Rank-65618 over GF(16)

January 15, 2021

The equation

The equation of the surface is :

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

(1, 1, 1, 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(16) is 303112742

General information

Number of lines	12
Number of points	321
Number of singular points	3
Number of Eckardt points	0
Number of double points	18
Number of single points	156
Number of points off lines	144
Number of Hesse planes	0
Number of axes	0
Type of points on lines	17^{12}
Type of lines on points	4^3, 2^{18}, 1^{156}, 0^{144}

Singular Points

The surface has 3 singular points:

$0: \ P_4 = \mathbf{P}(1,1,1,1) = \mathbf{P}(1,1,1,1)$
$1: \ P_{3010} = \mathbf{P}(1,\delta^5,\delta^{10},1) = \mathbf{P}(1,11,10,1)$
$2: \ P_{3250} = \mathbf{P}(1,\delta^{10},\delta^5,1) = \mathbf{P}(1,10,11,1)$

The 12 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{274} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{274} = \mathbf{Pl}(1,0,1,0,0,1)_{4657}$$

$$\ell_1 = \begin{bmatrix} 1 & 0 & \delta^{10} & 0 \\ 0 & 1 & \delta^5 & 0 \end{bmatrix}_{2741} = \begin{bmatrix} 1 & 0 & 10 & 0 \\ 0 & 1 & 11 & 0 \end{bmatrix}_{2741} = \mathbf{Pl}(11,0,10,0,0,1)_{4946}$$

$$\ell_2 = \begin{bmatrix} 1 & 0 & \delta^5 & 0 \\ 0 & 1 & \delta^{10} & 0 \end{bmatrix}_{3013} = \begin{bmatrix} 1 & 0 & 11 & 0 \\ 0 & 1 & 10 & 0 \end{bmatrix}_{3013} = \mathbf{Pl}(10,0,11,0,0,1)_{4976}$$

$$\ell_3 = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{530} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{530} = \mathbf{Pl}(0,0,1,1,1,1)_{9426}$$

$$\ell_4 = \begin{bmatrix} 1 & \delta^5 & 0 & 0 \\ 0 & 0 & 1 & \delta^5 \end{bmatrix}_{3270} = \begin{bmatrix} 1 & 11 & 0 & 0 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{3270} = \mathbf{Pl}(0,0,10,11,1,1)_{9705}$$

$$\ell_5 = \begin{bmatrix} 1 & \delta^{10} & 0 & 0 \\ 0 & 0 & 1 & \delta^{10} \end{bmatrix}_{2996} = \begin{bmatrix} 1 & 10 & 0 & 0 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{2996} = \mathbf{Pl}(0,0,11,10,1,1)_{9736}$$

$$\ell_6 = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{289} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{289} = \mathbf{Pl}(1,1,0,0,1,1)_{8961}$$

$$\ell_7 = \begin{bmatrix} 1 & 0 & \delta^5 & 0 \\ 0 & 1 & 0 & \delta^5 \end{bmatrix}_{3179} = \begin{bmatrix} 1 & 0 & 11 & 0 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{3179} = \mathbf{Pl}(10,11,0,0,1,1)_{8970}$$

$$\ell_8 = \begin{bmatrix} 1 & 0 & \delta^{10} & 0 \\ 0 & 1 & 0 & \delta^{10} \end{bmatrix}_{2890} = \begin{bmatrix} 1 & 0 & 10 & 0 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{2890} = \mathbf{Pl}(11,10,0,0,1,1)_{8971}$$

$$\ell_9 = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{4642} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{4642} = \mathbf{Pl}(1,1,1,1,0,1)_{5586}$$

$$\ell_{10} = \begin{bmatrix} 1 & 0 & \delta^{10} & 1 \\ 0 & 1 & \delta^5 & 0 \end{bmatrix}_{7109} = \begin{bmatrix} 1 & 0 & 10 & 1 \\ 0 & 1 & 11 & 0 \end{bmatrix}_{7109} = \mathbf{Pl}(11,10,10,11,0,1)_{7981}$$

$$\ell_{11} = \begin{bmatrix} 1 & 0 & \delta^5 & 1 \\ 0 & 1 & \delta^{10} & 0 \end{bmatrix}_{7381} = \begin{bmatrix} 1 & 0 & 11 & 1 \\ 0 & 1 & 10 & 0 \end{bmatrix}_{7381} = \mathbf{Pl}(10,11,11,10,0,1)_{7770}$$

Rank of lines: (274, 2741, 3013, 530, 3270, 2996, 289, 3179, 2890, 4642, 7109, 7381)
Rank of points on Klein quadric: (4657, 4946, 4976, 9426, 9705, 9736, 8961, 8970, 8971, 5586, 7981, 7770)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

The surface has 18 Double points:
The double points on the surface are:

$P_{205} = (10,11,1,0) = \ell_0 \cap \ell_1$
$P_{190} = (11,10,1,0) = \ell_0 \cap \ell_2$
$P_5 = (1,1,0,0) = \ell_0 \cap \ell_3$
$P_{20} = (1,0,1,0) = \ell_0 \cap \ell_6$
$P_{35} = (0,1,1,0) = \ell_0 \cap \ell_9$
$P_{36} = (1,1,1,0) = \ell_1 \cap \ell_2$
$P_{14} = (10,1,0,0) = \ell_1 \cap \ell_4$
$P_{30} = (11,0,1,0) = \ell_1 \cap \ell_8$
$P_{179} = (0,10,1,0) = \ell_1 \cap \ell_{10}$
$P_{15} = (11,1,0,0) = \ell_2 \cap \ell_5$
$P_{29} = (10,0,1,0) = \ell_2 \cap \ell_7$
$P_{195} = (0,11,1,0) = \ell_2 \cap \ell_{11}$
$P_{699} = (10,10,1,1) = \ell_3 \cap \ell_7$
$P_{716} = (11,11,1,1) = \ell_3 \cap \ell_8$
$P_{2859} = (10,1,10,1) = \ell_4 \cap \ell_6$
$P_{3004} = (11,10,10,1) = \ell_4 \cap \ell_7$
$P_{3116} = (11,1,11,1) = \ell_5 \cap \ell_6$
$P_{3275} = (10,11,11,1) = \ell_5 \cap \ell_8$

Single Points

The surface has 156 single points:
The single points on the surface are:

