Rank-66764 over GF(16)

January 15, 2021

The equation

The equation of the surface is :

$$X_0^3 + X_3^3 + X_0^2X_3 + X_0X_1^2 + X_0X_2^2 + X_0X_1X_2 = 0$$

(1, 0, 0, 1, 0, 0, 1, 1, 0, 0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(16) is 571547926

General information

Number of lines	1
Number of points	257
Number of singular points	2
Number of Eckardt points	0
Number of double points	0
Number of single points	17
Number of points off lines	240
Number of Hesse planes	0
Number of axes	0
Type of points on lines	17
Type of lines on points	1^{17}, 0^{240}

Singular Points

The surface has 2 singular points:

$0: \ P_{179} = \mathbf{P}(0, \delta^{10}, 1, 0) = \mathbf{P}(0, 10, 1, 0)$
$1: \ P_{195} = \mathbf{P}(0, \delta^{5}, 1, 0) = \mathbf{P}(0, 11, 1, 0)$

The 1 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \left[\begin{array}{cccc} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{array}\right]_{69888} = \left[\begin{array}{cccc} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{array}\right]_{69888} = \mathbf{Pl}(0,0,0,0,0,1)_{4625}$$

Rank of lines: (69888)
Rank of points on Klein quadric: (4625)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

The surface has 0 Double points:
The double points on the surface are:

Single Points

The surface has 17 single points:
The single points on the surface are:

0 : $P_1 = (0,1,0,0)$ lies on line ℓ_0
1 : $P_2 = (0,0,1,0)$ lies on line ℓ_0
2 : $P_{35} = (0,1,1,0)$ lies on line ℓ_0
3 : $P_{51} = (0,2,1,0)$ lies on line ℓ_0
4 : $P_{67} = (0,3,1,0)$ lies on line ℓ_0
5 : $P_{83} = (0,4,1,0)$ lies on line ℓ_0
6 : $P_{99} = (0,5,1,0)$ lies on line ℓ_0
7 : $P_{115} = (0,6,1,0)$ lies on line ℓ_0
8 : $P_{131} = (0,7,1,0)$ lies on line ℓ_0
9 : $P_{147} = (0,8,1,0)$ lies on line ℓ_0
10 : $P_{163} = (0,9,1,0)$ lies on line ℓ_0
11 : $P_{179} = (0,10,1,0)$ lies on line ℓ_0
12 : $P_{195} = (0,11,1,0)$ lies on line ℓ_0
13 : $P_{211} = (0,12,1,0)$ lies on line ℓ_0
14 : $P_{227} = (0,13,1,0)$ lies on line ℓ_0
15 : $P_{243} = (0,14,1,0)$ lies on line ℓ_0
16 : $P_{259} = (0,15,1,0)$ lies on line ℓ_0

The single points on the surface are:

Points on surface but on no line

The surface has 240 points not on any line:
The points on the surface but not on lines are:

0 : $P_4 = (1,1,1,1)$
1 : $P_5 = (1,1,0,0)$
2 : $P_{20} = (1,0,1,0)$
3 : $P_{36} = (1,1,1,0)$
4 : $P_{64} = (13,2,1,0)$
5 : $P_{80} = (13,3,1,0)$
6 : $P_{90} = (7,4,1,0)$
7 : $P_{106} = (7,5,1,0)$
8 : $P_{126} = (11,6,1,0)$
9 : $P_{142} = (11,7,1,0)$
10 : $P_{159} = (12,8,1,0)$
11 : $P_{175} = (12,9,1,0)$
12 : $P_{221} = (10,12,1,0)$
13 : $P_{237} = (10,13,1,0)$
14 : $P_{249} = (6,14,1,0)$
15 : $P_{265} = (6,15,1,0)$
16 : $P_{291} = (1,1,0,1)$
17 : $P_{314} = (8,2,0,1)$
18 : $P_{329} = (7,3,0,1)$
19 : $P_{353} = (15,4,0,1)$
20 : $P_{366} = (12,5,0,1)$
21 : $P_{408} = (6,8,0,1)$
22 : $P_{421} = (3,9,0,1)$
23 : $P_{438} = (4,10,0,1)$
24 : $P_{445} = (11,10,0,1)$
25 : $P_{448} = (14,10,0,1)$
26 : $P_{452} = (2,11,0,1)$
27 : $P_{459} = (9,11,0,1)$

