Rank-65873 over GF(16)

January 15, 2021

The equation

The equation of the surface is :

$$X_1^3 + X_2^3 + X_3^3 + X_0^2X_3 + X_1^2X_2 + X_0X_1X_2 = 0$$

(0, 1, 1, 1, 0, 0, 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(16) is 303112741

General information

Number of lines	1
Number of points	273
Number of singular points	1
Number of Eckardt points	0
Number of double points	0
Number of single points	17
Number of points off lines	256
Number of Hesse planes	0
Number of axes	0
Type of points on lines	17
Type of lines on points	1^{17}, 0^{256}

Singular Points

The surface has 1 singular points:

$0 : \ P_{275} = \mathbf{P}(1,0,0,1) = \mathbf{P}(1,0,0,1)$

The 1 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{4385} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{4385} = \mathbf{Pl}(1,1,1,1,1,0)_{1250}$$

Rank of lines: (4385)
Rank of points on Klein quadric: (1250)

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 : $P_{36} = (1, 1, 1, 0)$ lies on line ℓ_0
1 : $P_{275} = (1, 0, 0, 1)$ lies on line ℓ_0
2 : $P_{546} = (0, 1, 1, 1)$ lies on line ℓ_0
3 : $P_{820} = (3, 2, 2, 1)$ lies on line ℓ_0
4 : $P_{1091} = (2, 3, 3, 1)$ lies on line ℓ_0
5 : $P_{1366} = (5, 4, 4, 1)$ lies on line ℓ_0
6 : $P_{1637} = (4, 5, 5, 1)$ lies on line ℓ_0
7 : $P_{1912} = (7, 6, 6, 1)$ lies on line ℓ_0
8 : $P_{2183} = (6, 7, 7, 1)$ lies on line ℓ_0
9 : $P_{2458} = (9, 8, 8, 1)$ lies on line ℓ_0
10 : $P_{2729} = (8, 9, 9, 1)$ lies on line ℓ_0
11 : $P_{3004} = (11, 10, 10, 1)$ lies on line ℓ_0
12 : $P_{3275} = (10, 11, 11, 1)$ lies on line ℓ_0
13 : $P_{3550} = (13, 12, 12, 1)$ lies on line ℓ_0
14 : $P_{3821} = (12, 13, 13, 1)$ lies on line ℓ_0
15 : $P_{4096} = (15, 14, 14, 1)$ lies on line ℓ_0
16 : $P_{4367} = (14, 15, 15, 1)$ lies on line ℓ_0

The single points on the surface are:

Points on surface but on no line

The surface has 256 points not on any line:
The points on the surface but not on lines are:

0 : $P_0 = (1, 0, 0, 0)$
1 : $P_4 = (1, 1, 1, 1)$
2 : $P_{61} = (10, 2, 1, 0)$
3 : $P_{81} = (14, 3, 1, 0)$
4 : $P_{94} = (11, 4, 1, 0)$
5 : $P_{101} = (2, 5, 1, 0)$
6 : $P_{130} = (15, 6, 1, 0)$
7 : $P_{136} = (5, 7, 1, 0)$
8 : $P_{151} = (4, 8, 1, 0)$
9 : $P_{173} = (10, 9, 1, 0)$
10 : $P_{189} = (10, 10, 1, 0)$
11 : $P_{206} = (11, 11, 1, 0)$
12 : $P_{219} = (8, 12, 1, 0)$
13 : $P_{230} = (3, 13, 1, 0)$
14 : $P_{254} = (11, 14, 1, 0)$
15 : $P_{268} = (9, 15, 1, 0)$
16 : $P_{290} = (0, 1, 0, 1)$
17 : $P_{310} = (4, 2, 0, 1)$
18 : $P_{331} = (9, 3, 0, 1)$
19 : $P_{347} = (9, 4, 0, 1)$
20 : $P_{368} = (14, 5, 0, 1)$
21 : $P_{372} = (2, 6, 0, 1)$
22 : $P_{395} = (9, 7, 0, 1)$
23 : $P_{404} = (2, 8, 0, 1)$
24 : $P_{432} = (14, 9, 0, 1)$
25 : $P_{434} = (0, 10, 0, 1)$
26 : $P_{450} = (0, 11, 0, 1)$
27 : $P_{480} = (14, 12, 0, 1)$

