

Rank-337 over GF(16)

January 15, 2021

The equation

The equation of the surface is :

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

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

The point rank of the equation over GF(16) is 303108653

General information

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

Singular Points

The surface has 1 singular points:

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

The 0 Lines

The lines and their Pluecker coordinates are:

Rank of lines: ()

Rank of points on Klein quadric: ()

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 0 single points:

The single points on the surface are:

The single points on the surface are:

Points on surface but on no line

The surface has 257 points not on any line:

The points on the surface but not on lines are:

0 : $P_0 = (1, 0, 0, 0)$	27 : $P_{699} = (10, 10, 1, 1)$
1 : $P_3 = (0, 0, 0, 1)$	28 : $P_{716} = (11, 11, 1, 1)$
2 : $P_4 = (1, 1, 1, 1)$	29 : $P_{723} = (2, 12, 1, 1)$
3 : $P_{291} = (1, 1, 0, 1)$	30 : $P_{746} = (9, 13, 1, 1)$
4 : $P_{311} = (5, 2, 0, 1)$	31 : $P_{765} = (12, 14, 1, 1)$
5 : $P_{330} = (8, 3, 0, 1)$	32 : $P_{780} = (11, 15, 1, 1)$
6 : $P_{346} = (8, 4, 0, 1)$	33 : $P_{790} = (5, 0, 2, 1)$
7 : $P_{369} = (15, 5, 0, 1)$	34 : $P_{811} = (10, 1, 2, 1)$
8 : $P_{373} = (3, 6, 0, 1)$	35 : $P_{822} = (5, 2, 2, 1)$
9 : $P_{394} = (8, 7, 0, 1)$	36 : $P_{839} = (6, 3, 2, 1)$
10 : $P_{405} = (3, 8, 0, 1)$	37 : $P_{856} = (7, 4, 2, 1)$
11 : $P_{433} = (15, 9, 0, 1)$	38 : $P_{879} = (14, 5, 2, 1)$
12 : $P_{435} = (1, 10, 0, 1)$	39 : $P_{890} = (9, 6, 2, 1)$
13 : $P_{451} = (1, 11, 0, 1)$	40 : $P_{909} = (12, 7, 2, 1)$
14 : $P_{481} = (15, 12, 0, 1)$	41 : $P_{924} = (11, 8, 2, 1)$
15 : $P_{487} = (5, 13, 0, 1)$	42 : $P_{938} = (9, 9, 2, 1)$
16 : $P_{501} = (3, 14, 0, 1)$	43 : $P_{957} = (12, 10, 2, 1)$
17 : $P_{519} = (5, 15, 0, 1)$	44 : $P_{963} = (2, 11, 2, 1)$
18 : $P_{531} = (1, 0, 1, 1)$	45 : $P_{990} = (13, 12, 2, 1)$
19 : $P_{567} = (6, 2, 1, 1)$	46 : $P_{1002} = (9, 13, 2, 1)$
20 : $P_{587} = (10, 3, 1, 1)$	47 : $P_{1013} = (4, 14, 2, 1)$
21 : $P_{606} = (13, 4, 1, 1)$	48 : $P_{1037} = (12, 15, 2, 1)$
22 : $P_{620} = (11, 5, 1, 1)$	49 : $P_{1049} = (8, 0, 3, 1)$
23 : $P_{629} = (4, 6, 1, 1)$	50 : $P_{1063} = (6, 1, 3, 1)$
24 : $P_{655} = (14, 7, 1, 1)$	51 : $P_{1083} = (10, 2, 3, 1)$
25 : $P_{667} = (10, 8, 1, 1)$	52 : $P_{1097} = (8, 3, 3, 1)$
26 : $P_{680} = (7, 9, 1, 1)$	53 : $P_{1119} = (14, 4, 3, 1)$