28 : $P_{460} = (10, 11, 0, 1)$
29 : $P_{503} = (5, 14, 0, 1)$
30 : $P_{527} = (13, 15, 0, 1)$
31 : $P_{531} = (1, 0, 1, 1)$
32 : $P_{627} = (2, 6, 1, 1)$
33 : $P_{634} = (9, 6, 1, 1)$
34 : $P_{635} = (10, 6, 1, 1)$
35 : $P_{643} = (2, 7, 1, 1)$
36 : $P_{650} = (9, 7, 1, 1)$
37 : $P_{651} = (10, 7, 1, 1)$
38 : $P_{725} = (4, 12, 1, 1)$
39 : $P_{732} = (11, 12, 1, 1)$
40 : $P_{735} = (14, 12, 1, 1)$
41 : $P_{741} = (4, 13, 1, 1)$
42 : $P_{748} = (11, 13, 1, 1)$
43 : $P_{751} = (14, 13, 1, 1)$
44 : $P_{793} = (8, 0, 2, 1)$
45 : $P_{825} = (8, 2, 2, 1)$
46 : $P_{856} = (7, 4, 2, 1)$
47 : $P_{888} = (7, 6, 2, 1)$
48 : $P_{918} = (5, 8, 2, 1)$
49 : $P_{930} = (1, 9, 2, 1)$
50 : $P_{950} = (5, 10, 2, 1)$
51 : $P_{962} = (1, 11, 2, 1)$
52 : $P_{990} = (13, 12, 2, 1)$
53 : $P_{1022} = (13, 14, 2, 1)$
54 : $P_{1048} = (7, 0, 3, 1)$
55 : $P_{1096} = (7, 3, 3, 1)$
56 : $P_{1126} = (5, 5, 3, 1)$
57 : $P_{1142} = (5, 6, 3, 1)$
58 : $P_{1173} = (4, 8, 3, 1)$
59 : $P_{1180} = (11, 8, 3, 1)$
60 : $P_{1183} = (14, 8, 3, 1)$
61 : $P_{1200} = (15, 9, 3, 1)$
62 : $P_{1216} = (15, 10, 3, 1)$
63 : $P_{1221} = (4, 11, 3, 1)$
64 : $P_{1228} = (11, 11, 3, 1)$
65 : $P_{1231} = (14, 11, 3, 1)$
66 : $P_{1236} = (3, 12, 3, 1)$
67 : $P_{1284} = (3, 15, 3, 1)$
68 : $P_{1312} = (15, 0, 4, 1)$
69 : $P_{1336} = (7, 2, 4, 1)$
70 : $P_{1376} = (15, 4, 4, 1)$
71 : $P_{1400} = (7, 6, 4, 1)$
72 : $P_{1453} = (12, 9, 4, 1)$
73 : $P_{1458} = (1, 10, 4, 1)$
74 : $P_{1481} = (8, 11, 4, 1)$
75 : $P_{1517} = (12, 13, 4, 1)$
76 : $P_{1522} = (1, 14, 4, 1)$
77 : $P_{1545} = (8, 15, 4, 1)$
78 : $P_{1565} = (12, 0, 5, 1)$
79 : $P_{1606} = (5, 3, 5, 1)$
80 : $P_{1645} = (12, 5, 5, 1)$
81 : $P_{1654} = (5, 6, 5, 1)$
82 : $P_{1689} = (8, 8, 5, 1)$