28 : $P_{486} = (4, 13, 0, 1)$
29 : $P_{500} = (2, 14, 0, 1)$
30 : $P_{518} = (4, 15, 0, 1)$
31 : $P_{530} = (0, 0, 1, 1)$
32 : $P_{627} = (2, 6, 1, 1)$
33 : $P_{629} = (4, 6, 1, 1)$
34 : $P_{650} = (9, 7, 1, 1)$
35 : $P_{655} = (14, 7, 1, 1)$
36 : $P_{693} = (4, 10, 1, 1)$
37 : $P_{703} = (14, 10, 1, 1)$
38 : $P_{707} = (2, 11, 1, 1)$
39 : $P_{714} = (9, 11, 1, 1)$
40 : $P_{723} = (2, 12, 1, 1)$
41 : $P_{735} = (14, 12, 1, 1)$
42 : $P_{741} = (4, 13, 1, 1)$
43 : $P_{746} = (9, 13, 1, 1)$
44 : $P_{789} = (4, 0, 2, 1)$
45 : $P_{824} = (7, 2, 2, 1)$
46 : $P_{851} = (2, 4, 2, 1)$
47 : $P_{859} = (10, 4, 2, 1)$
48 : $P_{871} = (6, 5, 2, 1)$
49 : $P_{877} = (12, 5, 2, 1)$
50 : $P_{936} = (7, 9, 2, 1)$
51 : $P_{941} = (12, 9, 2, 1)$
52 : $P_{947} = (2, 10, 2, 1)$
53 : $P_{960} = (15, 10, 2, 1)$
54 : $P_{979} = (2, 12, 2, 1)$
55 : $P_{980} = (3, 12, 2, 1)$
56 : $P_{1018} = (9, 14, 2, 1)$
57 : $P_{1021} = (12, 14, 2, 1)$
58 : $P_{1050} = (9, 0, 3, 1)$
59 : $P_{1066} = (9, 1, 3, 1)$
60 : $P_{1067} = (10, 1, 3, 1)$
61 : $P_{1082} = (9, 2, 3, 1)$
62 : $P_{1088} = (15, 2, 3, 1)$
63 : $P_{1096} = (7, 3, 3, 1)$
64 : $P_{1112} = (7, 4, 3, 1)$
65 : $P_{1116} = (11, 4, 3, 1)$
66 : $P_{1193} = (8, 9, 3, 1)$
67 : $P_{1195} = (10, 9, 3, 1)$
68 : $P_{1227} = (10, 11, 3, 1)$
69 : $P_{1231} = (14, 11, 3, 1)$
70 : $P_{1235} = (2, 12, 3, 1)$
71 : $P_{1248} = (15, 12, 3, 1)$
72 : $P_{1250} = (1, 13, 3, 1)$
73 : $P_{1264} = (15, 13, 3, 1)$
74 : $P_{1306} = (9, 0, 4, 1)$
75 : $P_{1335} = (6, 2, 4, 1)$
76 : $P_{1343} = (14, 2, 4, 1)$
77 : $P_{1373} = (12, 4, 4, 1)$
78 : $P_{1397} = (4, 6, 4, 1)$
79 : $P_{1398} = (5, 6, 4, 1)$
80 : $P_{1431} = (6, 8, 4, 1)$
81 : $P_{1438} = (13, 8, 4, 1)$
82 : $P_{1445} = (4, 9, 4, 1)$
83 : $P_{1452} = (11, 9, 4, 1)$
84 : $P_{1476} = (3, 11, 4, 1)$
85 : $P_{1477} = (4, 11, 4, 1)$
86 : $P_{1527} = (6, 14, 4, 1)$
87 : $P_{1533} = (12, 14, 4, 1)$
88 : $P_{1567} = (14, 0, 5, 1)$
89 : $P_{1580} = (11, 1, 5, 1)$
90 : $P_{1583} = (14, 1, 5, 1)$
91 : $P_{1620} = (3, 4, 5, 1)$
92 : $P_{1631} = (14, 4, 5, 1)$
93 : $P_{1645} = (12, 5, 5, 1)$
94 : $P_{1652} = (3, 6, 5, 1)$
95 : $P_{1653} = (4, 6, 5, 1)$
96 : $P_{1666} = (1, 7, 5, 1)$
97 : $P_{1668} = (3, 7, 5, 1)$
98 : $P_{1707} = (10, 9, 5, 1)$
99 : $P_{1709} = (12, 9, 5, 1)$
100 : $P_{1715} = (2, 10, 5, 1)$
101 : $P_{1724} = (11, 10, 5, 1)$
102 : $P_{1788} = (11, 14, 5, 1)$
103 : $P_{1792} = (15, 14, 5, 1)$
104 : $P_{1811} = (2, 0, 6, 1)$
105 : $P_{1842} = (1, 2, 6, 1)$
106 : $P_{1854} = (13, 2, 6, 1)$
107 : $P_{1897} = (8, 5, 6, 1)$
108 : $P_{1904} = (15, 5, 6, 1)$
109 : $P_{1915} = (10, 6, 6, 1)$
110 : $P_{1963} = (10, 9, 6, 1)$
111 : $P_{1967} = (14, 9, 6, 1)$
112 : $P_{1976} = (7, 10, 6, 1)$
113 : $P_{1978} = (9, 10, 6, 1)$
114 : $P_{1990} = (5, 11, 6, 1)$
115 : $P_{1998} = (13, 11, 6, 1)$
116 : $P_{2036} = (3, 14, 6, 1)$
117 : $P_{2045} = (12, 14, 6, 1)$
118 : $P_{2053} = (4, 15, 6, 1)$
119 : $P_{2062} = (13, 15, 6, 1)$
120 : $P_{2074} = (9, 0, 7, 1)$
121 : $P_{2101} = (4, 2, 7, 1)$
122 : $P_{2107} = (10, 2, 7, 1)$
123 : $P_{2137} = (8, 4, 7, 1)$
124 : $P_{2142} = (13, 4, 7, 1)$
125 : $P_{2157} = (12, 5, 7, 1)$
126 : $P_{2159} = (14, 5, 7, 1)$
127 : $P_{2187} = (10, 7, 7, 1)$
128 : $P_{2210} = (1, 9, 7, 1)$
129 : $P_{2221} = (12, 9, 7, 1)$
130 : $P_{2227} = (2, 10, 7, 1)$
131 : $P_{2231} = (6, 10, 7, 1)$
132 : $P_{2253} = (12, 11, 7, 1)$
133 : $P_{2256} = (15, 11, 7, 1)$
134 : $P_{2308} = (3, 15, 7, 1)$
135 : $P_{2310} = (5, 15, 7, 1)$