0 : $P_{54} = (3, 2, 1, 0)$ lies on line ℓ_0
1 : $P_{56} = (5, 2, 1, 0)$ lies on line ℓ_2
2 : $P_{57} = (6, 2, 1, 0)$ lies on line ℓ_1
3 : $P_{69} = (2, 3, 1, 0)$ lies on line ℓ_0
4 : $P_{79} = (12, 3, 1, 0)$ lies on line ℓ_1
5 : $P_{81} = (14, 3, 1, 0)$ lies on line ℓ_2
6 : $P_{88} = (5, 4, 1, 0)$ lies on line ℓ_0
7 : $P_{91} = (8, 4, 1, 0)$ lies on line ℓ_1
8 : $P_{96} = (13, 4, 1, 0)$ lies on line ℓ_2
9 : $P_{101} = (2, 5, 1, 0)$ lies on line ℓ_1
10 : $P_{103} = (4, 5, 1, 0)$ lies on line ℓ_0
11 : $P_{105} = (6, 5, 1, 0)$ lies on line ℓ_2
12 : $P_{117} = (2, 6, 1, 0)$ lies on line ℓ_2
13 : $P_{120} = (5, 6, 1, 0)$ lies on line ℓ_1
14 : $P_{122} = (7, 6, 1, 0)$ lies on line ℓ_0
15 : $P_{137} = (6, 7, 1, 0)$ lies on line ℓ_0
16 : $P_{140} = (9, 7, 1, 0)$ lies on line ℓ_2
17 : $P_{146} = (15, 7, 1, 0)$ lies on line ℓ_1
18 : $P_{151} = (4, 8, 1, 0)$ lies on line ℓ_2
19 : $P_{156} = (9, 8, 1, 0)$ lies on line ℓ_0
20 : $P_{160} = (13, 8, 1, 0)$ lies on line ℓ_1
21 : $P_{170} = (7, 9, 1, 0)$ lies on line ℓ_1
22 : $P_{171} = (8, 9, 1, 0)$ lies on line ℓ_0
23 : $P_{178} = (15, 9, 1, 0)$ lies on line ℓ_2
24 : $P_{214} = (3, 12, 1, 0)$ lies on line ℓ_2
25 : $P_{224} = (13, 12, 1, 0)$ lies on line ℓ_0
26 : $P_{225} = (14, 12, 1, 0)$ lies on line ℓ_1
27 : $P_{231} = (4, 13, 1, 0)$ lies on line ℓ_1
28 : $P_{235} = (8, 13, 1, 0)$ lies on line ℓ_2
29 : $P_{239} = (12, 13, 1, 0)$ lies on line ℓ_0
30 : $P_{246} = (3, 14, 1, 0)$ lies on line ℓ_1
31 : $P_{255} = (12, 14, 1, 0)$ lies on line ℓ_2
32 : $P_{258} = (15, 14, 1, 0)$ lies on line ℓ_0
33 : $P_{266} = (7, 15, 1, 0)$ lies on line ℓ_2
34 : $P_{268} = (9, 15, 1, 0)$ lies on line ℓ_1
35 : $P_{273} = (14, 15, 1, 0)$ lies on line ℓ_0
36 : $P_{290} = (0, 1, 0, 1)$ lies on line ℓ_6
37 : $P_{291} = (1, 1, 0, 1)$ lies on line ℓ_9
38 : $P_{434} = (0, 10, 0, 1)$ lies on line ℓ_7
39 : $P_{435} = (1, 10, 0, 1)$ lies on line ℓ_{11}
40 : $P_{450} = (0, 11, 0, 1)$ lies on line ℓ_8
41 : $P_{451} = (1, 11, 0, 1)$ lies on line ℓ_{10}
42 : $P_{530} = (0, 0, 1, 1)$ lies on line ℓ_3
43 : $P_{531} = (1, 0, 1, 1)$ lies on line ℓ_9
44 : $P_{563} = (2, 2, 1, 1)$ lies on line ℓ_3
45 : $P_{580} = (3, 3, 1, 1)$ lies on line ℓ_3
46 : $P_{597} = (4, 4, 1, 1)$ lies on line ℓ_3
47 : $P_{614} = (5, 5, 1, 1)$ lies on line ℓ_3
48 : $P_{631} = (6, 6, 1, 1)$ lies on line ℓ_3
49 : $P_{648} = (7, 7, 1, 1)$ lies on line ℓ_3
50 : $P_{665} = (8, 8, 1, 1)$ lies on line ℓ_3
51 : $P_{682} = (9, 9, 1, 1)$ lies on line ℓ_3
52 : $P_{733} = (12, 12, 1, 1)$ lies on line ℓ_3
53 : $P_{750} = (13, 13, 1, 1)$ lies on line ℓ_3
54 : $P_{767} = (14, 14, 1, 1)$ lies on line ℓ_3
55 : $P_{784} = (15, 15, 1, 1)$ lies on line ℓ_3
56 : $P_{803} = (2, 1, 2, 1)$ lies on line ℓ_6
57 : $P_{834} = (1, 3, 2, 1)$ lies on line ℓ_9
58 : $P_{866} = (1, 5, 2, 1)$ lies on line ℓ_{11}
59 : $P_{882} = (1, 6, 2, 1)$ lies on line ℓ_{10}
60 : $P_{958} = (13, 10, 2, 1)$ lies on line ℓ_7
61 : $P_{976} = (15, 11, 2, 1)$ lies on line ℓ_8
62 : $P_{1060} = (3, 1, 3, 1)$ lies on line ℓ_6
63 : $P_{1074} = (1, 2, 3, 1)$ lies on line ℓ_9
64 : $P_{1208} = (7, 10, 3, 1)$ lies on line ℓ_7
65 : $P_{1221} = (4, 11, 3, 1)$ lies on line ℓ_8
66 : $P_{1234} = (1, 12, 3, 1)$ lies on line ℓ_{10}
67 : $P_{1266} = (1, 14, 3, 1)$ lies on line ℓ_{11}
68 : $P_{1317} = (4, 1, 4, 1)$ lies on line ℓ_6
69 : $P_{1378} = (1, 5, 4, 1)$ lies on line ℓ_9
70 : $P_{1426} = (1, 8, 4, 1)$ lies on line ℓ_{10}
71 : $P_{1460} = (3, 10, 4, 1)$ lies on line ℓ_7
72 : $P_{1480} = (7, 11, 4, 1)$ lies on line ℓ_8
73 : $P_{1506} = (1, 13, 4, 1)$ lies on line ℓ_{11}
74 : $P_{1574} = (5, 1, 5, 1)$ lies on line ℓ_6
75 : $P_{1586} = (1, 2, 5, 1)$ lies on line ℓ_{10}
76 : $P_{1618} = (1, 4, 5, 1)$ lies on line ℓ_9
77 : $P_{1650} = (1, 6, 5, 1)$ lies on line ℓ_{11}
78 : $P_{1722} = (9, 10, 5, 1)$ lies on line ℓ_7
79 : $P_{1741} = (12, 11, 5, 1)$ lies on line ℓ_8
80 : $P_{1831} = (6, 1, 6, 1)$ lies on line ℓ_6
81 : $P_{1842} = (1, 2, 6, 1)$ lies on line ℓ_{11}
82 : $P_{1890} = (1, 5, 6, 1)$ lies on line ℓ_{10}
83 : $P_{1922} = (1, 7, 6, 1)$ lies on line ℓ_9
84 : $P_{1983} = (14, 10, 6, 1)$ lies on line ℓ_7
85 : $P_{1993} = (8, 11, 6, 1)$ lies on line ℓ_8
86 : $P_{2088} = (7, 1, 7, 1)$ lies on line ℓ_6
87 : $P_{2162} = (1, 6, 7, 1)$ lies on line ℓ_9
88 : $P_{2210} = (1, 9, 7, 1)$ lies on line ℓ_{11}
89 : $P_{2229} = (4, 10, 7, 1)$ lies on line ℓ_7
90 : $P_{2244} = (3, 11, 7, 1)$ lies on line ℓ_8
91 : $P_{2306} = (1, 15, 7, 1)$ lies on line ℓ_{10}
92 : $P_{2345} = (8, 1, 8, 1)$ lies on line ℓ_6
93 : $P_{2386} = (1, 4, 8, 1)$ lies on line ℓ_{11}
94 : $P_{2466} = (1, 9, 8, 1)$ lies on line ℓ_9
95 : $P_{2487} = (6, 10, 8, 1)$ lies on line ℓ_7