83 : $P_{1715} = (2, 10, 5, 1)$
84 : $P_{1722} = (9, 10, 5, 1)$
85 : $P_{1723} = (10, 10, 5, 1)$
86 : $P_{1732} = (3, 11, 5, 1)$
87 : $P_{1769} = (8, 13, 5, 1)$
88 : $P_{1780} = (3, 14, 5, 1)$
89 : $P_{1795} = (2, 15, 5, 1)$
90 : $P_{1802} = (9, 15, 5, 1)$
91 : $P_{1803} = (10, 15, 5, 1)$
92 : $P_{1827} = (2, 1, 6, 1)$
93 : $P_{1834} = (9, 1, 6, 1)$
94 : $P_{1835} = (10, 1, 6, 1)$
95 : $P_{1848} = (7, 2, 6, 1)$
96 : $P_{1862} = (5, 3, 6, 1)$
97 : $P_{1880} = (7, 4, 6, 1)$
98 : $P_{1894} = (5, 5, 6, 1)$
99 : $P_{1923} = (2, 7, 6, 1)$
100 : $P_{1930} = (9, 7, 6, 1)$
101 : $P_{1931} = (10, 7, 6, 1)$
102 : $P_{1981} = (12, 10, 6, 1)$
103 : $P_{1991} = (6, 11, 6, 1)$
104 : $P_{2013} = (12, 12, 6, 1)$
105 : $P_{2023} = (6, 13, 6, 1)$
106 : $P_{2083} = (2, 1, 7, 1)$
107 : $P_{2090} = (9, 1, 7, 1)$
108 : $P_{2091} = (10, 1, 7, 1)$
109 : $P_{2163} = (2, 6, 7, 1)$
110 : $P_{2170} = (9, 6, 7, 1)$
111 : $P_{2171} = (10, 6, 7, 1)$
112 : $P_{2208} = (15, 8, 7, 1)$
113 : $P_{2215} = (6, 9, 7, 1)$
114 : $P_{2238} = (13, 10, 7, 1)$
115 : $P_{2248} = (7, 11, 7, 1)$
116 : $P_{2264} = (7, 12, 7, 1)$
117 : $P_{2286} = (13, 13, 7, 1)$
118 : $P_{2295} = (6, 14, 7, 1)$
119 : $P_{2320} = (15, 15, 7, 1)$
120 : $P_{2327} = (6, 0, 8, 1)$
121 : $P_{2358} = (5, 2, 8, 1)$
122 : $P_{2373} = (4, 3, 8, 1)$
123 : $P_{2380} = (11, 3, 8, 1)$
124 : $P_{2383} = (14, 3, 8, 1)$
125 : $P_{2409} = (8, 5, 8, 1)$
126 : $P_{2448} = (15, 7, 8, 1)$
127 : $P_{2455} = (6, 8, 8, 1)$
128 : $P_{2486} = (5, 10, 8, 1)$
129 : $P_{2501} = (4, 11, 8, 1)$
130 : $P_{2508} = (11, 11, 8, 1)$
131 : $P_{2511} = (14, 11, 8, 1)$
132 : $P_{2537} = (8, 13, 8, 1)$
133 : $P_{2576} = (15, 15, 8, 1)$
134 : $P_{2580} = (3, 0, 9, 1)$
135 : $P_{2610} = (1, 2, 9, 1)$