54 : $P_{1127} = (6, 5, 3, 1)$	108 : $P_{1996} = (11, 11, 6, 1)$
55 : $P_{1139} = (2, 6, 3, 1)$	109 : $P_{2011} = (10, 12, 6, 1)$
56 : $P_{1159} = (6, 7, 3, 1)$	110 : $P_{2029} = (12, 13, 6, 1)$
57 : $P_{1183} = (14, 8, 3, 1)$	111 : $P_{2040} = (7, 14, 6, 1)$
58 : $P_{1198} = (13, 9, 3, 1)$	112 : $P_{2062} = (13, 15, 6, 1)$
59 : $P_{1212} = (11, 10, 3, 1)$	113 : $P_{2073} = (8, 0, 7, 1)$
60 : $P_{1221} = (4, 11, 3, 1)$	114 : $P_{2085} = (4, 1, 7, 1)$
61 : $P_{1245} = (12, 12, 3, 1)$	115 : $P_{2111} = (14, 2, 7, 1)$
62 : $P_{1258} = (9, 13, 3, 1)$	116 : $P_{2127} = (14, 3, 7, 1)$
63 : $P_{1272} = (7, 14, 3, 1)$	117 : $P_{2135} = (6, 4, 7, 1)$
64 : $P_{1295} = (14, 15, 3, 1)$	118 : $P_{2157} = (12, 5, 7, 1)$
65 : $P_{1305} = (8, 0, 4, 1)$	119 : $P_{2175} = (14, 6, 7, 1)$
66 : $P_{1324} = (11, 1, 4, 1)$	120 : $P_{2185} = (8, 7, 7, 1)$
67 : $P_{1338} = (9, 2, 4, 1)$	121 : $P_{2200} = (7, 8, 7, 1)$
68 : $P_{1351} = (6, 3, 4, 1)$	122 : $P_{2215} = (6, 9, 7, 1)$
69 : $P_{1369} = (8, 4, 4, 1)$	123 : $P_{2231} = (6, 10, 7, 1)$
70 : $P_{1390} = (13, 5, 4, 1)$	124 : $P_{2252} = (11, 11, 7, 1)$
71 : $P_{1400} = (7, 6, 4, 1)$	125 : $P_{2270} = (13, 12, 7, 1)$
72 : $P_{1423} = (14, 7, 4, 1)$	126 : $P_{2283} = (10, 13, 7, 1)$
73 : $P_{1427} = (2, 8, 4, 1)$	127 : $P_{2291} = (2, 14, 7, 1)$
74 : $P_{1453} = (12, 9, 4, 1)$	128 : $P_{2314} = (9, 15, 7, 1)$
75 : $P_{1461} = (4, 10, 4, 1)$	129 : $P_{2324} = (3, 0, 8, 1)$
76 : $P_{1479} = (6, 11, 4, 1)$	130 : $P_{2344} = (7, 1, 8, 1)$
77 : $P_{1495} = (6, 12, 4, 1)$	131 : $P_{2365} = (12, 2, 8, 1)$
78 : $P_{1519} = (14, 13, 4, 1)$	132 : $P_{2373} = (4, 3, 8, 1)$
79 : $P_{1535} = (14, 14, 4, 1)$	133 : $P_{2391} = (6, 4, 8, 1)$
80 : $P_{1547} = (10, 15, 4, 1)$	134 : $P_{2405} = (4, 5, 8, 1)$