96 : $P_{2511} = (14, 11, 8, 1)$ lies on line ℓ_8
97 : $P_{2530} = (1, 13, 8, 1)$ lies on line ℓ_{10}
98 : $P_{2602} = (9, 1, 9, 1)$ lies on line ℓ_6
99 : $P_{2690} = (1, 7, 9, 1)$ lies on line ℓ_{10}
100 : $P_{2706} = (1, 8, 9, 1)$ lies on line ℓ_9
101 : $P_{2749} = (12, 10, 9, 1)$ lies on line ℓ_7
102 : $P_{2758} = (5, 11, 9, 1)$ lies on line ℓ_8
103 : $P_{2818} = (1, 15, 9, 1)$ lies on line ℓ_{11}
104 : $P_{2833} = (0, 0, 10, 1)$ lies on line ℓ_4
105 : $P_{2834} = (1, 0, 10, 1)$ lies on line ℓ_{10}
106 : $P_{2878} = (13, 2, 10, 1)$ lies on line ℓ_4
107 : $P_{2888} = (7, 3, 10, 1)$ lies on line ℓ_4
108 : $P_{2900} = (3, 4, 10, 1)$ lies on line ℓ_4
109 : $P_{2922} = (9, 5, 10, 1)$ lies on line ℓ_4
110 : $P_{2943} = (14, 6, 10, 1)$ lies on line ℓ_4
111 : $P_{2949} = (4, 7, 10, 1)$ lies on line ℓ_4
112 : $P_{2967} = (6, 8, 10, 1)$ lies on line ℓ_4
113 : $P_{2989} = (12, 9, 10, 1)$ lies on line ℓ_4
114 : $P_{3030} = (5, 12, 10, 1)$ lies on line ℓ_4
115 : $P_{3056} = (15, 13, 10, 1)$ lies on line ℓ_4
116 : $P_{3065} = (8, 14, 10, 1)$ lies on line ℓ_4
117 : $P_{3075} = (2, 15, 10, 1)$ lies on line ℓ_4
118 : $P_{3089} = (0, 0, 11, 1)$ lies on line ℓ_5
119 : $P_{3090} = (1, 0, 11, 1)$ lies on line ℓ_{11}
120 : $P_{3136} = (15, 2, 11, 1)$ lies on line ℓ_5
121 : $P_{3141} = (4, 3, 11, 1)$ lies on line ℓ_5
122 : $P_{3160} = (7, 4, 11, 1)$ lies on line ℓ_5
123 : $P_{3181} = (12, 5, 11, 1)$ lies on line ℓ_5
124 : $P_{3193} = (8, 6, 11, 1)$ lies on line ℓ_5
125 : $P_{3204} = (3, 7, 11, 1)$ lies on line ℓ_5
126 : $P_{3231} = (14, 8, 11, 1)$ lies on line ℓ_5
127 : $P_{3238} = (5, 9, 11, 1)$ lies on line ℓ_5
128 : $P_{3290} = (9, 12, 11, 1)$ lies on line ℓ_5
129 : $P_{3299} = (2, 13, 11, 1)$ lies on line ℓ_5
130 : $P_{3319} = (6, 14, 11, 1)$ lies on line ℓ_5
131 : $P_{3342} = (13, 15, 11, 1)$ lies on line ℓ_5
132 : $P_{3373} = (12, 1, 12, 1)$ lies on line ℓ_6
133 : $P_{3394} = (1, 3, 12, 1)$ lies on line ℓ_{11}
134 : $P_{3510} = (5, 10, 12, 1)$ lies on line ℓ_7
135 : $P_{3530} = (9, 11, 12, 1)$ lies on line ℓ_8
136 : $P_{3554} = (1, 13, 12, 1)$ lies on line ℓ_9
137 : $P_{3570} = (1, 14, 12, 1)$ lies on line ℓ_{10}
138 : $P_{3630} = (13, 1, 13, 1)$ lies on line ℓ_6
139 : $P_{3666} = (1, 4, 13, 1)$ lies on line ℓ_{10}
140 : $P_{3730} = (1, 8, 13, 1)$ lies on line ℓ_{11}
141 : $P_{3776} = (15, 10, 13, 1)$ lies on line ℓ_7
142 : $P_{3779} = (2, 11, 13, 1)$ lies on line ℓ_8
143 : $P_{3794} = (1, 12, 13, 1)$ lies on line ℓ_9
144 : $P_{3887} = (14, 1, 14, 1)$ lies on line ℓ_6
145 : $P_{3906} = (1, 3, 14, 1)$ lies on line ℓ_{10}
146 : $P_{4025} = (8, 10, 14, 1)$ lies on line ℓ_7
147 : $P_{4039} = (6, 11, 14, 1)$ lies on line ℓ_8
148 : $P_{4050} = (1, 12, 14, 1)$ lies on line ℓ_{11}
149 : $P_{4098} = (1, 15, 14, 1)$ lies on line ℓ_9
150 : $P_{4144} = (15, 1, 15, 1)$ lies on line ℓ_6
151 : $P_{4226} = (1, 7, 15, 1)$ lies on line ℓ_{11}
152 : $P_{4258} = (1, 9, 15, 1)$ lies on line ℓ_{10}
153 : $P_{4275} = (2, 10, 15, 1)$ lies on line ℓ_7
154 : $P_{4302} = (13, 11, 15, 1)$ lies on line ℓ_8
155 : $P_{4338} = (1, 14, 15, 1)$ lies on line ℓ_9

