : $P_{930} = (1, 9, 2, 1)$ | 70 : $P_{1858} = (1, 3, 6, 1)$ |
| 31 : $P_{995} = (2, 13, 2, 1)$ | 71 : $P_{1917} = (12, 6, 6, 1)$ |
| 32 : $P_{1024} = (15, 14, 2, 1)$ | 72 : $P_{1925} = (4, 7, 6, 1)$ |
| 33 : $P_{1031} = (6, 15, 2, 1)$ | 73 : $P_{1935} = (14, 7, 6, 1)$ |
| 34 : $P_{1093} = (4, 3, 3, 1)$ | 74 : $P_{1940} = (3, 8, 6, 1)$ |
| 35 : $P_{1118} = (13, 4, 3, 1)$ | 75 : $P_{1967} = (14, 9, 6, 1)$ |
| 36 : $P_{1126} = (5, 5, 3, 1)$ | 76 : $P_{1975} = (6, 10, 6, 1)$ |
| 37 : $P_{1138} = (1, 6, 3, 1)$ | 77 : $P_{1978} = (9, 10, 6, 1)$ |
| 38 : $P_{1161} = (8, 7, 3, 1)$ | 78 : $P_{2009} = (8, 12, 6, 1)$ |
| 39 : $P_{1194} = (9, 9, 3, 1)$ | 79 : $P_{2032} = (15, 13, 6, 1)$ |