136 : $P_{2640} = (15, 3, 9, 1)$
137 : $P_{2653} = (12, 4, 9, 1)$
138 : $P_{2695} = (6, 7, 9, 1)$
139 : $P_{2724} = (3, 9, 9, 1)$
140 : $P_{2752} = (15, 10, 9, 1)$
141 : $P_{2754} = (1, 11, 9, 1)$
142 : $P_{2797} = (12, 13, 9, 1)$
143 : $P_{2807} = (6, 14, 9, 1)$
144 : $P_{2837} = (4, 0, 10, 1)$
145 : $P_{2844} = (11, 0, 10, 1)$
146 : $P_{2847} = (14, 0, 10, 1)$
147 : $P_{2870} = (5, 2, 10, 1)$
148 : $P_{2896} = (15, 3, 10, 1)$
149 : $P_{2898} = (1, 4, 10, 1)$
150 : $P_{2915} = (2, 5, 10, 1)$
151 : $P_{2922} = (9, 5, 10, 1)$
152 : $P_{2923} = (10, 5, 10, 1)$
153 : $P_{2941} = (12, 6, 10, 1)$
154 : $P_{2958} = (13, 7, 10, 1)$
155 : $P_{2966} = (5, 8, 10, 1)$
156 : $P_{2992} = (15, 9, 10, 1)$
157 : $P_{2997} = (4, 10, 10, 1)$
158 : $P_{3004} = (11, 10, 10, 1)$
159 : $P_{3007} = (14, 10, 10, 1)$
160 : $P_{3037} = (12, 12, 10, 1)$
161 : $P_{3054} = (13, 13, 10, 1)$
162 : $P_{3058} = (1, 14, 10, 1)$
163 : $P_{3075} = (2, 15, 10, 1)$
164 : $P_{3082} = (9, 15, 10, 1)$
165 : $P_{3083} = (10, 15, 10, 1)$
166 : $P_{3091} = (2, 0, 11, 1)$
167 : $P_{3098} = (9, 0, 11, 1)$
168 : $P_{3099} = (10, 0, 11, 1)$
169 : $P_{3122} = (1, 2, 11, 1)$
170 : $P_{3141} = (4, 3, 11, 1)$
171 : $P_{3148} = (11, 3, 11, 1)$
172 : $P_{3151} = (14, 3, 11, 1)$
173 : $P_{3161} = (8, 4, 11, 1)$
174 : $P_{3172} = (3, 5, 11, 1)$
175 : $P_{3191} = (6, 6, 11, 1)$
176 : $P_{3208} = (7, 7, 11, 1)$
177 : $P_{3221} = (4, 8, 11, 1)$
178 : $P_{3228} = (11, 8, 11, 1)$
179 : $P_{3231} = (14, 8, 11, 1)$
180 : $P_{3234} = (1, 9, 11, 1)$
181 : $P_{3267} = (2, 11, 11, 1)$
182 : $P_{3274} = (9, 11, 11, 1)$
183 : $P_{3275} = (10, 11, 11, 1)$
184 : $P_{3288} = (7, 12, 11, 1)$
185 : $P_{3303} = (6, 13, 11, 1)$
186 : $P_{3316} = (3, 14, 11, 1)$
187 : $P_{3337} = (8, 15, 11, 1)$
188 : $P_{3365} = (4, 1, 12, 1)$
189 : $P_{3372} = (11, 1, 12, 1)$
190 : $P_{3375} = (14, 1, 12, 1)$
191 : $P_{3390} = (13, 2, 12, 1)$
192 : $P_{3396} = (3, 3, 12, 1)$
193 : $P_{3453} = (12, 6, 12, 1)$
194 : $P_{3464} = (7, 7, 12, 1)$
195 : $P_{3517} = (12, 10, 12, 1)$
196 : $P_{3528} = (7, 11, 12, 1)$
197 : $P_{3557} = (4, 13, 12, 1)$
198 : $P_{3564} = (11, 13, 12, 1)$
199 : $P_{3567} = (14, 13, 12, 1)$
200 : $P_{3582} = (13, 14, 12, 1)$
201 : $P_{3588} = (3, 15, 12, 1)$
202 : $P_{3621} = (4, 1, 13, 1)$
203 : $P_{3628} = (11, 1, 13, 1)$
204 : $P_{3631} = (14, 1, 13, 1)$
205 : $P_{3677} = (12, 4, 13, 1)$
206 : $P_{3689} = (8, 5, 13, 1)$
207 : $P_{3703} = (6, 6, 13, 1)$
208 : $P_{3726} = (13, 7, 13, 1)$
209 : $P_{3737} = (8, 8, 13, 1)$
210 : $P_{3757} = (12, 9, 13, 1)$
211 : $P_{3774} = (13, 10, 13, 1)$
212 : $P_{3783} = (6, 11, 13, 1)$
213 : $P_{3797} = (4, 12, 13, 1)$
214 : $P_{3804} = (11, 12, 13, 1)$
215 : $P_{3807} = (14, 12, 13, 1)$
216 : $P_{3862} = (5, 0, 14, 1)$
217 : $P_{3902} = (13, 2, 14, 1)$
218 : $P_{3922} = (1, 4, 14, 1)$
219 : $P_{3940} = (3, 5, 14, 1)$
220 : $P_{3975} = (6, 7, 14, 1)$
221 : $P_{4007} = (6, 9, 14, 1)$
222 : $P_{4018} = (1, 10, 14, 1)$
223 : $P_{4036} = (3, 11, 14, 1)$
224 : $P_{4062} = (13, 12, 14, 1)$
225 : $P_{4086} = (5, 14, 14, 1)$
226 : $P_{4126} = (13, 0, 15, 1)$
227 : $P_{4164} = (3, 3, 15, 1)$
228 : $P_{4185} = (8, 4, 15, 1)$
229 : $P_{4195} = (2, 5, 15, 1)$
230 : $P_{4202} = (9, 5, 15, 1)$
231 : $P_{4203} = (10, 5, 15, 1)$
232 : $P_{4240} = (15, 7, 15, 1)$
233 : $P_{4256} = (15, 8, 15, 1)$
234 : $P_{4275} = (2, 10, 15, 1)$
235 : $P_{4282} = (9, 10, 15, 1)$
236 : $P_{4283} = (10, 10, 15, 1)$
237 : $P_{4297} = (8, 11, 15, 1)$
238 : $P_{4308} = (3, 12, 15, 1)$
239 : $P_{4366} = (13, 15, 15, 1)$