81 : $P_{1568} = (15, 0, 5, 1)$	135 : $P_{2424} = (7, 6, 8, 1)$
82 : $P_{1582} = (13, 1, 5, 1)$	136 : $P_{2442} = (9, 7, 8, 1)$
83 : $P_{1597} = (12, 2, 5, 1)$	137 : $P_{2452} = (3, 8, 8, 1)$
84 : $P_{1603} = (2, 3, 5, 1)$	138 : $P_{2475} = (10, 9, 8, 1)$
85 : $P_{1628} = (11, 4, 5, 1)$	139 : $P_{2492} = (11, 10, 8, 1)$
86 : $P_{1648} = (15, 5, 5, 1)$	140 : $P_{2511} = (14, 11, 8, 1)$
87 : $P_{1655} = (6, 6, 5, 1)$	141 : $P_{2515} = (2, 12, 8, 1)$
88 : $P_{1679} = (14, 7, 5, 1)$	142 : $P_{2542} = (13, 13, 8, 1)$
89 : $P_{1694} = (13, 8, 5, 1)$	143 : $P_{2549} = (4, 14, 8, 1)$
90 : $P_{1699} = (2, 9, 5, 1)$	144 : $P_{2568} = (7, 15, 8, 1)$
91 : $P_{1722} = (9, 10, 5, 1)$	145 : $P_{2592} = (15, 0, 9, 1)$
92 : $P_{1739} = (10, 11, 5, 1)$	146 : $P_{2603} = (10, 1, 9, 1)$
93 : $P_{1758} = (13, 12, 5, 1)$	147 : $P_{2611} = (2, 2, 9, 1)$
94 : $P_{1765} = (4, 13, 5, 1)$	148 : $P_{2636} = (11, 3, 9, 1)$
95 : $P_{1784} = (7, 14, 5, 1)$	149 : $P_{2655} = (14, 4, 9, 1)$
96 : $P_{1795} = (2, 15, 5, 1)$	150 : $P_{2670} = (13, 5, 9, 1)$
97 : $P_{1812} = (3, 0, 6, 1)$	151 : $P_{2686} = (13, 6, 9, 1)$
98 : $P_{1839} = (14, 1, 6, 1)$	152 : $P_{2691} = (2, 7, 9, 1)$
99 : $P_{1848} = (7, 2, 6, 1)$	153 : $P_{2712} = (7, 8, 9, 1)$
100 : $P_{1863} = (6, 3, 6, 1)$	154 : $P_{2736} = (15, 9, 9, 1)$
101 : $P_{1882} = (9, 4, 6, 1)$	155 : $P_{2750} = (13, 10, 9, 1)$
102 : $P_{1891} = (2, 5, 6, 1)$	156 : $P_{2762} = (9, 11, 9, 1)$
103 : $P_{1908} = (3, 6, 6, 1)$	157 : $P_{2771} = (2, 12, 9, 1)$
104 : $P_{1925} = (4, 7, 6, 1)$	158 : $P_{2797} = (12, 13, 9, 1)$
105 : $P_{1941} = (4, 8, 6, 1)$	159 : $P_{2807} = (6, 14, 9, 1)$
106 : $P_{1957} = (4, 9, 6, 1)$	160 : $P_{2821} = (4, 15, 9, 1)$
107 : $P_{1976} = (7, 10, 6, 1)$	161 : $P_{2834} = (1, 0, 10, 1)$