136 : $P_{2323} = (2, 0, 8, 1)$
137 : $P_{2339} = (2, 1, 8, 1)$
138 : $P_{2347} = (10, 1, 8, 1)$
139 : $P_{2356} = (3, 2, 8, 1)$
140 : $P_{2363} = (10, 2, 8, 1)$
141 : $P_{2455} = (6, 8, 8, 1)$
142 : $P_{2467} = (2, 9, 8, 1)$
143 : $P_{2470} = (5, 9, 8, 1)$
144 : $P_{2501} = (4, 11, 8, 1)$
145 : $P_{2507} = (10, 11, 8, 1)$
146 : $P_{2514} = (1, 12, 8, 1)$
147 : $P_{2518} = (5, 12, 8, 1)$
148 : $P_{2534} = (5, 13, 8, 1)$
149 : $P_{2538} = (9, 13, 8, 1)$
150 : $P_{2551} = (6, 14, 8, 1)$
151 : $P_{2556} = (11, 14, 8, 1)$
152 : $P_{2591} = (14, 0, 9, 1)$
153 : $P_{2615} = (6, 2, 9, 1)$
154 : $P_{2622} = (13, 2, 9, 1)$
155 : $P_{2643} = (2, 4, 9, 1)$
156 : $P_{2654} = (13, 4, 9, 1)$
157 : $P_{2727} = (6, 9, 9, 1)$
158 : $P_{2742} = (5, 10, 9, 1)$
159 : $P_{2746} = (9, 10, 9, 1)$
160 : $P_{2793} = (8, 13, 9, 1)$
161 : $P_{2794} = (9, 13, 9, 1)$
162 : $P_{2810} = (9, 14, 9, 1)$
163 : $P_{2811} = (10, 14, 9, 1)$
164 : $P_{2824} = (7, 15, 9, 1)$
165 : $P_{2830} = (13, 15, 9, 1)$
166 : $P_{2833} = (0, 0, 10, 1)$
167 : $P_{2850} = (1, 1, 10, 1)$
168 : $P_{2860} = (11, 1, 10, 1)$
169 : $P_{2868} = (3, 2, 10, 1)$
170 : $P_{2879} = (14, 2, 10, 1)$
171 : $P_{2882} = (1, 3, 10, 1)$
172 : $P_{2887} = (6, 3, 10, 1)$
173 : $P_{2962} = (1, 8, 10, 1)$
174 : $P_{2968} = (7, 8, 10, 1)$
175 : $P_{2981} = (4, 9, 10, 1)$
176 : $P_{2985} = (8, 9, 10, 1)$
177 : $P_{2993} = (0, 10, 10, 1)$
178 : $P_{3021} = (12, 11, 10, 1)$
179 : $P_{3022} = (13, 11, 10, 1)$
180 : $P_{3089} = (0, 0, 11, 1)$
181 : $P_{3106} = (1, 1, 11, 1)$
182 : $P_{3115} = (10, 1, 11, 1)$
183 : $P_{3155} = (2, 4, 11, 1)$
184 : $P_{3158} = (5, 4, 11, 1)$
185 : $P_{3170} = (1, 5, 11, 1)$
186 : $P_{3182} = (13, 5, 11, 1)$
187 : $P_{3255} = (6, 10, 11, 1)$
188 : $P_{3256} = (7, 10, 11, 1)$
189 : $P_{3265} = (0, 11, 11, 1)$
190 : $P_{3322} = (9, 14, 11, 1)$
