Rank-65617 over GF(16)

January 15, 2021

The equation

The equation of the surface is:

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

(0, 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 303112741

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:

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

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:

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0: P_0 = (1, 0, 0, 0)
                                                                  27: P_{450} = (0, 11, 0, 1)
1: P_{35} = (0, 1, 1, 0)
                                                                  28: P_{480} = (14, 12, 0, 1)
2: P_{59} = (8, 2, 1, 0)
                                                                  29: P_{486} = (4, 13, 0, 1)
3: P_{80} = (13, 3, 1, 0)
                                                                  30: P_{500} = (2, 14, 0, 1)
4: P_{98} = (15, 4, 1, 0)
                                                                  31: P_{518} = (4, 15, 0, 1)
                                                                  32: P_{530} = (0,0,1,1)
5: P_{106} = (7, 5, 1, 0)
6: P_{124} = (9, 6, 1, 0)
                                                                  33: P_{555} = (10, 1, 1, 1)
7: P_{133} = (2,7,1,0)
                                                                  34: P_{556} = (11, 1, 1, 1)
8: P_{159} = (12, 8, 1, 0)
                                                                  35: P_{635} = (10, 6, 1, 1)
9: P_{166} = (3, 9, 1, 0)
                                                                  36: P_{637} = (12, 6, 1, 1)
10: P_{179} = (0, 10, 1, 0)
                                                                  37: P_{651} = (10, 7, 1, 1)
11: P_{195} = (0, 11, 1, 0)
                                                                  38: P_{654} = (13, 7, 1, 1)
12: P_{215} = (4, 12, 1, 0)
                                                                  39: P_{694} = (5, 10, 1, 1)
13: P_{241} = (14, 13, 1, 0)
                                                                  40: P_{704} = (15, 10, 1, 1)
14: P_{248} = (5, 14, 1, 0)
                                                                  41: P_{708} = (3, 11, 1, 1)
15: P_{265} = (6, 15, 1, 0)
                                                                  42: P_{713} = (8, 11, 1, 1)
16: P_{275} = (1, 0, 0, 1)
                                                                  43: P_{728} = (7, 12, 1, 1)
17: P_{290} = (0, 1, 0, 1)
                                                                  44: P_{732} = (11, 12, 1, 1)
18: P_{310} = (4, 2, 0, 1)
                                                                  45: P_{743} = (6, 13, 1, 1)
19: P_{331} = (9, 3, 0, 1)
                                                                  46: P_{748} = (11, 13, 1, 1)
20: P_{347} = (9, 4, 0, 1)
                                                                  47: P_{789} = (4,0,2,1)
21: P_{368} = (14, 5, 0, 1)
                                                                  48: P_{826} = (9, 2, 2, 1)
22: P_{372} = (2, 6, 0, 1)
                                                                  49: P_{830} = (13, 2, 2, 1)
23: P_{395} = (9, 7, 0, 1)
                                                                  50: P_{856} = (7, 4, 2, 1)
24: P_{404} = (2, 8, 0, 1)
                                                                  51: P_{864} = (15, 4, 2, 1)
25: P_{432} = (14, 9, 0, 1)
                                                                  52: P_{869} = (4, 5, 2, 1)
26: P_{434} = (0, 10, 0, 1)
                                                                  53: P_{879} = (14, 5, 2, 1)
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54: P_{930} = (1, 9, 2, 1)
                                                                 108: P_{1835} = (10, 1, 6, 1)
55: P_{939} = (10, 9, 2, 1)
                                                                 109: P_{1837} = (12, 1, 6, 1)
                                                                 110: P_{1858} = (1, 3, 6, 1)
56: P_{951} = (6, 10, 2, 1)
57: P_{956} = (11, 10, 2, 1)
                                                                 111: P_{1868} = (11, 3, 6, 1)
58: P_{989} = (12, 12, 2, 1)
                                                                 112: P_{1879} = (6, 4, 6, 1)
59: P_{990} = (13, 12, 2, 1)
                                                                 113: P_{1880} = (7, 4, 6, 1)
60: P_{1017} = (8, 14, 2, 1)
                                                                 114: P_{1923} = (2,7,6,1)
61: P_{1022} = (13, 14, 2, 1)
                                                                 115: P_{1930} = (9, 7, 6, 1)
62: P_{1050} = (9, 0, 3, 1)
                                                                 116: P_{1941} = (4, 8, 6, 1)