The single points on the surface are:

Points on surface but on no line

The surface has 144 points not on any line:
The points on the surface but not on lines are:

0 : $P_{586} = (9, 3, 1, 1)$
1 : $P_{588} = (11, 3, 1, 1)$
2 : $P_{619} = (10, 5, 1, 1)$
3 : $P_{623} = (14, 5, 1, 1)$
4 : $P_{659} = (2, 8, 1, 1)$
5 : $P_{668} = (11, 8, 1, 1)$
6 : $P_{691} = (2, 10, 1, 1)$
7 : $P_{698} = (9, 10, 1, 1)$
8 : $P_{709} = (4, 11, 1, 1)$
9 : $P_{719} = (14, 11, 1, 1)$
10 : $P_{773} = (4, 15, 1, 1)$
11 : $P_{779} = (10, 15, 1, 1)$
12 : $P_{825} = (8, 2, 2, 1)$
13 : $P_{845} = (12, 3, 2, 1)$
14 : $P_{876} = (11, 5, 2, 1)$
15 : $P_{888} = (7, 6, 2, 1)$
16 : $P_{910} = (13, 7, 2, 1)$
17 : $P_{919} = (6, 8, 2, 1)$
18 : $P_{965} = (4, 11, 2, 1)$
19 : $P_{971} = (10, 11, 2, 1)$
20 : $P_{1006} = (13, 13, 2, 1)$
21 : $P_{1066} = (9, 1, 3, 1)$
22 : $P_{1068} = (11, 1, 3, 1)$
23 : $P_{1085} = (12, 2, 3, 1)$
24 : $P_{1096} = (7, 3, 3, 1)$
25 : $P_{1168} = (15, 7, 3, 1)$

$26: P_{1192} = (7, 9, 3, 1)$
$27: P_{1239} = (6, 12, 3, 1)$
$28: P_{1262} = (13, 13, 3, 1)$
$29: P_{1275} = (10, 14, 3, 1)$
$30: P_{1376} = (15, 4, 4, 1)$
$31: P_{1383} = (6, 5, 4, 1)$
$32: P_{1416} = (7, 7, 4, 1)$
$33: P_{1435} = (10, 8, 4, 1)$
$34: P_{1466} = (9, 10, 4, 1)$
$35: P_{1468} = (11, 10, 4, 1)$
$36: P_{1496} = (7, 12, 4, 1)$
$37: P_{1517} = (12, 13, 4, 1)$
$38: P_{1550} = (13, 15, 4, 1)$
$39: P_{1579} = (10, 1, 5, 1)$
$40: P_{1583} = (14, 1, 5, 1)$
$41: P_{1596} = (11, 2, 5, 1)$
$42: P_{1623} = (6, 4, 5, 1)$
$43: P_{1645} = (12, 5, 5, 1)$
$44: P_{1662} = (13, 6, 5, 1)$
$45: P_{1672} = (7, 7, 5, 1)$
$46: P_{1748} = (3, 12, 5, 1)$
$47: P_{1789} = (12, 14, 5, 1)$
$48: P_{1848} = (7, 2, 6, 1)$
$49: P_{1902} = (13, 5, 6, 1)$
$50: P_{1931} = (10, 7, 6, 1)$
$51: P_{1942} = (5, 8, 6, 1)$
$52: P_{1965} = (12, 9, 6, 1)$
$53: P_{1987} = (2, 11, 6, 1)$
$54: P_{1996} = (11, 11, 6, 1)$
$55: P_{2039} = (6, 14, 6, 1)$
$56: P_{2055} = (6, 15, 6, 1)$
$57: P_{2110} = (13, 2, 7, 1)$
$58: P_{2128} = (15, 3, 7, 1)$
$59: P_{2136} = (7, 4, 7, 1)$
$60: P_{2152} = (7, 5, 7, 1)$
$61: P_{2171} = (10, 6, 7, 1)$
$62: P_{2215} = (6, 9, 7, 1)$
$63: P_{2250} = (9, 11, 7, 1)$
$64: P_{2252} = (11, 11, 7, 1)$
$65: P_{2317} = (12, 15, 7, 1)$
$66: P_{2339} = (2, 1, 8, 1)$
$67: P_{2348} = (11, 1, 8, 1)$
$68: P_{2359} = (6, 2, 8, 1)$
$69: P_{2395} = (10, 4, 8, 1)$
$70: P_{2422} = (5, 6, 8, 1)$
$71: P_{2455} = (6, 8, 8, 1)$
$72: P_{2478} = (13, 9, 8, 1)$
$73: P_{2525} = (12, 12, 8, 1)$
$74: P_{2536} = (7, 13, 8, 1)$
$75: P_{2632} = (7, 3, 9, 1)$
$76: P_{2685} = (12, 6, 9, 1)$
$77: P_{2695} = (6, 7, 9, 1)$
$78: P_{2718} = (13, 8, 9, 1)$
$79: P_{2724} = (3, 9, 9, 1)$
$80: P_{2763} = (10, 11, 9, 1)$
$81: P_{2767} = (14, 11, 9, 1)$
$82: P_{2781} = (12, 12, 9, 1)$
$83: P_{2828} = (11, 15, 9, 1)$
$84: P_{2851} = (2, 1, 10, 1)$
$85: P_{2858} = (9, 1, 10, 1)$
$86: P_{2906} = (9, 4, 10, 1)$
$87: P_{2908} = (11, 4, 10, 1)$
$88: P_{2997} = (4, 10, 10, 1)$
$89: P_{3007} = (14, 10, 10, 1)$
$90: P_{3035} = (10, 12, 10, 1)$
$91: P_{3039} = (14, 12, 10, 1)$
$92: P_{3045} = (4, 13, 10, 1)$
$93: P_{3051} = (10, 13, 10, 1)$
$94: P_{3059} = (2, 14, 10, 1)$
$95: P_{3068} = (11, 14, 10, 1)$
$96: P_{3109} = (4, 1, 11, 1)$
$97: P_{3119} = (14, 1, 11, 1)$
$98: P_{3125} = (4, 2, 11, 1)$
$99: P_{3131} = (10, 2, 11, 1)$
$100: P_{3187} = (2, 6, 11, 1)$
$101: P_{3196} = (11, 6, 11, 1)$
$102: P_{3210} = (9, 7, 11, 1)$
$103: P_{3212} = (11, 7, 11, 1)$
$104: P_{3243} = (10, 9, 11, 1)$
$105: P_{3247} = (14, 9, 11, 1)$
$106: P_{3267} = (2, 11, 11, 1)$
$107: P_{3274} = (9, 11, 11, 1)$
$108: P_{3399} = (6, 3, 12, 1)$
$109: P_{3416} = (7, 4, 12, 1)$
$110: P_{3428} = (3, 5, 12, 1)$
$111: P_{3485} = (12, 8, 12, 1)$
$112: P_{3501} = (12, 9, 12, 1)$
$113: P_{3515} = (10, 10, 12, 1)$
$114: P_{3519} = (14, 10, 12, 1)$
$115: P_{3564} = (11, 13, 12, 1)$
$116: P_{3582} = (13, 14, 12, 1)$
$117: P_{3646} = (13, 2, 13, 1)$
$118: P_{3662} = (13, 3, 13, 1)$
$119: P_{3677} = (12, 4, 13, 1)$
$120: P_{3736} = (7, 8, 13, 1)$
$121: P_{3765} = (4, 10, 13, 1)$
$122: P_{3771} = (10, 10, 13, 1)$
$123: P_{3804} = (11, 12, 13, 1)$
$124: P_{3831} = (6, 14, 13, 1)$
$125: P_{3849} = (8, 15, 13, 1)$
$126: P_{3915} = (10, 3, 14, 1)$
$127: P_{3949} = (12, 5, 14, 1)$
$128: P_{3959} = (6, 6, 14, 1)$
$129: P_{4019} = (2, 10, 14, 1)$
$130: P_{4028} = (11, 10, 14, 1)$
$131: P_{4062} = (13, 12, 14, 1)$
$132: P_{4071} = (6, 13, 14, 1)$
$133: P_{4086} = (5, 14, 14, 1)$