| | |
|------------------------------------|------------------------------------|
| 80 : $P_{2047} = (14, 14, 6, 1)$ | 132 : $P_{3310} = (13, 13, 11, 1)$ |
| 81 : $P_{2051} = (2, 15, 6, 1)$ | 133 : $P_{3311} = (14, 13, 11, 1)$ |
| 82 : $P_{2101} = (4, 2, 7, 1)$ | 134 : $P_{3418} = (9, 4, 12, 1)$ |
| 83 : $P_{2121} = (8, 3, 7, 1)$ | 135 : $P_{3440} = (15, 5, 12, 1)$ |
| 84 : $P_{2133} = (4, 4, 7, 1)$ | 136 : $P_{3449} = (8, 6, 12, 1)$ |
| 85 : $P_{2154} = (9, 5, 7, 1)$ | 137 : $P_{3462} = (5, 7, 12, 1)$ |
| 86 : $P_{2165} = (4, 6, 7, 1)$ | 138 : $P_{3487} = (14, 8, 12, 1)$ |
| 87 : $P_{2175} = (14, 6, 7, 1)$ | 139 : $P_{3498} = (9, 9, 12, 1)$ |
| 88 : $P_{2190} = (13, 7, 7, 1)$ | 140 : $P_{3525} = (4, 11, 12, 1)$ |
| 89 : $P_{2194} = (1, 8, 7, 1)$ | 141 : $P_{3533} = (12, 11, 12, 1)$ |
| 90 : $P_{2227} = (2, 10, 7, 1)$ | 142 : $P_{3544} = (7, 12, 12, 1)$ |
| 91 : $P_{2232} = (7, 10, 7, 1)$ | 143 : $P_{3555} = (2, 13, 12, 1)$ |
| 92 : $P_{2262} = (5, 12, 7, 1)$ | 144 : $P_{3562} = (9, 13, 12, 1)$ |
| 93 : $P_{2276} = (3, 13, 7, 1)$ | 145 : $P_{3586} = (1, 15, 12, 1)$ |
| 94 : $P_{2355} = (2, 2, 8, 1)$ | 146 : $P_{3635} = (2, 2, 13, 1)$ |
| 95 : $P_{2389} = (4, 4, 8, 1)$ | 147 : $P_{3653} = (4, 3, 13, 1)$ |
| 96 : $P_{2399} = (14, 4, 8, 1)$ | 148 : $P_{3682} = (1, 5, 13, 1)$ |
| 97 : $P_{2409} = (8, 5, 8, 1)$ | 149 : $P_{3712} = (15, 6, 13, 1)$ |
| 98 : $P_{2420} = (3, 6, 8, 1)$ | 150 : $P_{3716} = (3, 7, 13, 1)$ |
| 99 : $P_{2434} = (1, 7, 8, 1)$ | 151 : $P_{3790} = (13, 11, 13, 1)$ |
| 100 : $P_{2463} = (14, 8, 8, 1)$ | 152 : $P_{3791} = (14, 11, 13, 1)$ |
| 101 : $P_{2503} = (6, 11, 8, 1)$ | 153 : $P_{3795} = (2, 12, 13, 1)$ |
| 102 : $P_{2506} = (9, 11, 8, 1)$ | 154 : $P_{3802} = (9, 12, 13, 1)$ |
| 103 : $P_{2527} = (14, 12, 8, 1)$ | 155 : $P_{3815} = (6, 13, 13, 1)$ |
| 104 : $P_{2557} = (12, 14, 8, 1)$ | 156 : $P_{3827} = (2, 14, 13, 1)$ |