162 : $P_{2860} = (11, 1, 10, 1)$	210 : $P_{3619} = (2, 1, 13, 1)$
163 : $P_{2876} = (11, 2, 10, 1)$	211 : $P_{3645} = (12, 2, 13, 1)$
164 : $P_{2894} = (13, 3, 10, 1)$	212 : $P_{3656} = (7, 3, 13, 1)$
165 : $P_{2911} = (14, 4, 10, 1)$	213 : $P_{3677} = (12, 4, 13, 1)$
166 : $P_{2915} = (2, 5, 10, 1)$	214 : $P_{3694} = (13, 5, 13, 1)$
167 : $P_{2939} = (10, 6, 10, 1)$	215 : $P_{3708} = (11, 6, 13, 1)$
168 : $P_{2955} = (10, 7, 10, 1)$	216 : $P_{3719} = (6, 7, 13, 1)$
169 : $P_{2973} = (12, 8, 10, 1)$	217 : $P_{3733} = (4, 8, 13, 1)$
170 : $P_{2988} = (11, 9, 10, 1)$	218 : $P_{3759} = (14, 9, 13, 1)$
171 : $P_{2994} = (1, 10, 10, 1)$	219 : $P_{3771} = (10, 10, 13, 1)$
172 : $P_{3019} = (10, 11, 10, 1)$	220 : $P_{3789} = (12, 11, 13, 1)$
173 : $P_{3032} = (7, 12, 10, 1)$	221 : $P_{3802} = (9, 12, 13, 1)$
174 : $P_{3047} = (6, 13, 10, 1)$	222 : $P_{3814} = (5, 13, 13, 1)$
175 : $P_{3061} = (4, 14, 10, 1)$	223 : $P_{3834} = (9, 14, 13, 1)$
176 : $P_{3082} = (9, 15, 10, 1)$	224 : $P_{3850} = (9, 15, 13, 1)$
177 : $P_{3090} = (1, 0, 11, 1)$	225 : $P_{3860} = (3, 0, 14, 1)$
178 : $P_{3115} = (10, 1, 11, 1)$	226 : $P_{3884} = (11, 1, 14, 1)$
179 : $P_{3130} = (9, 2, 11, 1)$	227 : $P_{3902} = (13, 2, 14, 1)$
180 : $P_{3151} = (14, 3, 11, 1)$	228 : $P_{3914} = (9, 3, 14, 1)$
181 : $P_{3163} = (10, 4, 11, 1)$	229 : $P_{3925} = (4, 4, 14, 1)$
182 : $P_{3176} = (7, 5, 11, 1)$	230 : $P_{3947} = (10, 5, 14, 1)$
183 : $P_{3197} = (12, 6, 11, 1)$	231 : $P_{3957} = (4, 6, 14, 1)$
184 : $P_{3214} = (13, 7, 11, 1)$	232 : $P_{3975} = (6, 7, 14, 1)$
185 : $P_{3221} = (4, 8, 11, 1)$	233 : $P_{3992} = (7, 8, 14, 1)$
186 : $P_{3235} = (2, 9, 11, 1)$	234 : $P_{4003} = (2, 9, 14, 1)$
187 : $P_{3260} = (11, 10, 11, 1)$	235 : $P_{4031} = (14, 10, 14, 1)$
188 : $P_{3266} = (1, 11, 11, 1)$	236 : $P_{4040} = (7, 11, 14, 1)$
189 : $P_{3292} = (11, 12, 11, 1)$	237 : $P_{4053} = (4, 12, 14, 1)$
190 : $P_{3308} = (11, 13, 11, 1)$	238 : $P_{4072} = (7, 13, 14, 1)$
191 : $P_{3323} = (10, 14, 11, 1)$	239 : $P_{4084} = (3, 14, 14, 1)$
192 : $P_{3335} = (6, 15, 11, 1)$	240 : $P_{4109} = (12, 15, 14, 1)$
193 : $P_{3360} = (15, 0, 12, 1)$	241 : $P_{4118} = (5, 0, 15, 1)$
194 : $P_{3370} = (9, 1, 12, 1)$	242 : $P_{4141} = (12, 1, 15, 1)$
195 : $P_{3381} = (4, 2, 12, 1)$	243 : $P_{4154} = (9, 2, 15, 1)$
196 : $P_{3407} = (14, 3, 12, 1)$	244 : $P_{4173} = (12, 3, 15, 1)$
197 : $P_{3411} = (2, 4, 12, 1)$	245 : $P_{4183} = (6, 4, 15, 1)$
198 : $P_{3427} = (2, 5, 12, 1)$	246 : $P_{4202} = (9, 5, 15, 1)$
199 : $P_{3448} = (7, 6, 12, 1)$	247 : $P_{4213} = (4, 6, 15, 1)$
200 : $P_{3468} = (11, 7, 12, 1)$	248 : $P_{4232} = (7, 7, 15, 1)$
201 : $P_{3479} = (6, 8, 12, 1)$	249 : $P_{4250} = (9, 8, 15, 1)$
202 : $P_{3502} = (13, 9, 12, 1)$	250 : $P_{4270} = (13, 9, 15, 1)$
203 : $P_{3515} = (10, 10, 12, 1)$	251 : $P_{4275} = (2, 10, 15, 1)$
204 : $P_{3534} = (13, 11, 12, 1)$	252 : $P_{4299} = (10, 11, 15, 1)$
205 : $P_{3552} = (15, 12, 12, 1)$	253 : $P_{4319} = (14, 12, 15, 1)$
206 : $P_{3555} = (2, 13, 12, 1)$	254 : $P_{4333} = (12, 13, 15, 1)$
207 : $P_{3582} = (13, 14, 12, 1)$	255 : $P_{4348} = (11, 14, 15, 1)$
208 : $P_{3597} = (12, 15, 12, 1)$	256 : $P_{4358} = (5, 15, 15, 1)$
209 : $P_{3606} = (5, 0, 13, 1)$	