134 : $P_{4104} = (7, 15, 14, 1)$
135 : $P_{4133} = (4, 1, 15, 1)$
136 : $P_{4139} = (10, 1, 15, 1)$
137 : $P_{4190} = (13, 4, 15, 1)$
138 : $P_{4215} = (6, 6, 15, 1)$
139 : $P_{4237} = (12, 7, 15, 1)$
140 : $P_{4268} = (11, 9, 15, 1)$
141 : $P_{4329} = (8, 13, 15, 1)$
142 : $P_{4344} = (7, 14, 15, 1)$
143 : $P_{4366} = (13, 15, 15, 1)$

Line Intersection Graph

	0	1	2	3	4	5	6	7	8	9	10	11
0	0	1	1	1	0	0	1	0	0	1	0	0
1	1	0	1	0	1	0	0	0	1	0	1	0
2	1	1	0	0	0	1	0	1	0	0	0	1
3	1	0	0	0	0	0	1	1	1	0	1	1
4	0	1	0	0	0	0	1	1	1	1	0	1
5	0	0	1	0	0	0	1	1	1	1	1	0
6	1	0	0	1	1	1	0	0	0	0	1	1
7	0	0	1	1	1	1	0	0	0	1	1	0
8	0	1	0	1	1	1	0	0	0	1	0	1
9	1	0	0	0	1	1	0	1	1	0	1	1
10	0	1	0	1	0	1	1	1	0	1	0	1
11	0	0	1	1	1	0	1	0	1	1	1	0

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_6	ℓ_9
in point	P_{205}	P_{190}	P_5	P_{20}	P_{35}

Line 1 intersects

Line	ℓ_0	ℓ_2	ℓ_4	ℓ_8	ℓ_{10}
in point	P_{205}	P_{36}	P_{14}	P_{30}	P_{179}

Line 2 intersects

Line	ℓ_0	ℓ_1	ℓ_5	ℓ_7	ℓ_{11}
in point	P_{190}	P_{36}	P_{15}	P_{29}	P_{195}

Line 3 intersects

Line	ℓ_0	ℓ_6	ℓ_7	ℓ_8	ℓ_{10}	ℓ_{11}
in point	P_5	P_4	P_{699}	P_{716}	P_4	P_4

Line 4 intersects

Line	ℓ_1	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{11}
in point	P_{14}	P_{2859}	P_{3004}	P_{3010}	P_{3010}	P_{3010}

Line 5 intersects

Line	ℓ_2	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{10}
in point	P_{15}	P_{3116}	P_{3250}	P_{3275}	P_{3250}	P_{3250}

Line 6 intersects

Line	ℓ_0	ℓ_3	ℓ_4	ℓ_5	ℓ_{10}	ℓ_{11}
in point	P_{20}	P_4	P_{2859}	P_{3116}	P_4	P_4

Line 7 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_9	ℓ_{10}
in point	P_{29}	P_{699}	P_{3004}	P_{3250}	P_{3250}	P_{3250}

Line 8 intersects

Line	ℓ_1	ℓ_3	ℓ_4	ℓ_5	ℓ_9	ℓ_{11}
in point	P_{30}	P_{716}	P_{3010}	P_{3275}	P_{3010}	P_{3010}

Line 9 intersects

Line	ℓ_0	ℓ_4	ℓ_5	ℓ_7	ℓ_8	ℓ_{10}	ℓ_{11}
in point	P_{35}	P_{3010}	P_{3250}	P_{3250}	P_{3010}	P_{3250}	P_{3010}