| 105 : $P_{2576} = (15, 15, 8, 1)$ | 157 : $P_{3846} = (5, 15, 13, 1)$ |
| 106 : $P_{2597} = (4, 1, 9, 1)$ | 158 : $P_{3879} = (6, 1, 14, 1)$ |
| 107 : $P_{2605} = (12, 1, 9, 1)$ | 159 : $P_{3882} = (9, 1, 14, 1)$ |
| 108 : $P_{2610} = (1, 2, 9, 1)$ | 160 : $P_{3904} = (15, 2, 14, 1)$ |
| 109 : $P_{2634} = (9, 3, 9, 1)$ | 161 : $P_{3909} = (4, 3, 14, 1)$ |
| 110 : $P_{2646} = (5, 4, 9, 1)$ | 162 : $P_{3919} = (14, 3, 14, 1)$ |
| 111 : $P_{2664} = (7, 5, 9, 1)$ | 163 : $P_{3922} = (1, 4, 14, 1)$ |
| 112 : $P_{2687} = (14, 6, 9, 1)$ | 164 : $P_{3951} = (14, 5, 14, 1)$ |
| 113 : $P_{2736} = (15, 9, 9, 1)$ | 165 : $P_{3967} = (14, 6, 14, 1)$ |
| 114 : $P_{2778} = (9, 12, 9, 1)$ | 166 : $P_{3997} = (12, 8, 14, 1)$ |
| 115 : $P_{2809} = (8, 14, 9, 1)$ | 167 : $P_{4009} = (8, 9, 14, 1)$ |
| 116 : $P_{2819} = (2, 15, 9, 1)$ | 168 : $P_{4067} = (2, 13, 14, 1)$ |
| 117 : $P_{2826} = (9, 15, 9, 1)$ | 169 : $P_{4084} = (3, 14, 14, 1)$ |
| 118 : $P_{2917} = (4, 5, 10, 1)$ | 170 : $P_{4151} = (6, 2, 15, 1)$ |
| 119 : $P_{2925} = (12, 5, 10, 1)$ | 171 : $P_{4164} = (3, 3, 15, 1)$ |
| 120 : $P_{2935} = (6, 6, 10, 1)$ | 172 : $P_{4181} = (4, 4, 15, 1)$ |
| 121 : $P_{2938} = (9, 6, 10, 1)$ | 173 : $P_{4211} = (2, 6, 15, 1)$ |
| 122 : $P_{2947} = (2, 7, 10, 1)$ | 174 : $P_{4256} = (15, 8, 15, 1)$ |
| 123 : $P_{2952} = (7, 7, 10, 1)$ | 175 : $P_{4259} = (2, 9, 15, 1)$ |
| 124 : $P_{3086} = (13, 15, 10, 1)$ | 176 : $P_{4266} = (9, 9, 15, 1)$ |
| 125 : $P_{3087} = (14, 15, 10, 1)$ | 177 : $P_{4286} = (13, 10, 15, 1)$ |
| 126 : $P_{3139} = (2, 3, 11, 1)$ | 178 : $P_{4287} = (14, 10, 15, 1)$ |
| 127 : $P_{3144} = (7, 3, 11, 1)$ | 179 : $P_{4306} = (1, 12, 15, 1)$ |
| 128 : $P_{3223} = (6, 8, 11, 1)$ | 180 : $P_{4326} = (5, 13, 15, 1)$ |
| 129 : $P_{3226} = (9, 8, 11, 1)$ | 181 : $P_{4355} = (2, 15, 15, 1)$ |
| 130 : $P_{3285} = (4, 12, 11, 1)$ | |
| 131 : $P_{3293} = (12, 12, 11, 1)$ | |