Line Intersection Graph

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Neighbor sets in the line intersection graph:
The surface has 257 points:

The points on the surface are:

0 : $P_0 = (1, 0, 0, 0)$	51 : $P_{1083} = (10, 2, 3, 1)$	102 : $P_{1891} = (2, 5, 6, 1)$
1 : $P_3 = (0, 0, 0, 1)$	52 : $P_{1097} = (8, 3, 3, 1)$	103 : $P_{1908} = (3, 6, 6, 1)$
2 : $P_4 = (1, 1, 1, 1)$	53 : $P_{1119} = (14, 4, 3, 1)$	104 : $P_{1925} = (4, 7, 6, 1)$
3 : $P_{291} = (1, 1, 0, 1)$	54 : $P_{1127} = (6, 5, 3, 1)$	105 : $P_{1941} = (4, 8, 6, 1)$
4 : $P_{311} = (5, 2, 0, 1)$	55 : $P_{1139} = (2, 6, 3, 1)$	106 : $P_{1957} = (4, 9, 6, 1)$
5 : $P_{330} = (8, 3, 0, 1)$	56 : $P_{1159} = (6, 7, 3, 1)$	107 : $P_{1976} = (7, 10, 6, 1)$
6 : $P_{346} = (8, 4, 0, 1)$	57 : $P_{1183} = (14, 8, 3, 1)$	108 : $P_{1996} = (11, 11, 6, 1)$
7 : $P_{369} = (15, 5, 0, 1)$	58 : $P_{1198} = (13, 9, 3, 1)$	109 : $P_{2011} = (10, 12, 6, 1)$
8 : $P_{373} = (3, 6, 0, 1)$	59 : $P_{1212} = (11, 10, 3, 1)$	110 : $P_{2029} = (12, 13, 6, 1)$
9 : $P_{394} = (8, 7, 0, 1)$	60 : $P_{1221} = (4, 11, 3, 1)$	111 : $P_{2040} = (7, 14, 6, 1)$
10 : $P_{405} = (3, 8, 0, 1)$	61 : $P_{1245} = (12, 12, 3, 1)$	112 : $P_{2062} = (13, 15, 6, 1)$
11 : $P_{433} = (15, 9, 0, 1)$	62 : $P_{1258} = (9, 13, 3, 1)$	113 : $P_{2073} = (8, 0, 7, 1)$
12 : $P_{435} = (1, 10, 0, 1)$	63 : $P_{1272} = (7, 14, 3, 1)$	114 : $P_{2085} = (4, 1, 7, 1)$
13 : $P_{451} = (1, 11, 0, 1)$	64 : $P_{1295} = (14, 15, 3, 1)$	115 : $P_{2111} = (14, 2, 7, 1)$
14 : $P_{481} = (15, 12, 0, 1)$	65 : $P_{1305} = (8, 0, 4, 1)$	116 : $P_{2127} = (14, 3, 7, 1)$
15 : $P_{487} = (5, 13, 0, 1)$	66 : $P_{1324} = (11, 1, 4, 1)$	117 : $P_{2135} = (6, 4, 7, 1)$
16 : $P_{501} = (3, 14, 0, 1)$	67 : $P_{1338} = (9, 2, 4, 1)$	118 : $P_{2157} = (12, 5, 7, 1)$
17 : $P_{519} = (5, 15, 0, 1)$	68 : $P_{1351} = (6, 3, 4, 1)$	119 : $P_{2175} = (14, 6, 7, 1)$
18 : $P_{531} = (1, 0, 1, 1)$	69 : $P_{1369} = (8, 4, 4, 1)$	120 : $P_{2185} = (8, 7, 7, 1)$
19 : $P_{567} = (6, 2, 1, 1)$	70 : $P_{1390} = (13, 5, 4, 1)$	121 : $P_{2200} = (7, 8, 7, 1)$
20 : $P_{587} = (10, 3, 1, 1)$	71 : $P_{1400} = (7, 6, 4, 1)$	122 : $P_{2215} = (6, 9, 7, 1)$
21 : $P_{606} = (13, 4, 1, 1)$	72 : $P_{1423} = (14, 7, 4, 1)$	123 : $P_{2231} = (6, 10, 7, 1)$
22 : $P_{620} = (11, 5, 1, 1)$	73 : $P_{1427} = (2, 8, 4, 1)$	124 : $P_{2252} = (11, 11, 7, 1)$
23 : $P_{629} = (4, 6, 1, 1)$	74 : $P_{1453} = (12, 9, 4, 1)$	125 : $P_{2270} = (13, 12, 7, 1)$
24 : $P_{655} = (14, 7, 1, 1)$	75 : $P_{1461} = (4, 10, 4, 1)$	126 : $P_{2283} = (10, 13, 7, 1)$