Line Intersection Graph

	0
0	0

Neighbor sets in the line intersection graph:
Line 0 intersects

Line
in point

The surface has 257 points:
The points on the surface are:

0 : $P_{1} = (0, 1, 0, 0)$
1 : $P_{2} = (0, 0, 1, 0)$
2 : $P_{4} = (1, 1, 1, 1)$
3 : $P_{5} = (1, 1, 0, 0)$
4 : $P_{20} = (1, 0, 1, 0)$
5 : $P_{35} = (0, 1, 1, 0)$
6 : $P_{36} = (1, 1, 1, 0)$
7 : $P_{51} = (0, 2, 1, 0)$
8 : $P_{64} = (13, 2, 1, 0)$
9 : $P_{67} = (0, 3, 1, 0)$
10 : $P_{80} = (13, 3, 1, 0)$
11 : $P_{83} = (0, 4, 1, 0)$
12 : $P_{90} = (7, 4, 1, 0)$
13 : $P_{99} = (0, 5, 1, 0)$
14 : $P_{106} = (7, 5, 1, 0)$
15 : $P_{115} = (0, 6, 1, 0)$
16 : $P_{126} = (11, 6, 1, 0)$
17 : $P_{131} = (0, 7, 1, 0)$
18 : $P_{142} = (11, 7, 1, 0)$
19 : $P_{147} = (0, 8, 1, 0)$
20 : $P_{159} = (12, 8, 1, 0)$
21 : $P_{163} = (0, 9, 1, 0)$
22 : $P_{175} = (12, 9, 1, 0)$
23 : $P_{179} = (0, 10, 1, 0)$
24 : $P_{195} = (0, 11, 1, 0)$
25 : $P_{211} = (0, 12, 1, 0)$
26 : $P_{221} = (10, 12, 1, 0)$
27 : $P_{227} = (0, 13, 1, 0)$
28 : $P_{237} = (10, 13, 1, 0)$
29 : $P_{243} = (0, 14, 1, 0)$
30 : $P_{249} = (6, 14, 1, 0)$
31 : $P_{259} = (0, 15, 1, 0)$
32 : $P_{265} = (6, 15, 1, 0)$
33 : $P_{291} = (1, 1, 0, 1)$
34 : $P_{314} = (8, 2, 0, 1)$
35 : $P_{329} = (7, 3, 0, 1)$
36 : $P_{353} = (15, 4, 0, 1)$
37 : $P_{366} = (12, 5, 0, 1)$
38 : $P_{408} = (6, 8, 0, 1)$
39 : $P_{421} = (3, 9, 0, 1)$
40 : $P_{438} = (4, 10, 0, 1)$
41 : $P_{445} = (11, 10, 0, 1)$
42 : $P_{448} = (14, 10, 0, 1)$
43 : $P_{452} = (2, 11, 0, 1)$
44 : $P_{459} = (9, 11, 0, 1)$
45 : $P_{460} = (10, 11, 0, 1)$
46 : $P_{503} = (5, 14, 0, 1)$
47 : $P_{527} = (13, 15, 0, 1)$
48 : $P_{531} = (1, 0, 1, 1)$
49 : $P_{627} = (2, 6, 1, 1)$
50 : $P_{634} = (9, 6, 1, 1)$
51 : $P_{635} = (10, 6, 1, 1)$
52 : $P_{643} = (2, 7, 1, 1)$
53 : $P_{650} = (9, 7, 1, 1)$
54 : $P_{651} = (10, 7, 1, 1)$
55 : $P_{725} = (4, 12, 1, 1)$
56 : $P_{732} = (11, 12, 1, 1)$
57 : $P_{735} = (14, 12, 1, 1)$
58 : $P_{741} = (4, 13, 1, 1)$
59 : $P_{748} = (11, 13, 1, 1)$
60 : $P_{751} = (14, 13, 1, 1)$
61 : $P_{793} = (8, 0, 2, 1)$