Line Intersection Graph

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 2 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 3 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 4 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| 5 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| 6 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 7 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 8 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |

Neighbor sets in the line intersection graph:

Line 0 intersects

| Line | ℓ_1 | ℓ_2 | ℓ_3 | ℓ_6 |
|----------|----------|----------|----------|----------|
| in point | P_{35} | P_{35} | P_3 | P_3 |

Line 1 intersects

| Line | ℓ_0 | ℓ_2 | ℓ_4 | ℓ_8 |
|----------|----------|----------|-----------|------------|
| in point | P_{35} | P_{35} | P_{715} | P_{3115} |

Line 2 intersects

| Line | ℓ_0 | ℓ_1 | ℓ_5 | ℓ_7 |
|----------|----------|----------|------------|-----------|
| in point | P_{35} | P_{35} | P_{2860} | P_{700} |

Line 3 intersects

| Line | ℓ_0 | ℓ_4 | ℓ_5 | ℓ_6 |
|----------|----------|-----------|-----------|----------|
| in point | P_3 | P_{179} | P_{179} | P_3 |

Line 4 intersects

| Line | ℓ_1 | ℓ_3 | ℓ_5 | ℓ_8 |
|----------|-----------|-----------|-----------|------------|
| in point | P_{715} | P_{179} | P_{179} | P_{3003} |

Line 5 intersects

| Line | ℓ_2 | ℓ_3 | ℓ_4 | ℓ_7 |
|----------|------------|-----------|-----------|------------|
| in point | P_{2860} | P_{179} | P_{179} | P_{3276} |

Line 6 intersects

| Line | ℓ_0 | ℓ_3 | ℓ_7 | ℓ_8 |
|----------|----------|----------|-----------|-----------|
| in point | P_3 | P_3 | P_{195} | P_{195} |

Line 7 intersects

| Line | ℓ_2 | ℓ_5 | ℓ_6 | ℓ_8 |
|----------|-----------|------------|-----------|-----------|
| in point | P_{700} | P_{3276} | P_{195} | P_{195} |

Line 8 intersects

| Line | ℓ_1 | ℓ_4 | ℓ_6 | ℓ_7 |
|----------|------------|------------|-----------|-----------|
| in point | P_{3115} | P_{3003} | P_{195} | P_{195} |

The surface has 321 points:

The points on the surface are:

| | | |
|------------------------------|--------------------------------|---------------------------------|
| 0 : $P_0 = (1, 0, 0, 0)$ | 7 : $P_{124} = (9, 6, 1, 0)$ | 14 : $P_{241} = (14, 13, 1, 0)$ |
| 1 : $P_3 = (0, 0, 0, 1)$ | 8 : $P_{133} = (2, 7, 1, 0)$ | 15 : $P_{248} = (5, 14, 1, 0)$ |
| 2 : $P_{35} = (0, 1, 1, 0)$ | 9 : $P_{159} = (12, 8, 1, 0)$ | 16 : $P_{265} = (6, 15, 1, 0)$ |
| 3 : $P_{59} = (8, 2, 1, 0)$ | 10 : $P_{166} = (3, 9, 1, 0)$ | 17 : $P_{275} = (1, 0, 0, 1)$ |
| 4 : $P_{80} = (13, 3, 1, 0)$ | 11 : $P_{179} = (0, 10, 1, 0)$ | 18 : $P_{300} = (10, 1, 0, 1)$ |
| 5 : $P_{98} = (15, 4, 1, 0)$ | 12 : $P_{195} = (0, 11, 1, 0)$ | 19 : $P_{301} = (11, 1, 0, 1)$ |
| 6 : $P_{106} = (7, 5, 1, 0)$ | 13 : $P_{215} = (4, 12, 1, 0)$ | 20 : $P_{444} = (10, 10, 0, 1)$ |