25 : $P_{667} = (10, 8, 1, 1)$	76 : $P_{1479} = (6, 11, 4, 1)$	127 : $P_{2291} = (2, 14, 7, 1)$
26 : $P_{680} = (7, 9, 1, 1)$	77 : $P_{1495} = (6, 12, 4, 1)$	128 : $P_{2314} = (9, 15, 7, 1)$
27 : $P_{699} = (10, 10, 1, 1)$	78 : $P_{1519} = (14, 13, 4, 1)$	129 : $P_{2324} = (3, 0, 8, 1)$
28 : $P_{716} = (11, 11, 1, 1)$	79 : $P_{1535} = (14, 14, 4, 1)$	130 : $P_{2344} = (7, 1, 8, 1)$
29 : $P_{723} = (2, 12, 1, 1)$	80 : $P_{1547} = (10, 15, 4, 1)$	131 : $P_{2365} = (12, 2, 8, 1)$
30 : $P_{746} = (9, 13, 1, 1)$	81 : $P_{1568} = (15, 0, 5, 1)$	132 : $P_{2373} = (4, 3, 8, 1)$
31 : $P_{765} = (12, 14, 1, 1)$	82 : $P_{1582} = (13, 1, 5, 1)$	133 : $P_{2391} = (6, 4, 8, 1)$
32 : $P_{780} = (11, 15, 1, 1)$	83 : $P_{1597} = (12, 2, 5, 1)$	134 : $P_{2405} = (4, 5, 8, 1)$
33 : $P_{790} = (5, 0, 2, 1)$	84 : $P_{1603} = (2, 3, 5, 1)$	135 : $P_{2424} = (7, 6, 8, 1)$
34 : $P_{811} = (10, 1, 2, 1)$	85 : $P_{1628} = (11, 4, 5, 1)$	136 : $P_{2442} = (9, 7, 8, 1)$
35 : $P_{822} = (5, 2, 2, 1)$	86 : $P_{1648} = (15, 5, 5, 1)$	137 : $P_{2452} = (3, 8, 8, 1)$
36 : $P_{839} = (6, 3, 2, 1)$	87 : $P_{1655} = (6, 6, 5, 1)$	138 : $P_{2475} = (10, 9, 8, 1)$
37 : $P_{856} = (7, 4, 2, 1)$	88 : $P_{1679} = (14, 7, 5, 1)$	139 : $P_{2492} = (11, 10, 8, 1)$
38 : $P_{879} = (14, 5, 2, 1)$	89 : $P_{1694} = (13, 8, 5, 1)$	140 : $P_{2511} = (14, 11, 8, 1)$
39 : $P_{890} = (9, 6, 2, 1)$	90 : $P_{1699} = (2, 9, 5, 1)$	141 : $P_{2515} = (2, 12, 8, 1)$
40 : $P_{909} = (12, 7, 2, 1)$	91 : $P_{1722} = (9, 10, 5, 1)$	142 : $P_{2542} = (13, 13, 8, 1)$
41 : $P_{924} = (11, 8, 2, 1)$	92 : $P_{1739} = (10, 11, 5, 1)$	143 : $P_{2549} = (4, 14, 8, 1)$
42 : $P_{938} = (9, 9, 2, 1)$	93 : $P_{1758} = (13, 12, 5, 1)$	144 : $P_{2568} = (7, 15, 8, 1)$
43 : $P_{957} = (12, 10, 2, 1)$	94 : $P_{1765} = (4, 13, 5, 1)$	145 : $P_{2592} = (15, 0, 9, 1)$
44 : $P_{963} = (2, 11, 2, 1)$	95 : $P_{1784} = (7, 14, 5, 1)$	146 : $P_{2603} = (10, 1, 9, 1)$
45 : $P_{990} = (13, 12, 2, 1)$	96 : $P_{1795} = (2, 15, 5, 1)$	147 : $P_{2611} = (2, 2, 9, 1)$
46 : $P_{1002} = (9, 13, 2, 1)$	97 : $P_{1812} = (3, 0, 6, 1)$	148 : $P_{2636} = (11, 3, 9, 1)$
47 : $P_{1013} = (4, 14, 2, 1)$	98 : $P_{1839} = (14, 1, 6, 1)$	149 : $P_{2655} = (14, 4, 9, 1)$
48 : $P_{1037} = (12, 15, 2, 1)$	99 : $P_{1848} = (7, 2, 6, 1)$	150 : $P_{2670} = (13, 5, 9, 1)$
49 : $P_{1049} = (8, 0, 3, 1)$	100 : $P_{1863} = (6, 3, 6, 1)$	151 : $P_{2686} = (13, 6, 9, 1)$
50 : $P_{1063} = (6, 1, 3, 1)$	101 : $P_{1882} = (9, 4, 6, 1)$	152 : $P_{2691} = (2, 7, 9, 1)$