191 : $P_{3328} = (15, 14, 11, 1)$
192 : $P_{3330} = (1, 15, 11, 1)$
193 : $P_{3341} = (12, 15, 11, 1)$
194 : $P_{3359} = (14, 0, 12, 1)$
195 : $P_{3398} = (5, 3, 12, 1)$
196 : $P_{3401} = (8, 3, 12, 1)$
197 : $P_{3418} = (9, 4, 12, 1)$
198 : $P_{3420} = (11, 4, 12, 1)$
199 : $P_{3475} = (2, 8, 12, 1)$
200 : $P_{3479} = (6, 8, 12, 1)$
201 : $P_{3496} = (7, 9, 12, 1)$
202 : $P_{3504} = (15, 9, 12, 1)$
203 : $P_{3508} = (3, 10, 12, 1)$
204 : $P_{3511} = (6, 10, 12, 1)$
205 : $P_{3525} = (4, 11, 12, 1)$
206 : $P_{3534} = (13, 11, 12, 1)$
207 : $P_{3548} = (11, 12, 12, 1)$
208 : $P_{3570} = (1, 14, 12, 1)$
209 : $P_{3575} = (6, 14, 12, 1)$
210 : $P_{3605} = (4, 0, 13, 1)$
211 : $P_{3638} = (5, 2, 13, 1)$
212 : $P_{3639} = (6, 2, 13, 1)$
213 : $P_{3656} = (7, 3, 13, 1)$
214 : $P_{3658} = (9, 3, 13, 1)$
215 : $P_{3666} = (1, 4, 13, 1)$
216 : $P_{3672} = (7, 4, 13, 1)$
217 : $P_{3732} = (3, 8, 13, 1)$
218 : $P_{3744} = (15, 8, 13, 1)$
219 : $P_{3768} = (7, 10, 13, 1)$
220 : $P_{3769} = (8, 10, 13, 1)$
221 : $P_{3789} = (12, 11, 13, 1)$
222 : $P_{3791} = (14, 11, 13, 1)$
223 : $P_{3820} = (11, 13, 13, 1)$
224 : $P_{3827} = (2, 14, 13, 1)$
225 : $P_{3836} = (11, 14, 13, 1)$
226 : $P_{3859} = (2, 0, 14, 1)$
227 : $P_{3900} = (11, 2, 14, 1)$
228 : $P_{3903} = (14, 2, 14, 1)$
229 : $P_{3912} = (7, 3, 14, 1)$
230 : $P_{3917} = (12, 3, 14, 1)$
231 : $P_{3928} = (7, 4, 14, 1)$
232 : $P_{3934} = (13, 4, 14, 1)$
233 : $P_{3983} = (14, 7, 14, 1)$
234 : $P_{3984} = (15, 7, 14, 1)$
235 : $P_{4005} = (4, 9, 14, 1)$
236 : $P_{4008} = (7, 9, 14, 1)$
237 : $P_{4041} = (8, 11, 14, 1)$
238 : $P_{4047} = (14, 11, 14, 1)$
239 : $P_{4094} = (13, 14, 14, 1)$
240 : $P_{4117} = (4, 0, 15, 1)$
241 : $P_{4133} = (4, 1, 15, 1)$
242 : $P_{4140} = (11, 1, 15, 1)$
243 : $P_{4155} = (10, 2, 15, 1)$