Line 10 intersects

Line	ℓ_1	ℓ_3	ℓ_5	ℓ_6	ℓ_7	ℓ_9	ℓ_{11}
in point	P_{179}	P_4	P_{3250}	P_4	P_{3250}	P_{3250}	P_4

Line 11 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_6	ℓ_8	ℓ_9	ℓ_{10}
in point	P_{195}	P_4	P_{3010}	P_4	P_{3010}	P_{3010}	P_4

The surface has 321 points:
The points on the surface are:

0 : $P_4 = (1,1,1,1)$
1 : $P_5 = (1,1,0,0)$
2 : $P_{14} = (10,1,0,0)$
3 : $P_{15} = (11,1,0,0)$
4 : $P_{20} = (1,0,1,0)$
5 : $P_{29} = (10,0,1,0)$
6 : $P_{30} = (11,0,1,0)$
7 : $P_{35} = (0,1,1,0)$
8 : $P_{36} = (1,1,1,0)$
9 : $P_{54} = (3,2,1,0)$
10 : $P_{56} = (5,2,1,0)$
11 : $P_{57} = (6,2,1,0)$
12 : $P_{69} = (2,3,1,0)$
13 : $P_{79} = (12,3,1,0)$
14 : $P_{81} = (14,3,1,0)$
15 : $P_{88} = (5,4,1,0)$
16 : $P_{91} = (8,4,1,0)$
17 : $P_{96} = (13,4,1,0)$
18 : $P_{101} = (2,5,1,0)$
19 : $P_{103} = (4,5,1,0)$
20 : $P_{105} = (6,5,1,0)$
21 : $P_{117} = (2,6,1,0)$
22 : $P_{120} = (5,6,1,0)$
23 : $P_{122} = (7,6,1,0)$
24 : $P_{137} = (6,7,1,0)$
25 : $P_{140} = (9,7,1,0)$
26 : $P_{146} = (15,7,1,0)$
27 : $P_{151} = (4,8,1,0)$
28 : $P_{156} = (9,8,1,0)$
29 : $P_{160} = (13,8,1,0)$
30 : $P_{170} = (7,9,1,0)$
31 : $P_{171} = (8,9,1,0)$
32 : $P_{178} = (15,9,1,0)$
33 : $P_{179} = (0,10,1,0)$
34 : $P_{190} = (11,10,1,0)$
35 : $P_{195} = (0,11,1,0)$
36 : $P_{205} = (10,11,1,0)$
37 : $P_{214} = (3,12,1,0)$
38 : $P_{224} = (13,12,1,0)$
39 : $P_{225} = (14,12,1,0)$
40 : $P_{231} = (4,13,1,0)$
41 : $P_{235} = (8,13,1,0)$
42 : $P_{239} = (12,13,1,0)$
43 : $P_{246} = (3,14,1,0)$
44 : $P_{255} = (12,14,1,0)$
45 : $P_{258} = (15,14,1,0)$
46 : $P_{266} = (7,15,1,0)$
47 : $P_{268} = (9,15,1,0)$
48 : $P_{273} = (14,15,1,0)$
49 : $P_{290} = (0,1,0,1)$
50 : $P_{291} = (1,1,0,1)$
51 : $P_{434} = (0,10,0,1)$
52 : $P_{435} = (1,10,0,1)$
53 : $P_{450} = (0,11,0,1)$
54 : $P_{451} = (1,11,0,1)$
55 : $P_{530} = (0,0,1,1)$
56 : $P_{531} = (1,0,1,1)$
57 : $P_{563} = (2,2,1,1)$
58 : $P_{580} = (3,3,1,1)$
59 : $P_{586} = (9,3,1,1)$
60 : $P_{588} = (11,3,1,1)$
61 : $P_{597} = (4,4,1,1)$
62 : $P_{614} = (5,5,1,1)$
63 : $P_{619} = (10,5,1,1)$
64 : $P_{623} = (14,5,1,1)$
65 : $P_{631} = (6,6,1,1)$
66 : $P_{648} = (7,7,1,1)$
67 : $P_{659} = (2,8,1,1)$
68 : $P_{665} = (8,8,1,1)$
69 : $P_{668} = (11,8,1,1)$
70 : $P_{682} = (9,9,1,1)$
71 : $P_{691} = (2,10,1,1)$
72 : $P_{698} = (9,10,1,1)$
73 : $P_{699} = (10,10,1,1)$
74 : $P_{709} = (4,11,1,1)$
75 : $P_{716} = (11,11,1,1)$
76 : $P_{719} = (14,11,1,1)$
77 : $P_{733} = (12,12,1,1)$
78 : $P_{750} = (13,13,1,1)$
79 : $P_{767} = (14,14,1,1)$
80 : $P_{773} = (4,15,1,1)$
81 : $P_{779} = (10,15,1,1)$
82 : $P_{784} = (15,15,1,1)$
83 : $P_{803} = (2,1,2,1)$
84 : $P_{825} = (8,2,2,1)$
85 : $P_{834} = (1,3,2,1)$
86 : $P_{845} = (12,3,2,1)$
87 : $P_{866} = (1,5,2,1)$
88 : $P_{876} = (11,5,2,1)$
89 : $P_{882} = (1,6,2,1)$
90 : $P_{888} = (7,6,2,1)$
91 : $P_{910} = (13,7,2,1)$
92 : $P_{919} = (6,8,2,1)$
93 : $P_{958} = (13,10,2,1)$
94 : $P_{965} = (4,11,2,1)$
95 : $P_{971} = (10,11,2,1)$
96 : $P_{976} = (15,11,2,1)$
97 : $P_{1006} = (13,13,2,1)$
98 : $P_{1060} = (3,1,3,1)$
99 : $P_{1066} = (9,1,3,1)$
100 : $P_{1068} = (11,1,3,1)$
101 : $P_{1074} = (1,2,3,1)$
102 : $P_{1085} = (12,2,3,1)$
103 : $P_{1096} = (7,3,3,1)$
104 : $P_{1168} = (15,7,3,1)$
105 : $P_{1192} = (7,9,3,1)$
106 : $P_{1208} = (7,10,3,1)$
107 : $P_{1221} = (4,11,3,1)$
108 : $P_{1234} = (1,12,3,1)$
109 : $P_{1239} = (6,12,3,1)$
110 : $P_{1262} = (13,13,3,1)$
111 : $P_{1266} = (1,14,3,1)$
112 : $P_{1275} = (10,14,3,1)$
113 : $P_{1317} = (4,1,4,1)$
114 : $P_{1376} = (15,4,4,1)$
115 : $P_{1378} = (1,5,4,1)$
116 : $P_{1383} = (6,5,4,1)$
117 : $P_{1416} = (7,7,4,1)$
118 : $P_{1426} = (1,8,4,1)$
119 : $P_{1435} = (10,8,4,1)$