63: P_{1124} = (3, 5, 3, 1)
                                                                 117: P_{1943} = (6, 8, 6, 1)
64: P_{1133} = (12, 5, 3, 1)
                                                                 118: P_{2006} = (5, 12, 6, 1)
65: P_{1138} = (1, 6, 3, 1)
                                                                 119: P_{2007} = (6, 12, 6, 1)
66: P_{1148} = (11, 6, 3, 1)
                                                                 120: P_{2025} = (8, 13, 6, 1)
67: P_{1160} = (7,7,3,1)
                                                                 121: P_{2030} = (13, 13, 6, 1)
68: P_{1167} = (14, 7, 3, 1)
                                                                 122: P_{2074} = (9, 0, 7, 1)
69: P_{1175} = (6, 8, 3, 1)
                                                                 123: P_{2091} = (10, 1, 7, 1)
70: P_{1176} = (7, 8, 3, 1)
                                                                 124: P_{2094} = (13, 1, 7, 1)
                                                                 125: P_{2120} = (7, 3, 7, 1)
71: P_{1211} = (10, 10, 3, 1)
                                                                 126: P_{2127} = (14, 3, 7, 1)
72: P_{1214} = (13, 10, 3, 1)
73: P_{1267} = (2, 14, 3, 1)
                                                                 127: P_{2163} = (2, 6, 7, 1)
74: P_{1274} = (9, 14, 3, 1)
                                                                 128: P_{2170} = (9, 6, 7, 1)
                                                                 129: P_{2194} = (1, 8, 7, 1)
75: P_{1288} = (7, 15, 3, 1)
76: P_{1296} = (15, 15, 3, 1)
                                                                 130: P_{2204} = (11, 8, 7, 1)
77: P_{1306} = (9, 0, 4, 1)
                                                                 131: P_{2260} = (3, 12, 7, 1)
78: P_{1336} = (7, 2, 4, 1)
                                                                 132: P_{2269} = (12, 12, 7, 1)
79: P_{1344} = (15, 2, 4, 1)
                                                                 133: P_{2280} = (7, 13, 7, 1)
                                                                 134: P_{2288} = (15, 13, 7, 1)
80: P_{1368} = (7,4,4,1)
81: P_{1375} = (14, 4, 4, 1)
                                                                 135: P_{2295} = (6, 14, 7, 1)
82: P_{1399} = (6, 6, 4, 1)
                                                                 136: P_{2296} = (7, 14, 7, 1)
83: P_{1400} = (7, 6, 4, 1)
                                                                 137: P_{2323} = (2,0,8,1)
84: P_{1427} = (2, 8, 4, 1)
                                                                 138: P_{2375} = (6, 3, 8, 1)
85: P_{1434} = (9, 8, 4, 1)
                                                                 139: P_{2376} = (7, 3, 8, 1)
86: P_{1444} = (3, 9, 4, 1)
                                                                 140: P_{2387} = (2,4,8,1)
87: P_{1453} = (12, 9, 4, 1)
                                                                 141: P_{2394} = (9,4,8,1)
88: P_{1483} = (10, 11, 4, 1)
                                                                 142: P_{2406} = (5, 5, 8, 1)
                                                                 143: P_{2407} = (6, 5, 8, 1)
89: P_{1486} = (13, 11, 4, 1)
90: P_{1522} = (1, 14, 4, 1)
                                                                 144: P_{2421} = (4, 6, 8, 1)
                                                                 145: P_{2423} = (6, 6, 8, 1)
91: P_{1532} = (11, 14, 4, 1)
92: P_{1567} = (14, 0, 5, 1)
                                                                 146: P_{2434} = (1,7,8,1)
93: P_{1589} = (4, 2, 5, 1)
                                                                 147: P_{2444} = (11, 7, 8, 1)
94: P_{1599} = (14, 2, 5, 1)
                                                                 148: P_{2491} = (10, 10, 8, 1)
                                                                 149: P_{2493} = (12, 10, 8, 1)
95: P_{1604} = (3, 3, 5, 1)
96: P_{1613} = (12, 3, 5, 1)
                                                                 150: P_{2569} = (8, 15, 8, 1)
                                                                 151: P_{2574} = (13, 15, 8, 1)
97: P_{1686} = (5, 8, 5, 1)
98: P_{1687} = (6, 8, 5, 1)
                                                                 152: P_{2591} = (14, 0, 9, 1)
99: P_{1736} = (7, 11, 5, 1)
                                                                 153: P_{2610} = (1, 2, 9, 1)
100: P_{1740} = (11, 11, 5, 1)
                                                                 154: P_{2619} = (10, 2, 9, 1)
101: P_{1747} = (2, 12, 5, 1)
                                                                 155: P_{2644} = (3, 4, 9, 1)