244 : $P_{4158} = (13, 2, 15, 1)$
245 : $P_{4182} = (5, 4, 15, 1)$
246 : $P_{4188} = (11, 4, 15, 1)$
247 : $P_{4210} = (1, 6, 15, 1)$
248 : $P_{4217} = (8, 6, 15, 1)$
249 : $P_{4233} = (8, 7, 15, 1)$
250 : $P_{4239} = (14, 7, 15, 1)$
251 : $P_{4282} = (9, 10, 15, 1)$
252 : $P_{4284} = (11, 10, 15, 1)$
253 : $P_{4341} = (4, 14, 15, 1)$
254 : $P_{4345} = (8, 14, 15, 1)$
255 : $P_{4366} = (13, 15, 15, 1)$

Line Intersection Graph

	0
0	0

Neighbor sets in the line intersection graph:
Line 0 intersects

Line
in point

The surface has 273 points:
The points on the surface are:

0 : $P_{0} = (1, 0, 0, 0)$
1 : $P_{4} = (1, 1, 1, 1)$
2 : $P_{36} = (1, 1, 1, 0)$
3 : $P_{61} = (10, 2, 1, 0)$
4 : $P_{81} = (14, 3, 1, 0)$
5 : $P_{94} = (11, 4, 1, 0)$
6 : $P_{101} = (2, 5, 1, 0)$
7 : $P_{130} = (15, 6, 1, 0)$
8 : $P_{136} = (5, 7, 1, 0)$
9 : $P_{151} = (4, 8, 1, 0)$
10 : $P_{173} = (10, 9, 1, 0)$
11 : $P_{189} = (10, 10, 1, 0)$
12 : $P_{206} = (11, 11, 1, 0)$
13 : $P_{219} = (8, 12, 1, 0)$
14 : $P_{230} = (3, 13, 1, 0)$
15 : $P_{254} = (11, 14, 1, 0)$
16 : $P_{268} = (9, 15, 1, 0)$
17 : $P_{275} = (1, 0, 0, 1)$
18 : $P_{290} = (0, 1, 0, 1)$
19 : $P_{310} = (4, 2, 0, 1)$
20 : $P_{331} = (9, 3, 0, 1)$
21 : $P_{347} = (9, 4, 0, 1)$
22 : $P_{368} = (14, 5, 0, 1)$
23 : $P_{372} = (2, 6, 0, 1)$
24 : $P_{395} = (9, 7, 0, 1)$
25 : $P_{404} = (2, 8, 0, 1)$
26 : $P_{432} = (14, 9, 0, 1)$
27 : $P_{434} = (0, 10, 0, 1)$
28 : $P_{450} = (0, 11, 0, 1)$
29 : $P_{480} = (14, 12, 0, 1)$
30 : $P_{486} = (4, 13, 0, 1)$
31 : $P_{500} = (2, 14, 0, 1)$
32 : $P_{518} = (4, 15, 0, 1)$
33 : $P_{530} = (0, 0, 1, 1)$
34 : $P_{546} = (0, 1, 1, 1)$
35 : $P_{627} = (2, 6, 1, 1)$
36 : $P_{629} = (4, 6, 1, 1)$
37 : $P_{650} = (9, 7, 1, 1)$
38 : $P_{655} = (14, 7, 1, 1)$
39 : $P_{693} = (4, 10, 1, 1)$
40 : $P_{703} = (14, 10, 1, 1)$