153 : $P_{2712} = (7, 8, 9, 1)$	188 : $P_{3266} = (1, 11, 11, 1)$	223 : $P_{3834} = (9, 14, 13, 1)$
154 : $P_{2736} = (15, 9, 9, 1)$	189 : $P_{3292} = (11, 12, 11, 1)$	224 : $P_{3850} = (9, 15, 13, 1)$
155 : $P_{2750} = (13, 10, 9, 1)$	190 : $P_{3308} = (11, 13, 11, 1)$	225 : $P_{3860} = (3, 0, 14, 1)$
156 : $P_{2762} = (9, 11, 9, 1)$	191 : $P_{3323} = (10, 14, 11, 1)$	226 : $P_{3884} = (11, 1, 14, 1)$
157 : $P_{2771} = (2, 12, 9, 1)$	192 : $P_{3335} = (6, 15, 11, 1)$	227 : $P_{3902} = (13, 2, 14, 1)$
158 : $P_{2797} = (12, 13, 9, 1)$	193 : $P_{3360} = (15, 0, 12, 1)$	228 : $P_{3914} = (9, 3, 14, 1)$
159 : $P_{2807} = (6, 14, 9, 1)$	194 : $P_{3370} = (9, 1, 12, 1)$	229 : $P_{3925} = (4, 4, 14, 1)$
160 : $P_{2821} = (4, 15, 9, 1)$	195 : $P_{3381} = (4, 2, 12, 1)$	230 : $P_{3947} = (10, 5, 14, 1)$
161 : $P_{2834} = (1, 0, 10, 1)$	196 : $P_{3407} = (14, 3, 12, 1)$	231 : $P_{3957} = (4, 6, 14, 1)$
162 : $P_{2860} = (11, 1, 10, 1)$	197 : $P_{3411} = (2, 4, 12, 1)$	232 : $P_{3975} = (6, 7, 14, 1)$
163 : $P_{2876} = (11, 2, 10, 1)$	198 : $P_{3427} = (2, 5, 12, 1)$	233 : $P_{3992} = (7, 8, 14, 1)$
164 : $P_{2894} = (13, 3, 10, 1)$	199 : $P_{3448} = (7, 6, 12, 1)$	234 : $P_{4003} = (2, 9, 14, 1)$
165 : $P_{2911} = (14, 4, 10, 1)$	200 : $P_{3468} = (11, 7, 12, 1)$	235 : $P_{4031} = (14, 10, 14, 1)$
166 : $P_{2915} = (2, 5, 10, 1)$	201 : $P_{3479} = (6, 8, 12, 1)$	236 : $P_{4040} = (7, 11, 14, 1)$
167 : $P_{2939} = (10, 6, 10, 1)$	202 : $P_{3502} = (13, 9, 12, 1)$	237 : $P_{4053} = (4, 12, 14, 1)$
168 : $P_{2955} = (10, 7, 10, 1)$	203 : $P_{3515} = (10, 10, 12, 1)$	238 : $P_{4072} = (7, 13, 14, 1)$
169 : $P_{2973} = (12, 8, 10, 1)$	204 : $P_{3534} = (13, 11, 12, 1)$	239 : $P_{4084} = (3, 14, 14, 1)$