62 : $P_{825} = (8, 2, 2, 1)$
63 : $P_{856} = (7, 4, 2, 1)$
64 : $P_{888} = (7, 6, 2, 1)$
65 : $P_{918} = (5, 8, 2, 1)$
66 : $P_{930} = (1, 9, 2, 1)$
67 : $P_{950} = (5, 10, 2, 1)$
68 : $P_{962} = (1, 11, 2, 1)$
69 : $P_{990} = (13, 12, 2, 1)$
70 : $P_{1022} = (13, 14, 2, 1)$
71 : $P_{1048} = (7, 0, 3, 1)$
72 : $P_{1096} = (7, 3, 3, 1)$
73 : $P_{1126} = (5, 5, 3, 1)$
74 : $P_{1142} = (5, 6, 3, 1)$
75 : $P_{1173} = (4, 8, 3, 1)$
76 : $P_{1180} = (11, 8, 3, 1)$
77 : $P_{1183} = (14, 8, 3, 1)$
78 : $P_{1200} = (15, 9, 3, 1)$
79 : $P_{1216} = (15, 10, 3, 1)$
80 : $P_{1221} = (4, 11, 3, 1)$
81 : $P_{1228} = (11, 11, 3, 1)$
82 : $P_{1231} = (14, 11, 3, 1)$
83 : $P_{1236} = (3, 12, 3, 1)$
84 : $P_{1284} = (3, 15, 3, 1)$
85 : $P_{1312} = (15, 0, 4, 1)$
86 : $P_{1336} = (7, 2, 4, 1)$
87 : $P_{1376} = (15, 4, 4, 1)$
88 : $P_{1400} = (7, 6, 4, 1)$
89 : $P_{1453} = (12, 9, 4, 1)$
90 : $P_{1458} = (1, 10, 4, 1)$
91 : $P_{1481} = (8, 11, 4, 1)$
92 : $P_{1517} = (12, 13, 4, 1)$
93 : $P_{1522} = (1, 14, 4, 1)$
94 : $P_{1545} = (8, 15, 4, 1)$
95 : $P_{1565} = (12, 0, 5, 1)$
96 : $P_{1606} = (5, 3, 5, 1)$
97 : $P_{1645} = (12, 5, 5, 1)$
98 : $P_{1654} = (5, 6, 5, 1)$
99 : $P_{1689} = (8, 8, 5, 1)$
100 : $P_{1715} = (2, 10, 5, 1)$
101 : $P_{1722} = (9, 10, 5, 1)$
102 : $P_{1723} = (10, 10, 5, 1)$
103 : $P_{1732} = (3, 11, 5, 1)$
104 : $P_{1769} = (8, 13, 5, 1)$
105 : $P_{1780} = (3, 14, 5, 1)$
106 : $P_{1795} = (2, 15, 5, 1)$
107 : $P_{1802} = (9, 15, 5, 1)$
108 : $P_{1803} = (10, 15, 5, 1)$
109 : $P_{1827} = (2, 1, 6, 1)$
110 : $P_{1834} = (9, 1, 6, 1)$
111 : $P_{1835} = (10, 1, 6, 1)$
112 : $P_{1848} = (7, 2, 6, 1)$
113 : $P_{1862} = (5, 3, 6, 1)$
114 : $P_{1880} = (7, 4, 6, 1)$
115 : $P_{1894} = (5, 5, 6, 1)$
116 : $P_{1923} = (2, 7, 6, 1)$
117 : $P_{1930} = (9, 7, 6, 1)$
118 : $P_{1931} = (10, 7, 6, 1)$
119 : $P_{1981} = (12, 10, 6, 1)$
120 : $P_{1991} = (6, 11, 6, 1)$
121 : $P_{2013} = (12, 12, 6, 1)$
122 : $P_{2023} = (6, 13, 6, 1)$
123 : $P_{2083} = (2, 1, 7, 1)$
124 : $P_{2090} = (9, 1, 7, 1)$
125 : $P_{2091} = (10, 1, 7, 1)$