| | | |
|----------------------------------|-----------------------------------|-----------------------------------|
| 21 : $P_{445} = (11, 10, 0, 1)$ | 75 : $P_{1253} = (4, 13, 3, 1)$ | 129 : $P_{1935} = (14, 7, 6, 1)$ |
| 22 : $P_{460} = (10, 11, 0, 1)$ | 76 : $P_{1260} = (11, 13, 3, 1)$ | 130 : $P_{1937} = (0, 8, 6, 1)$ |
| 23 : $P_{461} = (11, 11, 0, 1)$ | 77 : $P_{1269} = (4, 14, 3, 1)$ | 131 : $P_{1940} = (3, 8, 6, 1)$ |
| 24 : $P_{540} = (10, 0, 1, 1)$ | 78 : $P_{1279} = (14, 14, 3, 1)$ | 132 : $P_{1964} = (11, 9, 6, 1)$ |
| 25 : $P_{541} = (11, 0, 1, 1)$ | 79 : $P_{1284} = (3, 15, 3, 1)$ | 133 : $P_{1967} = (14, 9, 6, 1)$ |
| 26 : $P_{546} = (0, 1, 1, 1)$ | 80 : $P_{1291} = (10, 15, 3, 1)$ | 134 : $P_{1975} = (6, 10, 6, 1)$ |
| 27 : $P_{574} = (13, 2, 1, 1)$ | 81 : $P_{1315} = (2, 1, 4, 1)$ | 135 : $P_{1978} = (9, 10, 6, 1)$ |
| 28 : $P_{575} = (14, 2, 1, 1)$ | 82 : $P_{1320} = (7, 1, 4, 1)$ | 136 : $P_{2009} = (8, 12, 6, 1)$ |
| 29 : $P_{595} = (2, 4, 1, 1)$ | 83 : $P_{1332} = (3, 2, 4, 1)$ | 137 : $P_{2011} = (10, 12, 6, 1)$ |
| 30 : $P_{600} = (7, 4, 1, 1)$ | 84 : $P_{1339} = (10, 2, 4, 1)$ | 138 : $P_{2028} = (11, 13, 6, 1)$ |
| 31 : $P_{677} = (4, 9, 1, 1)$ | 85 : $P_{1345} = (0, 3, 4, 1)$ | 139 : $P_{2032} = (15, 13, 6, 1)$ |
| 32 : $P_{685} = (12, 9, 1, 1)$ | 86 : $P_{1358} = (13, 3, 4, 1)$ | 140 : $P_{2033} = (0, 14, 6, 1)$ |
| 33 : $P_{689} = (0, 10, 1, 1)$ | 87 : $P_{1361} = (0, 4, 4, 1)$ | 141 : $P_{2047} = (14, 14, 6, 1)$ |
| 34 : $P_{700} = (11, 10, 1, 1)$ | 88 : $P_{1369} = (8, 4, 4, 1)$ | 142 : $P_{2051} = (2, 15, 6, 1)$ |
| 35 : $P_{705} = (0, 11, 1, 1)$ | 89 : $P_{1404} = (11, 6, 4, 1)$ | 143 : $P_{2059} = (10, 15, 6, 1)$ |
| 36 : $P_{715} = (10, 11, 1, 1)$ | 90 : $P_{1409} = (0, 7, 4, 1)$ | 144 : $P_{2101} = (4, 2, 7, 1)$ |
| 37 : $P_{759} = (6, 14, 1, 1)$ | 91 : $P_{1413} = (4, 7, 4, 1)$ | 145 : $P_{2108} = (11, 2, 7, 1)$ |
| 38 : $P_{762} = (9, 14, 1, 1)$ | 92 : $P_{1429} = (4, 8, 4, 1)$ | 146 : $P_{2113} = (0, 3, 7, 1)$ |
| 39 : $P_{814} = (13, 1, 2, 1)$ | 93 : $P_{1439} = (14, 8, 4, 1)$ | 147 : $P_{2121} = (8, 3, 7, 1)$ |
| 40 : $P_{815} = (14, 1, 2, 1)$ | 94 : $P_{1446} = (5, 9, 4, 1)$ | 148 : $P_{2129} = (0, 4, 7, 1)$ |
| 41 : $P_{817} = (0, 2, 2, 1)$ | 95 : $P_{1452} = (11, 9, 4, 1)$ | 149 : $P_{2133} = (4, 4, 7, 1)$ |
| 42 : $P_{822} = (5, 2, 2, 1)$ | 96 : $P_{1498} = (9, 12, 4, 1)$ | 150 : $P_{2154} = (9, 5, 7, 1)$ |
| 43 : $P_{852} = (3, 4, 2, 1)$ | 97 : $P_{1499} = (10, 12, 4, 1)$ | 151 : $P_{2155} = (10, 5, 7, 1)$ |
| 44 : $P_{859} = (10, 4, 2, 1)$ | 98 : $P_{1522} = (1, 14, 4, 1)$ | 152 : $P_{2165} = (4, 6, 7, 1)$ |
| 45 : $P_{867} = (2, 5, 2, 1)$ | 99 : $P_{1531} = (10, 14, 4, 1)$ | 153 : $P_{2175} = (14, 6, 7, 1)$ |
| 46 : $P_{874} = (9, 5, 2, 1)$ | 100 : $P_{1541} = (4, 15, 4, 1)$ | 154 : $P_{2177} = (0, 7, 7, 1)$ |
| 47 : $P_{901} = (4, 7, 2, 1)$ | 101 : $P_{1548} = (11, 15, 4, 1)$ | 155 : $P_{2190} = (13, 7, 7, 1)$ |