170 : $P_{2988} = (11, 9, 10, 1)$	205 : $P_{3552} = (15, 12, 12, 1)$	240 : $P_{4109} = (12, 15, 14, 1)$
171 : $P_{2994} = (1, 10, 10, 1)$	206 : $P_{3555} = (2, 13, 12, 1)$	241 : $P_{4118} = (5, 0, 15, 1)$
172 : $P_{3019} = (10, 11, 10, 1)$	207 : $P_{3582} = (13, 14, 12, 1)$	242 : $P_{4141} = (12, 1, 15, 1)$
173 : $P_{3032} = (7, 12, 10, 1)$	208 : $P_{3597} = (12, 15, 12, 1)$	243 : $P_{4154} = (9, 2, 15, 1)$
174 : $P_{3047} = (6, 13, 10, 1)$	209 : $P_{3606} = (5, 0, 13, 1)$	244 : $P_{4173} = (12, 3, 15, 1)$
175 : $P_{3061} = (4, 14, 10, 1)$	210 : $P_{3619} = (2, 1, 13, 1)$	245 : $P_{4183} = (6, 4, 15, 1)$
176 : $P_{3082} = (9, 15, 10, 1)$	211 : $P_{3645} = (12, 2, 13, 1)$	246 : $P_{4202} = (9, 5, 15, 1)$
177 : $P_{3090} = (1, 0, 11, 1)$	212 : $P_{3656} = (7, 3, 13, 1)$	247 : $P_{4213} = (4, 6, 15, 1)$
178 : $P_{3115} = (10, 1, 11, 1)$	213 : $P_{3677} = (12, 4, 13, 1)$	248 : $P_{4232} = (7, 7, 15, 1)$
179 : $P_{3130} = (9, 2, 11, 1)$	214 : $P_{3694} = (13, 5, 13, 1)$	249 : $P_{4250} = (9, 8, 15, 1)$
180 : $P_{3151} = (14, 3, 11, 1)$	215 : $P_{3708} = (11, 6, 13, 1)$	250 : $P_{4270} = (13, 9, 15, 1)$
181 : $P_{3163} = (10, 4, 11, 1)$	216 : $P_{3719} = (6, 7, 13, 1)$	251 : $P_{4275} = (2, 10, 15, 1)$
182 : $P_{3176} = (7, 5, 11, 1)$	217 : $P_{3733} = (4, 8, 13, 1)$	252 : $P_{4299} = (10, 11, 15, 1)$
183 : $P_{3197} = (12, 6, 11, 1)$	218 : $P_{3759} = (14, 9, 13, 1)$	253 : $P_{4319} = (14, 12, 15, 1)$
184 : $P_{3214} = (13, 7, 11, 1)$	219 : $P_{3771} = (10, 10, 13, 1)$	254 : $P_{4333} = (12, 13, 15, 1)$
185 : $P_{3221} = (4, 8, 11, 1)$	220 : $P_{3789} = (12, 11, 13, 1)$	255 : $P_{4348} = (11, 14, 15, 1)$
186 : $P_{3235} = (2, 9, 11, 1)$	221 : $P_{3802} = (9, 12, 13, 1)$	256 : $P_{4358} = (5, 15, 15, 1)$
187 : $P_{3260} = (11, 10, 11, 1)$	222 : $P_{3814} = (5, 13, 13, 1)$	