126 : $P_{2163} = (2, 6, 7, 1)$
127 : $P_{2170} = (9, 6, 7, 1)$
128 : $P_{2171} = (10, 6, 7, 1)$
129 : $P_{2208} = (15, 8, 7, 1)$
130 : $P_{2215} = (6, 9, 7, 1)$
131 : $P_{2238} = (13, 10, 7, 1)$
132 : $P_{2248} = (7, 11, 7, 1)$
133 : $P_{2264} = (7, 12, 7, 1)$
134 : $P_{2286} = (13, 13, 7, 1)$
135 : $P_{2295} = (6, 14, 7, 1)$
136 : $P_{2320} = (15, 15, 7, 1)$
137 : $P_{2327} = (6, 0, 8, 1)$
138 : $P_{2358} = (5, 2, 8, 1)$
139 : $P_{2373} = (4, 3, 8, 1)$
140 : $P_{2380} = (11, 3, 8, 1)$
141 : $P_{2383} = (14, 3, 8, 1)$
142 : $P_{2409} = (8, 5, 8, 1)$
143 : $P_{2448} = (15, 7, 8, 1)$
144 : $P_{2455} = (6, 8, 8, 1)$
145 : $P_{2486} = (5, 10, 8, 1)$
146 : $P_{2501} = (4, 11, 8, 1)$
147 : $P_{2508} = (11, 11, 8, 1)$
148 : $P_{2511} = (14, 11, 8, 1)$
149 : $P_{2537} = (8, 13, 8, 1)$
150 : $P_{2576} = (15, 15, 8, 1)$
151 : $P_{2580} = (3, 0, 9, 1)$
152 : $P_{2610} = (1, 2, 9, 1)$
153 : $P_{2640} = (15, 3, 9, 1)$
154 : $P_{2653} = (12, 4, 9, 1)$
155 : $P_{2695} = (6, 7, 9, 1)$
156 : $P_{2724} = (3, 9, 9, 1)$
157 : $P_{2752} = (15, 10, 9, 1)$
158 : $P_{2754} = (1, 11, 9, 1)$
159 : $P_{2797} = (12, 13, 9, 1)$
160 : $P_{2807} = (6, 14, 9, 1)$
161 : $P_{2837} = (4, 0, 10, 1)$
162 : $P_{2844} = (11, 0, 10, 1)$
163 : $P_{2847} = (14, 0, 10, 1)$
164 : $P_{2870} = (5, 2, 10, 1)$
165 : $P_{2896} = (15, 3, 10, 1)$
166 : $P_{2898} = (1, 4, 10, 1)$
167 : $P_{2915} = (2, 5, 10, 1)$
168 : $P_{2922} = (9, 5, 10, 1)$
169 : $P_{2923} = (10, 5, 10, 1)$
170 : $P_{2941} = (12, 6, 10, 1)$
171 : $P_{2958} = (13, 7, 10, 1)$
172 : $P_{2966} = (5, 8, 10, 1)$
173 : $P_{2992} = (15, 9, 10, 1)$
174 : $P_{2997} = (4, 10, 10, 1)$
175 : $P_{3004} = (11, 10, 10, 1)$
176 : $P_{3007} = (14, 10, 10, 1)$
177 : $P_{3037} = (12, 12, 10, 1)$
178 : $P_{3054} = (13, 13, 10, 1)$
179 : $P_{3058} = (1, 14, 10, 1)$
180 : $P_{3075} = (2, 15, 10, 1)$
181 : $P_{3082} = (9, 15, 10, 1)$
182 : $P_{3083} = (10, 15, 10, 1)$
183 : $P_{3091} = (2, 0, 11, 1)$
184 : $P_{3098} = (9, 0, 11, 1)$
185 : $P_{3099} = (10, 0, 11, 1)$
186 : $P_{3122} = (1, 2, 11, 1)$
187 : $P_{3141} = (4, 3, 11, 1)$
188 : $P_{3148} = (11, 3, 11, 1)$
189 : $P_{3151} = (14, 3, 11, 1)$
190 : $P_{3161} = (8, 4, 11, 1)$
191 : $P_{3172} = (3, 5, 11, 1)$