| 48 : $P_{908} = (11, 7, 2, 1)$ | 102 : $P_{1587} = (2, 2, 5, 1)$ | 156 : $P_{2194} = (1, 8, 7, 1)$ |
| 49 : $P_{915} = (2, 8, 2, 1)$ | 103 : $P_{1594} = (9, 2, 5, 1)$ | 157 : $P_{2203} = (10, 8, 7, 1)$ |
| 50 : $P_{923} = (10, 8, 2, 1)$ | 104 : $P_{1606} = (5, 3, 5, 1)$ | 158 : $P_{2227} = (2, 10, 7, 1)$ |
| 51 : $P_{930} = (1, 9, 2, 1)$ | 105 : $P_{1612} = (11, 3, 5, 1)$ | 159 : $P_{2232} = (7, 10, 7, 1)$ |
| 52 : $P_{940} = (11, 9, 2, 1)$ | 106 : $P_{1633} = (0, 5, 5, 1)$ | 160 : $P_{2262} = (5, 12, 7, 1)$ |
| 53 : $P_{987} = (10, 12, 2, 1)$ | 107 : $P_{1642} = (9, 5, 5, 1)$ | 161 : $P_{2268} = (11, 12, 7, 1)$ |
| 54 : $P_{993} = (0, 13, 2, 1)$ | 108 : $P_{1674} = (9, 7, 5, 1)$ | 162 : $P_{2276} = (3, 13, 7, 1)$ |
| 55 : $P_{995} = (2, 13, 2, 1)$ | 109 : $P_{1675} = (10, 7, 5, 1)$ | 163 : $P_{2283} = (10, 13, 7, 1)$ |
| 56 : $P_{1020} = (11, 14, 2, 1)$ | 110 : $P_{1689} = (8, 8, 5, 1)$ | 164 : $P_{2300} = (11, 14, 7, 1)$ |
| 57 : $P_{1024} = (15, 14, 2, 1)$ | 111 : $P_{1691} = (10, 8, 5, 1)$ | 165 : $P_{2355} = (2, 2, 8, 1)$ |
| 58 : $P_{1025} = (0, 15, 2, 1)$ | 112 : $P_{1697} = (0, 9, 5, 1)$ | 166 : $P_{2363} = (10, 2, 8, 1)$ |
| 59 : $P_{1031} = (6, 15, 2, 1)$ | 113 : $P_{1704} = (7, 9, 5, 1)$ | 167 : $P_{2380} = (11, 3, 8, 1)$ |
| 60 : $P_{1089} = (0, 3, 3, 1)$ | 114 : $P_{1717} = (4, 10, 5, 1)$ | 168 : $P_{2389} = (4, 4, 8, 1)$ |
| 61 : $P_{1093} = (4, 3, 3, 1)$ | 115 : $P_{1725} = (12, 10, 5, 1)$ | 169 : $P_{2399} = (14, 4, 8, 1)$ |
| 62 : $P_{1105} = (0, 4, 3, 1)$ | 116 : $P_{1745} = (0, 12, 5, 1)$ | 170 : $P_{2409} = (8, 5, 8, 1)$ |
| 63 : $P_{1118} = (13, 4, 3, 1)$ | 117 : $P_{1760} = (15, 12, 5, 1)$ | 171 : $P_{2411} = (10, 5, 8, 1)$ |
| 64 : $P_{1126} = (5, 5, 3, 1)$ | 118 : $P_{1762} = (1, 13, 5, 1)$ | 172 : $P_{2417} = (0, 6, 8, 1)$ |
| 65 : $P_{1132} = (11, 5, 3, 1)$ | 119 : $P_{1772} = (11, 13, 5, 1)$ | 173 : $P_{2420} = (3, 6, 8, 1)$ |
| 66 : $P_{1138} = (1, 6, 3, 1)$ | 120 : $P_{1788} = (11, 14, 5, 1)$ | 174 : $P_{2434} = (1, 7, 8, 1)$ |
| 67 : $P_{1147} = (10, 6, 3, 1)$ | 121 : $P_{1791} = (14, 14, 5, 1)$ | 175 : $P_{2443} = (10, 7, 8, 1)$ |
| 68 : $P_{1153} = (0, 7, 3, 1)$ | 122 : $P_{1803} = (10, 15, 5, 1)$ | 176 : $P_{2449} = (0, 8, 8, 1)$ |
| 69 : $P_{1161} = (8, 7, 3, 1)$ | 123 : $P_{1858} = (1, 3, 6, 1)$ | 177 : $P_{2463} = (14, 8, 8, 1)$ |
| 70 : $P_{1180} = (11, 8, 3, 1)$ | 124 : $P_{1867} = (10, 3, 6, 1)$ | 178 : $P_{2503} = (6, 11, 8, 1)$ |
| 71 : $P_{1194} = (9, 9, 3, 1)$ | 125 : $P_{1884} = (11, 4, 6, 1)$ | 179 : $P_{2506} = (9, 11, 8, 1)$ |
| 72 : $P_{1195} = (10, 9, 3, 1)$ | 126 : $P_{1905} = (0, 6, 6, 1)$ | 180 : $P_{2524} = (11, 12, 8, 1)$ |
| 73 : $P_{1219} = (2, 11, 3, 1)$ | 127 : $P_{1917} = (12, 6, 6, 1)$ | 181 : $P_{2527} = (14, 12, 8, 1)$ |
| 74 : $P_{1224} = (7, 11, 3, 1)$ | 128 : $P_{1925} = (4, 7, 6, 1)$ | 182 : $P_{2545} = (0, 14, 8, 1)$ |