41 : $P_{707} = (2, 11, 1, 1)$
42 : $P_{714} = (9, 11, 1, 1)$
43 : $P_{723} = (2, 12, 1, 1)$
44 : $P_{735} = (14, 12, 1, 1)$
45 : $P_{741} = (4, 13, 1, 1)$
46 : $P_{746} = (9, 13, 1, 1)$
47 : $P_{789} = (4, 0, 2, 1)$
48 : $P_{820} = (3, 2, 2, 1)$
49 : $P_{824} = (7, 2, 2, 1)$
50 : $P_{851} = (2, 4, 2, 1)$
51 : $P_{859} = (10, 4, 2, 1)$
52 : $P_{871} = (6, 5, 2, 1)$
53 : $P_{877} = (12, 5, 2, 1)$
54 : $P_{936} = (7, 9, 2, 1)$
55 : $P_{941} = (12, 9, 2, 1)$
56 : $P_{947} = (2, 10, 2, 1)$
57 : $P_{960} = (15, 10, 2, 1)$
58 : $P_{979} = (2, 12, 2, 1)$
59 : $P_{980} = (3, 12, 2, 1)$
60 : $P_{1018} = (9, 14, 2, 1)$
61 : $P_{1021} = (12, 14, 2, 1)$
62 : $P_{1050} = (9, 0, 3, 1)$
63 : $P_{1066} = (9, 1, 3, 1)$
64 : $P_{1067} = (10, 1, 3, 1)$
65 : $P_{1082} = (9, 2, 3, 1)$
66 : $P_{1088} = (15, 2, 3, 1)$
67 : $P_{1091} = (2, 3, 3, 1)$
68 : $P_{1096} = (7, 3, 3, 1)$
69 : $P_{1112} = (7, 4, 3, 1)$
70 : $P_{1116} = (11, 4, 3, 1)$
71 : $P_{1193} = (8, 9, 3, 1)$
72 : $P_{1195} = (10, 9, 3, 1)$
73 : $P_{1227} = (10, 11, 3, 1)$
74 : $P_{1231} = (14, 11, 3, 1)$
75 : $P_{1235} = (2, 12, 3, 1)$
76 : $P_{1248} = (15, 12, 3, 1)$
77 : $P_{1250} = (1, 13, 3, 1)$
78 : $P_{1264} = (15, 13, 3, 1)$
79 : $P_{1306} = (9, 0, 4, 1)$
80 : $P_{1335} = (6, 2, 4, 1)$
81 : $P_{1343} = (14, 2, 4, 1)$
82 : $P_{1366} = (5, 4, 4, 1)$
83 : $P_{1373} = (12, 4, 4, 1)$
84 : $P_{1397} = (4, 6, 4, 1)$
85 : $P_{1398} = (5, 6, 4, 1)$
86 : $P_{1431} = (6, 8, 4, 1)$
87 : $P_{1438} = (13, 8, 4, 1)$
88 : $P_{1445} = (4, 9, 4, 1)$
89 : $P_{1452} = (11, 9, 4, 1)$
90 : $P_{1476} = (3, 11, 4, 1)$
91 : $P_{1477} = (4, 11, 4, 1)$
92 : $P_{1527} = (6, 14, 4, 1)$
93 : $P_{1533} = (12, 14, 4, 1)$
94 : $P_{1567} = (14, 0, 5, 1)$
95 : $P_{1580} = (11, 1, 5, 1)$
96 : $P_{1583} = (14, 1, 5, 1)$
97 : $P_{1620} = (3, 4, 5, 1)$
98 : $P_{1631} = (14, 4, 5, 1)$