120 : $P_{1460} = (3, 10, 4, 1)$
121 : $P_{1466} = (9, 10, 4, 1)$
122 : $P_{1468} = (11, 10, 4, 1)$
123 : $P_{1480} = (7, 11, 4, 1)$
124 : $P_{1496} = (7, 12, 4, 1)$
125 : $P_{1506} = (1, 13, 4, 1)$
126 : $P_{1517} = (12, 13, 4, 1)$
127 : $P_{1550} = (13, 15, 4, 1)$
128 : $P_{1574} = (5, 1, 5, 1)$
129 : $P_{1579} = (10, 1, 5, 1)$
130 : $P_{1583} = (14, 1, 5, 1)$
131 : $P_{1586} = (1, 2, 5, 1)$
132 : $P_{1596} = (11, 2, 5, 1)$
133 : $P_{1618} = (1, 4, 5, 1)$
134 : $P_{1623} = (6, 4, 5, 1)$
135 : $P_{1645} = (12, 5, 5, 1)$
136 : $P_{1650} = (1, 6, 5, 1)$
137 : $P_{1662} = (13, 6, 5, 1)$
138 : $P_{1672} = (7, 7, 5, 1)$
139 : $P_{1722} = (9, 10, 5, 1)$
140 : $P_{1741} = (12, 11, 5, 1)$
141 : $P_{1748} = (3, 12, 5, 1)$
142 : $P_{1789} = (12, 14, 5, 1)$
143 : $P_{1831} = (6, 1, 6, 1)$
144 : $P_{1842} = (1, 2, 6, 1)$
145 : $P_{1848} = (7, 2, 6, 1)$
146 : $P_{1890} = (1, 5, 6, 1)$
147 : $P_{1902} = (13, 5, 6, 1)$
148 : $P_{1922} = (1, 7, 6, 1)$
149 : $P_{1931} = (10, 7, 6, 1)$
150 : $P_{1942} = (5, 8, 6, 1)$
151 : $P_{1965} = (12, 9, 6, 1)$
152 : $P_{1983} = (14, 10, 6, 1)$
153 : $P_{1987} = (2, 11, 6, 1)$
154 : $P_{1993} = (8, 11, 6, 1)$
155 : $P_{1996} = (11, 11, 6, 1)$
156 : $P_{2039} = (6, 14, 6, 1)$
157 : $P_{2055} = (6, 15, 6, 1)$
158 : $P_{2088} = (7, 1, 7, 1)$
159 : $P_{2110} = (13, 2, 7, 1)$
160 : $P_{2128} = (15, 3, 7, 1)$
161 : $P_{2136} = (7, 4, 7, 1)$
162 : $P_{2152} = (7, 5, 7, 1)$
163 : $P_{2162} = (1, 6, 7, 1)$
164 : $P_{2171} = (10, 6, 7, 1)$
165 : $P_{2210} = (1, 9, 7, 1)$
166 : $P_{2215} = (6, 9, 7, 1)$
167 : $P_{2229} = (4, 10, 7, 1)$
168 : $P_{2244} = (3, 11, 7, 1)$
169 : $P_{2250} = (9, 11, 7, 1)$
170 : $P_{2252} = (11, 11, 7, 1)$
171 : $P_{2306} = (1, 15, 7, 1)$
172 : $P_{2317} = (12, 15, 7, 1)$
173 : $P_{2339} = (2, 1, 8, 1)$
174 : $P_{2345} = (8, 1, 8, 1)$
175 : $P_{2348} = (11, 1, 8, 1)$
176 : $P_{2359} = (6, 2, 8, 1)$
177 : $P_{2386} = (1, 4, 8, 1)$
178 : $P_{2395} = (10, 4, 8, 1)$
179 : $P_{2422} = (5, 6, 8, 1)$
180 : $P_{2455} = (6, 8, 8, 1)$
181 : $P_{2466} = (1, 9, 8, 1)$
182 : $P_{2478} = (13, 9, 8, 1)$
183 : $P_{2487} = (6, 10, 8, 1)$
184 : $P_{2511} = (14, 11, 8, 1)$
185 : $P_{2525} = (12, 12, 8, 1)$
186 : $P_{2530} = (1, 13, 8, 1)$
187 : $P_{2536} = (7, 13, 8, 1)$
188 : $P_{2602} = (9, 1, 9, 1)$
189 : $P_{2632} = (7, 3, 9, 1)$
190 : $P_{2685} = (12, 6, 9, 1)$
191 : $P_{2690} = (1, 7, 9, 1)$
192 : $P_{2695} = (6, 7, 9, 1)$
193 : $P_{2706} = (1, 8, 9, 1)$
194 : $P_{2718} = (13, 8, 9, 1)$
195 : $P_{2724} = (3, 9, 9, 1)$
196 : $P_{2749} = (12, 10, 9, 1)$
197 : $P_{2758} = (5, 11, 9, 1)$
198 : $P_{2763} = (10, 11, 9, 1)$
199 : $P_{2767} = (14, 11, 9, 1)$
200 : $P_{2781} = (12, 12, 9, 1)$
201 : $P_{2818} = (1, 15, 9, 1)$
202 : $P_{2828} = (11, 15, 9, 1)$
203 : $P_{2833} = (0, 0, 10, 1)$
204 : $P_{2834} = (1, 0, 10, 1)$
205 : $P_{2851} = (2, 1, 10, 1)$
206 : $P_{2858} = (9, 1, 10, 1)$
207 : $P_{2859} = (10, 1, 10, 1)$
208 : $P_{2878} = (13, 2, 10, 1)$
209 : $P_{2888} = (7, 3, 10, 1)$
210 : $P_{2900} = (3, 4, 10, 1)$
211 : $P_{2906} = (9, 4, 10, 1)$
212 : $P_{2908} = (11, 4, 10, 1)$
213 : $P_{2922} = (9, 5, 10, 1)$
214 : $P_{2943} = (14, 6, 10, 1)$
215 : $P_{2949} = (4, 7, 10, 1)$
216 : $P_{2967} = (6, 8, 10, 1)$
217 : $P_{2989} = (12, 9, 10, 1)$
218 : $P_{2997} = (4, 10, 10, 1)$
219 : $P_{3004} = (11, 10, 10, 1)$
220 : $P_{3007} = (14, 10, 10, 1)$
221 : $P_{3010} = (1, 11, 10, 1)$
222 : $P_{3030} = (5, 12, 10, 1)$
223 : $P_{3035} = (10, 12, 10, 1)$
224 : $P_{3039} = (14, 12, 10, 1)$
225 : $P_{3045} = (4, 13, 10, 1)$
226 : $P_{3051} = (10, 13, 10, 1)$
227 : $P_{3056} = (15, 13, 10, 1)$
228 : $P_{3059} = (2, 14, 10, 1)$
229 : $P_{3065} = (8, 14, 10, 1)$
230 : $P_{3068} = (11, 14, 10, 1)$
231 : $P_{3075} = (2, 15, 10, 1)$
232 : $P_{3089} = (0, 0, 11, 1)$
233 : $P_{3090} = (1, 0, 11, 1)$
234 : $P_{3109} = (4, 1, 11, 1)$
235 : $P_{3116} = (11, 1, 11, 1)$
236 : $P_{3119} = (14, 1, 11, 1)$
237 : $P_{3125} = (4, 2, 11, 1)$
238 : $P_{3131} = (10, 2, 11, 1)$
239 : $P_{3136} = (15, 2, 11, 1)$
240 : $P_{3141} = (4, 3, 11, 1)$
241 : $P_{3160} = (7, 4, 11, 1)$
242 : $P_{3181} = (12, 5, 11, 1)$
243 : $P_{3187} = (2, 6, 11, 1)$
244 : $P_{3193} = (8, 6, 11, 1)$
245 : $P_{3196} = (11, 6, 11, 1)$
246 : $P_{3204} = (3, 7, 11, 1)$
247 : $P_{3210} = (9, 7, 11, 1)$
248 : $P_{3212} = (11, 7, 11, 1)$
249 : $P_{3231} = (14, 8, 11, 1)$
250 : $P_{3238} = (5, 9, 11, 1)$
251 : $P_{3243} = (10, 9, 11, 1)$
252 : $P_{3247} = (14, 9, 11, 1)$
253 : $P_{3250} = (1, 10, 11, 1)$
254 : $P_{3267} = (2, 11, 11, 1)$
255 : $P_{3274} = (9, 11, 11, 1)$
256 : $P_{3275} = (10, 11, 11, 1)$
257 : $P_{3290} = (9, 12, 11, 1)$
258 : $P_{3299} = (2, 13, 11, 1)$
259 : $P_{3319} = (6, 14, 11, 1)$
260 : $P_{3342} = (13, 15, 11, 1)$
261 : $P_{3373} = (12, 1, 12, 1)$
262 : $P_{3394} = (1, 3, 12, 1)$
263 : $P_{3399} = (6, 3, 12, 1)$
264 : $P_{3416} = (7, 4, 12, 1)$
265 : $P_{3428} = (3, 5, 12, 1)$
266 : $P_{3485} = (12, 8, 12, 1)$
267 : $P_{3501} = (12, 9, 12, 1)$
268 : $P_{3510} = (5, 10, 12, 1)$
269 : $P_{3515} = (10, 10, 12, 1)$
270 : $P_{3519} = (14, 10, 12, 1)$
271 : $P_{3530} = (9, 11, 12, 1)$
272 : $P_{3554} = (1, 13, 12, 1)$
273 : $P_{3564} = (11, 13, 12, 1)$
274 : $P_{3570} = (1, 14, 12, 1)$
275 : $P_{3582} = (13, 14, 12, 1)$
276 : $P_{3630} = (13, 1, 13, 1)$
277 : $P_{3646} = (13, 2, 13, 1)$
278 : $P_{3662} = (13, 3, 13, 1)$
279 : $P_{3666} = (1, 4, 13, 1)$
280 : $P_{3677} = (12, 4, 13, 1)$
281 : $P_{3730} = (1, 8, 13, 1)$