| | | |
|------------------------------------|------------------------------------|------------------------------------|
| 183 : $P_{2557} = (12, 14, 8, 1)$ | 230 : $P_{3249} = (0, 10, 11, 1)$ | 277 : $P_{3841} = (0, 15, 13, 1)$ |
| 184 : $P_{2572} = (11, 15, 8, 1)$ | 231 : $P_{3265} = (0, 11, 11, 1)$ | 278 : $P_{3846} = (5, 15, 13, 1)$ |
| 185 : $P_{2576} = (15, 15, 8, 1)$ | 232 : $P_{3276} = (11, 11, 11, 1)$ | 279 : $P_{3879} = (6, 1, 14, 1)$ |
| 186 : $P_{2597} = (4, 1, 9, 1)$ | 233 : $P_{3285} = (4, 12, 11, 1)$ | 280 : $P_{3882} = (9, 1, 14, 1)$ |
| 187 : $P_{2605} = (12, 1, 9, 1)$ | 234 : $P_{3293} = (12, 12, 11, 1)$ | 281 : $P_{3900} = (11, 2, 14, 1)$ |
| 188 : $P_{2610} = (1, 2, 9, 1)$ | 235 : $P_{3310} = (13, 13, 11, 1)$ | 282 : $P_{3904} = (15, 2, 14, 1)$ |
| 189 : $P_{2620} = (11, 2, 9, 1)$ | 236 : $P_{3311} = (14, 13, 11, 1)$ | 283 : $P_{3909} = (4, 3, 14, 1)$ |
| 190 : $P_{2634} = (9, 3, 9, 1)$ | 237 : $P_{3387} = (10, 2, 12, 1)$ | 284 : $P_{3919} = (14, 3, 14, 1)$ |
| 191 : $P_{2635} = (10, 3, 9, 1)$ | 238 : $P_{3418} = (9, 4, 12, 1)$ | 285 : $P_{3922} = (1, 4, 14, 1)$ |
| 192 : $P_{2646} = (5, 4, 9, 1)$ | 239 : $P_{3419} = (10, 4, 12, 1)$ | 286 : $P_{3931} = (10, 4, 14, 1)$ |
| 193 : $P_{2652} = (11, 4, 9, 1)$ | 240 : $P_{3425} = (0, 5, 12, 1)$ | 287 : $P_{3948} = (11, 5, 14, 1)$ |
| 194 : $P_{2657} = (0, 5, 9, 1)$ | 241 : $P_{3440} = (15, 5, 12, 1)$ | 288 : $P_{3951} = (14, 5, 14, 1)$ |
| 195 : $P_{2664} = (7, 5, 9, 1)$ | 242 : $P_{3449} = (8, 6, 12, 1)$ | 289 : $P_{3953} = (0, 6, 14, 1)$ |
| 196 : $P_{2684} = (11, 6, 9, 1)$ | 243 : $P_{3451} = (10, 6, 12, 1)$ | 290 : $P_{3967} = (14, 6, 14, 1)$ |
| 197 : $P_{2687} = (14, 6, 9, 1)$ | 244 : $P_{3462} = (5, 7, 12, 1)$ | 291 : $P_{3980} = (11, 7, 14, 1)$ |
| 198 : $P_{2721} = (0, 9, 9, 1)$ | 245 : $P_{3468} = (11, 7, 12, 1)$ | 292 : $P_{3985} = (0, 8, 14, 1)$ |
| 199 : $P_{2736} = (15, 9, 9, 1)$ | 246 : $P_{3484} = (11, 8, 12, 1)$ | 293 : $P_{3997} = (12, 8, 14, 1)$ |
| 200 : $P_{2769} = (0, 12, 9, 1)$ | 247 : $P_{3487} = (14, 8, 12, 1)$ | 294 : $P_{4009} = (8, 9, 14, 1)$ |
| 201 : $P_{2778} = (9, 12, 9, 1)$ | 248 : $P_{3489} = (0, 9, 12, 1)$ | 295 : $P_{4011} = (10, 9, 14, 1)$ |
| 202 : $P_{2795} = (10, 13, 9, 1)$ | 249 : $P_{3498} = (9, 9, 12, 1)$ | 296 : $P_{4067} = (2, 13, 14, 1)$ |
| 203 : $P_{2809} = (8, 14, 9, 1)$ | 250 : $P_{3525} = (4, 11, 12, 1)$ | 297 : $P_{4075} = (10, 13, 14, 1)$ |
| 204 : $P_{2811} = (10, 14, 9, 1)$ | 251 : $P_{3533} = (12, 11, 12, 1)$ | 298 : $P_{4081} = (0, 14, 14, 1)$ |
| 205 : $P_{2819} = (2, 15, 9, 1)$ | 252 : $P_{3537} = (0, 12, 12, 1)$ | 299 : $P_{4084} = (3, 14, 14, 1)$ |