$99: P_{1637} = (4, 5, 5, 1)$
$100: P_{1645} = (12, 5, 5, 1)$
$101: P_{1652} = (3, 6, 5, 1)$
$102: P_{1653} = (4, 6, 5, 1)$
$103: P_{1666} = (1, 7, 5, 1)$
$104: P_{1668} = (3, 7, 5, 1)$
$105: P_{1707} = (10, 9, 5, 1)$
$106: P_{1709} = (12, 9, 5, 1)$
$107: P_{1715} = (2, 10, 5, 1)$
$108: P_{1724} = (11, 10, 5, 1)$
$109: P_{1788} = (11, 14, 5, 1)$
$110: P_{1792} = (15, 14, 5, 1)$
$111: P_{1811} = (2, 0, 6, 1)$
$112: P_{1842} = (1, 2, 6, 1)$
$113: P_{1854} = (13, 2, 6, 1)$
$114: P_{1897} = (8, 5, 6, 1)$
$115: P_{1904} = (15, 5, 6, 1)$
$116: P_{1912} = (7, 6, 6, 1)$
$117: P_{1915} = (10, 6, 6, 1)$
$118: P_{1963} = (10, 9, 6, 1)$
$119: P_{1967} = (14, 9, 6, 1)$
$120: P_{1976} = (7, 10, 6, 1)$
$121: P_{1978} = (9, 10, 6, 1)$
$122: P_{1990} = (5, 11, 6, 1)$
$123: P_{1998} = (13, 11, 6, 1)$
$124: P_{2036} = (3, 14, 6, 1)$
$125: P_{2045} = (12, 14, 6, 1)$
$126: P_{2053} = (4, 15, 6, 1)$
$127: P_{2062} = (13, 15, 6, 1)$
$128: P_{2074} = (9, 0, 7, 1)$
$129: P_{2101} = (4, 2, 7, 1)$
$130: P_{2107} = (10, 2, 7, 1)$
$131: P_{2137} = (8, 4, 7, 1)$
$132: P_{2142} = (13, 4, 7, 1)$
$133: P_{2157} = (12, 5, 7, 1)$
$134: P_{2159} = (14, 5, 7, 1)$
$135: P_{2183} = (6, 7, 7, 1)$
$136: P_{2187} = (10, 7, 7, 1)$
$137: P_{2210} = (1, 9, 7, 1)$
$138: P_{2221} = (12, 9, 7, 1)$
$139: P_{2227} = (2, 10, 7, 1)$
$140: P_{2231} = (6, 10, 7, 1)$
$141: P_{2253} = (12, 11, 7, 1)$
$142: P_{2256} = (15, 11, 7, 1)$
$143: P_{2308} = (3, 15, 7, 1)$
$144: P_{2310} = (5, 15, 7, 1)$
$145: P_{2323} = (2, 0, 8, 1)$
$146: P_{2339} = (2, 1, 8, 1)$
$147: P_{2347} = (10, 1, 8, 1)$
$148: P_{2356} = (3, 2, 8, 1)$
$149: P_{2363} = (10, 2, 8, 1)$
$150: P_{2455} = (6, 8, 8, 1)$
$151: P_{2458} = (9, 8, 8, 1)$
$152: P_{2467} = (2, 9, 8, 1)$
$153: P_{2470} = (5, 9, 8, 1)$
$154: P_{2501} = (4, 11, 8, 1)$
$155: P_{2507} = (10, 11, 8, 1)$
$156: P_{2514} = (1, 12, 8, 1)$
$157: P_{2518} = (5, 12, 8, 1)$
$158: P_{2534} = (5, 13, 8, 1)$
$159: P_{2538} = (9, 13, 8, 1)$
$160: P_{2551} = (6, 14, 8, 1)$
$161: P_{2556} = (11, 14, 8, 1)$
$162: P_{2591} = (14, 0, 9, 1)$
$163: P_{2615} = (6, 2, 9, 1)$
$164: P_{2622} = (13, 2, 9, 1)$
$165: P_{2643} = (2, 4, 9, 1)$
$166: P_{2654} = (13, 4, 9, 1)$
$167: P_{2727} = (6, 9, 9, 1)$
$168: P_{2729} = (8, 9, 9, 1)$
$169: P_{2742} = (5, 10, 9, 1)$
$170: P_{2746} = (9, 10, 9, 1)$
$171: P_{2793} = (8, 13, 9, 1)$
$172: P_{2794} = (9, 13, 9, 1)$
$173: P_{2810} = (9, 14, 9, 1)$
$174: P_{2811} = (10, 14, 9, 1)$
$175: P_{2824} = (7, 15, 9, 1)$
$176: P_{2830} = (13, 15, 9, 1)$
$177: P_{2833} = (0, 0, 10, 1)$
$178: P_{2850} = (1, 1, 10, 1)$
$179: P_{2860} = (11, 1, 10, 1)$
$180: P_{2868} = (3, 2, 10, 1)$
$181: P_{2879} = (14, 2, 10, 1)$
$182: P_{2882} = (1, 3, 10, 1)$
$183: P_{2887} = (6, 3, 10, 1)$
$184: P_{2962} = (1, 8, 10, 1)$
$185: P_{2968} = (7, 8, 10, 1)$
$186: P_{2981} = (4, 9, 10, 1)$
$187: P_{2985} = (8, 9, 10, 1)$