$282: P_{3736} = (7, 8, 13, 1)$
$283: P_{3765} = (4, 10, 13, 1)$
$284: P_{3771} = (10, 10, 13, 1)$
$285: P_{3776} = (15, 10, 13, 1)$
$286: P_{3779} = (2, 11, 13, 1)$
$287: P_{3794} = (1, 12, 13, 1)$
$288: P_{3804} = (11, 12, 13, 1)$
$289: P_{3831} = (6, 14, 13, 1)$
$290: P_{3849} = (8, 15, 13, 1)$
$291: P_{3887} = (14, 1, 14, 1)$
$292: P_{3906} = (1, 3, 14, 1)$
$293: P_{3915} = (10, 3, 14, 1)$
$294: P_{3949} = (12, 5, 14, 1)$
$295: P_{3959} = (6, 6, 14, 1)$
$296: P_{4019} = (2, 10, 14, 1)$
$297: P_{4025} = (8, 10, 14, 1)$
$298: P_{4028} = (11, 10, 14, 1)$
$299: P_{4039} = (6, 11, 14, 1)$
$300: P_{4050} = (1, 12, 14, 1)$
$301: P_{4062} = (13, 12, 14, 1)$
$302: P_{4071} = (6, 13, 14, 1)$
$303: P_{4086} = (5, 14, 14, 1)$
$304: P_{4098} = (1, 15, 14, 1)$
$305: P_{4104} = (7, 15, 14, 1)$
$306: P_{4133} = (4, 1, 15, 1)$
$307: P_{4139} = (10, 1, 15, 1)$
$308: P_{4144} = (15, 1, 15, 1)$
$309: P_{4190} = (13, 4, 15, 1)$
$310: P_{4215} = (6, 6, 15, 1)$
$311: P_{4226} = (1, 7, 15, 1)$
$312: P_{4237} = (12, 7, 15, 1)$
$313: P_{4258} = (1, 9, 15, 1)$
$314: P_{4268} = (11, 9, 15, 1)$
$315: P_{4275} = (2, 10, 15, 1)$
$316: P_{4302} = (13, 11, 15, 1)$
$317: P_{4329} = (8, 13, 15, 1)$
$318: P_{4338} = (1, 14, 15, 1)$
$319: P_{4344} = (7, 14, 15, 1)$
$320: P_{4366} = (13, 15, 15, 1)$