| 206 : $P_{2826} = (9, 15, 9, 1)$ | 253 : $P_{3544} = (7, 12, 12, 1)$ | 300 : $P_{4145} = (0, 2, 15, 1)$ |
| 207 : $P_{2843} = (10, 0, 10, 1)$ | 254 : $P_{3555} = (2, 13, 12, 1)$ | 301 : $P_{4151} = (6, 2, 15, 1)$ |
| 208 : $P_{2844} = (11, 0, 10, 1)$ | 255 : $P_{3562} = (9, 13, 12, 1)$ | 302 : $P_{4164} = (3, 3, 15, 1)$ |
| 209 : $P_{2849} = (0, 1, 10, 1)$ | 256 : $P_{3586} = (1, 15, 12, 1)$ | 303 : $P_{4171} = (10, 3, 15, 1)$ |
| 210 : $P_{2860} = (11, 1, 10, 1)$ | 257 : $P_{3596} = (11, 15, 12, 1)$ | 304 : $P_{4181} = (4, 4, 15, 1)$ |
| 211 : $P_{2917} = (4, 5, 10, 1)$ | 258 : $P_{3633} = (0, 2, 13, 1)$ | 305 : $P_{4188} = (11, 4, 15, 1)$ |
| 212 : $P_{2925} = (12, 5, 10, 1)$ | 259 : $P_{3635} = (2, 2, 13, 1)$ | 306 : $P_{4203} = (10, 5, 15, 1)$ |
| 213 : $P_{2935} = (6, 6, 10, 1)$ | 260 : $P_{3653} = (4, 3, 13, 1)$ | 307 : $P_{4211} = (2, 6, 15, 1)$ |
| 214 : $P_{2938} = (9, 6, 10, 1)$ | 261 : $P_{3660} = (11, 3, 13, 1)$ | 308 : $P_{4219} = (10, 6, 15, 1)$ |
| 215 : $P_{2947} = (2, 7, 10, 1)$ | 262 : $P_{3682} = (1, 5, 13, 1)$ | 309 : $P_{4252} = (11, 8, 15, 1)$ |
| 216 : $P_{2952} = (7, 7, 10, 1)$ | 263 : $P_{3692} = (11, 5, 13, 1)$ | 310 : $P_{4256} = (15, 8, 15, 1)$ |
| 217 : $P_{2993} = (0, 10, 10, 1)$ | 264 : $P_{3708} = (11, 6, 13, 1)$ | 311 : $P_{4259} = (2, 9, 15, 1)$ |
| 218 : $P_{3003} = (10, 10, 10, 1)$ | 265 : $P_{3712} = (15, 6, 13, 1)$ | 312 : $P_{4266} = (9, 9, 15, 1)$ |
| 219 : $P_{3009} = (0, 11, 10, 1)$ | 266 : $P_{3716} = (3, 7, 13, 1)$ | 313 : $P_{4286} = (13, 10, 15, 1)$ |
| 220 : $P_{3086} = (13, 15, 10, 1)$ | 267 : $P_{3723} = (10, 7, 13, 1)$ | 314 : $P_{4287} = (14, 10, 15, 1)$ |
| 221 : $P_{3087} = (14, 15, 10, 1)$ | 268 : $P_{3755} = (10, 9, 13, 1)$ | 315 : $P_{4306} = (1, 12, 15, 1)$ |
| 222 : $P_{3099} = (10, 0, 11, 1)$ | 269 : $P_{3790} = (13, 11, 13, 1)$ | 316 : $P_{4316} = (11, 12, 15, 1)$ |
| 223 : $P_{3100} = (11, 0, 11, 1)$ | 270 : $P_{3791} = (14, 11, 13, 1)$ | 317 : $P_{4321} = (0, 13, 15, 1)$ |
| 224 : $P_{3105} = (0, 1, 11, 1)$ | 271 : $P_{3795} = (2, 12, 13, 1)$ | 318 : $P_{4326} = (5, 13, 15, 1)$ |
| 225 : $P_{3115} = (10, 1, 11, 1)$ | 272 : $P_{3802} = (9, 12, 13, 1)$ | 319 : $P_{4353} = (0, 15, 15, 1)$ |
| 226 : $P_{3139} = (2, 3, 11, 1)$ | 273 : $P_{3809} = (0, 13, 13, 1)$ | 320 : $P_{4355} = (2, 15, 15, 1)$ |
| 227 : $P_{3144} = (7, 3, 11, 1)$ | 274 : $P_{3815} = (6, 13, 13, 1)$ | |
| 228 : $P_{3223} = (6, 8, 11, 1)$ | 275 : $P_{3827} = (2, 14, 13, 1)$ | |
| 229 : $P_{3226} = (9, 8, 11, 1)$ | 276 : $P_{3835} = (10, 14, 13, 1)$ | |