192 : $P_{3191} = (6, 6, 11, 1)$
193 : $P_{3208} = (7, 7, 11, 1)$
194 : $P_{3221} = (4, 8, 11, 1)$
195 : $P_{3228} = (11, 8, 11, 1)$
196 : $P_{3231} = (14, 8, 11, 1)$
197 : $P_{3234} = (1, 9, 11, 1)$
198 : $P_{3267} = (2, 11, 11, 1)$
199 : $P_{3274} = (9, 11, 11, 1)$
200 : $P_{3275} = (10, 11, 11, 1)$
201 : $P_{3288} = (7, 12, 11, 1)$
202 : $P_{3303} = (6, 13, 11, 1)$
203 : $P_{3316} = (3, 14, 11, 1)$
204 : $P_{3337} = (8, 15, 11, 1)$
205 : $P_{3365} = (4, 1, 12, 1)$
206 : $P_{3372} = (11, 1, 12, 1)$
207 : $P_{3375} = (14, 1, 12, 1)$
208 : $P_{3390} = (13, 2, 12, 1)$
209 : $P_{3396} = (3, 3, 12, 1)$
210 : $P_{3453} = (12, 6, 12, 1)$
211 : $P_{3464} = (7, 7, 12, 1)$
212 : $P_{3517} = (12, 10, 12, 1)$
213 : $P_{3528} = (7, 11, 12, 1)$
214 : $P_{3557} = (4, 13, 12, 1)$
215 : $P_{3564} = (11, 13, 12, 1)$
216 : $P_{3567} = (14, 13, 12, 1)$
217 : $P_{3582} = (13, 14, 12, 1)$
218 : $P_{3588} = (3, 15, 12, 1)$
219 : $P_{3621} = (4, 1, 13, 1)$
220 : $P_{3628} = (11, 1, 13, 1)$
221 : $P_{3631} = (14, 1, 13, 1)$
222 : $P_{3677} = (12, 4, 13, 1)$
223 : $P_{3689} = (8, 5, 13, 1)$
224 : $P_{3703} = (6, 6, 13, 1)$
225 : $P_{3726} = (13, 7, 13, 1)$
226 : $P_{3737} = (8, 8, 13, 1)$
227 : $P_{3757} = (12, 9, 13, 1)$
228 : $P_{3774} = (13, 10, 13, 1)$
229 : $P_{3783} = (6, 11, 13, 1)$
230 : $P_{3797} = (4, 12, 13, 1)$
231 : $P_{3804} = (11, 12, 13, 1)$
232 : $P_{3807} = (14, 12, 13, 1)$
233 : $P_{3862} = (5, 0, 14, 1)$
234 : $P_{3902} = (13, 2, 14, 1)$
235 : $P_{3922} = (1, 4, 14, 1)$
236 : $P_{3940} = (3, 5, 14, 1)$
237 : $P_{3975} = (6, 7, 14, 1)$
238 : $P_{4007} = (6, 9, 14, 1)$
239 : $P_{4018} = (1, 10, 14, 1)$
240 : $P_{4036} = (3, 11, 14, 1)$
241 : $P_{4062} = (13, 12, 14, 1)$
242 : $P_{4086} = (5, 14, 14, 1)$
243 : $P_{4126} = (13, 0, 15, 1)$
244 : $P_{4164} = (3, 3, 15, 1)$
245 : $P_{4185} = (8, 4, 15, 1)$
246 : $P_{4195} = (2, 5, 15, 1)$
247 : $P_{4202} = (9, 5, 15, 1)$
248 : $P_{4203} = (10, 5, 15, 1)$
249 : $P_{4240} = (15, 7, 15, 1)$
250 : $P_{4256} = (15, 8, 15, 1)$
251 : $P_{4275} = (2, 10, 15, 1)$
252 : $P_{4282} = (9, 10, 15, 1)$
253 : $P_{4283} = (10, 10, 15, 1)$
254 : $P_{4297} = (8, 11, 15, 1)$
255 : $P_{4308} = (3, 12, 15, 1)$
256 : $P_{4366} = (13, 15, 15, 1)$