$188: P_{2993} = (0, 10, 10, 1)$
$189: P_{3004} = (11, 10, 10, 1)$
$190: P_{3021} = (12, 11, 10, 1)$
$191: P_{3022} = (13, 11, 10, 1)$
$192: P_{3089} = (0, 0, 11, 1)$
$193: P_{3106} = (1, 1, 11, 1)$
$194: P_{3115} = (10, 1, 11, 1)$
$195: P_{3155} = (2, 4, 11, 1)$
$196: P_{3158} = (5, 4, 11, 1)$
$197: P_{3170} = (1, 5, 11, 1)$
$198: P_{3182} = (13, 5, 11, 1)$
$199: P_{3255} = (6, 10, 11, 1)$
$200: P_{3256} = (7, 10, 11, 1)$
$201: P_{3265} = (0, 11, 11, 1)$
$202: P_{3275} = (10, 11, 11, 1)$
$203: P_{3322} = (9, 14, 11, 1)$
$204: P_{3328} = (15, 14, 11, 1)$
$205: P_{3330} = (1, 15, 11, 1)$
$206: P_{3341} = (12, 15, 11, 1)$
$207: P_{3359} = (14, 0, 12, 1)$
$208: P_{3398} = (5, 3, 12, 1)$
$209: P_{3401} = (8, 3, 12, 1)$
$210: P_{3418} = (9, 4, 12, 1)$
$211: P_{3420} = (11, 4, 12, 1)$
$212: P_{3475} = (2, 8, 12, 1)$
$213: P_{3479} = (6, 8, 12, 1)$
$214: P_{3496} = (7, 9, 12, 1)$
$215: P_{3504} = (15, 9, 12, 1)$
$216: P_{3508} = (3, 10, 12, 1)$
$217: P_{3511} = (6, 10, 12, 1)$
$218: P_{3525} = (4, 11, 12, 1)$
$219: P_{3534} = (13, 11, 12, 1)$
$220: P_{3548} = (11, 12, 12, 1)$
$221: P_{3550} = (13, 12, 12, 1)$
$222: P_{3570} = (1, 14, 12, 1)$
$223: P_{3575} = (6, 14, 12, 1)$
$224: P_{3605} = (4, 0, 13, 1)$
$225: P_{3638} = (5, 2, 13, 1)$
$226: P_{3639} = (6, 2, 13, 1)$
$227: P_{3656} = (7, 3, 13, 1)$
$228: P_{3658} = (9, 3, 13, 1)$
$229: P_{3666} = (1, 4, 13, 1)$
$230: P_{3672} = (7, 4, 13, 1)$
$231: P_{3732} = (3, 8, 13, 1)$
$232: P_{3744} = (15, 8, 13, 1)$
$233: P_{3768} = (7, 10, 13, 1)$
$234: P_{3769} = (8, 10, 13, 1)$
$235: P_{3789} = (12, 11, 13, 1)$
$236: P_{3791} = (14, 11, 13, 1)$
$237: P_{3820} = (11, 13, 13, 1)$
$238: P_{3821} = (12, 13, 13, 1)$
$239: P_{3827} = (2, 14, 13, 1)$
$240: P_{3836} = (11, 14, 13, 1)$
$241: P_{3859} = (2, 0, 14, 1)$
$242: P_{3900} = (11, 2, 14, 1)$
$243: P_{3903} = (14, 2, 14, 1)$
$244: P_{3912} = (7, 3, 14, 1)$
$245: P_{3917} = (12, 3, 14, 1)$
$246: P_{3928} = (7, 4, 14, 1)$
$247: P_{3934} = (13, 4, 14, 1)$
$248: P_{3983} = (14, 7, 14, 1)$
$249: P_{3984} = (15, 7, 14, 1)$
$250: P_{4005} = (4, 9, 14, 1)$
$251: P_{4008} = (7, 9, 14, 1)$
$252: P_{4041} = (8, 11, 14, 1)$
$253: P_{4047} = (14, 11, 14, 1)$
$254: P_{4094} = (13, 14, 14, 1)$
$255: P_{4096} = (15, 14, 14, 1)$
$256: P_{4117} = (4, 0, 15, 1)$
$257: P_{4133} = (4, 1, 15, 1)$
$258: P_{4140} = (11, 1, 15, 1)$
$259: P_{4155} = (10, 2, 15, 1)$
$260: P_{4158} = (13, 2, 15, 1)$

261 : $P_{4182} = (5, 4, 15, 1)$
262 : $P_{4188} = (11, 4, 15, 1)$
263 : $P_{4210} = (1, 6, 15, 1)$
264 : $P_{4217} = (8, 6, 15, 1)$
265 : $P_{4233} = (8, 7, 15, 1)$
266 : $P_{4239} = (14, 7, 15, 1)$
267 : $P_{4282} = (9, 10, 15, 1)$
268 : $P_{4284} = (11, 10, 15, 1)$
269 : $P_{4341} = (4, 14, 15, 1)$
270 : $P_{4345} = (8, 14, 15, 1)$
271 : $P_{4366} = (13, 15, 15, 1)$
272 : $P_{4367} = (14, 15, 15, 1)$