102: P_{1757} = (12, 12, 5, 1)
                                                                 156: P_{2653} = (12, 4, 9, 1)
                                                                 157: P_{2723} = (2, 9, 9, 1)
103: P_{1762} = (1, 13, 5, 1)
104: P_{1771} = (10, 13, 5, 1)
                                                                 158: P_{2733} = (12, 9, 9, 1)
105: P_{1805} = (12, 15, 5, 1)
                                                                 159: P_{2744} = (7, 10, 9, 1)
106: P_{1806} = (13, 15, 5, 1)
                                                                 160: P_{2748} = (11, 10, 9, 1)
107: P_{1811} = (2, 0, 6, 1)
                                                                 161: P_{2797} = (12, 13, 9, 1)
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162: P_{2798} = (13, 13, 9, 1)
                                                                210: P_{3586} = (1, 15, 12, 1)
163: P_{2806} = (5, 14, 9, 1)
                                                                211: P_{3595} = (10, 15, 12, 1)
164: P_{2807} = (6, 14, 9, 1)
                                                                212: P_{3605} = (4, 0, 13, 1)
                                                                213: P_{3623} = (6, 1, 13, 1)
165: P_{2821} = (4, 15, 9, 1)
166: P_{2831} = (14, 15, 9, 1)
                                                                214: P_{3628} = (11, 1, 13, 1)
167: P_{2833} = (0, 0, 10, 1)
                                                                215: P_{3682} = (1, 5, 13, 1)
168: P_{2854} = (5, 1, 10, 1)
                                                                216: P_{3691} = (10, 5, 13, 1)
169: P_{2864} = (15, 1, 10, 1)
                                                                217: P_{3705} = (8, 6, 13, 1)
170: P_{2871} = (6, 2, 10, 1)
                                                                218: P_{3710} = (13, 6, 13, 1)
171: P_{2876} = (11, 2, 10, 1)
                                                                219: P_{3720} = (7,7,13,1)
172: P_{2891} = (10, 3, 10, 1)
                                                                220: P_{3728} = (15, 7, 13, 1)
173: P_{2894} = (13, 3, 10, 1)
                                                                221: P_{3757} = (12, 9, 13, 1)
                                                                222: P_{3758} = (13, 9, 13, 1)
174: P_{2971} = (10, 8, 10, 1)
175: P_{2973} = (12, 8, 10, 1)
                                                                223: P_{3797} = (4, 12, 13, 1)
176: P_{2984} = (7, 9, 10, 1)
                                                                224: P_{3807} = (14, 12, 13, 1)
177: P_{2988} = (11, 9, 10, 1)
                                                                225: P_{3850} = (9, 15, 13, 1)
                                                                226: P_{3854} = (13, 15, 13, 1)
178: P_{2996} = (3, 10, 10, 1)
                                                                227: P_{3859} = (2, 0, 14, 1)
179: P_{3001} = (8, 10, 10, 1)
                                                                228: P_{3897} = (8, 2, 14, 1)
180: P_{3019} = (10, 11, 10, 1)
181: P_{3020} = (11, 11, 10, 1)
                                                                229: P_{3902} = (13, 2, 14, 1)
182: P_{3089} = (0, 0, 11, 1)
                                                                230: P_{3907} = (2, 3, 14, 1)
183: P_{3108} = (3, 1, 11, 1)
                                                                231: P_{3914} = (9, 3, 14, 1)
184: P_{3113} = (8, 1, 11, 1)
                                                                232: P_{3922} = (1, 4, 14, 1)
185: P_{3163} = (10, 4, 11, 1)
                                                                233: P_{3932} = (11, 4, 14, 1)
186: P_{3166} = (13, 4, 11, 1)
                                                                234: P_{3975} = (6, 7, 14, 1)
187: P_{3176} = (7, 5, 11, 1)
                                                                235: P_{3976} = (7,7,14,1)
188: P_{3180} = (11, 5, 11, 1)
                                                                236: P_{4006} = (5, 9, 14, 1)
189: P_{3259} = (10, 10, 11, 1)
                                                                237: P_{4007} = (6, 9, 14, 1)
190: P_{3260} = (11, 10, 11, 1)
                                                                238: P_{4043} = (10, 11, 14, 1)
191: P_{3270} = (5, 11, 11, 1)
                                                                239: P_{4045} = (12, 11, 14, 1)
192: P_{3280} = (15, 11, 11, 1)
                                                                240: P_{4085} = (4, 14, 14, 1)
193: P_{3323} = (10, 14, 11, 1)
                                                                241: P_{4087} = (6, 14, 14, 1)
194: P_{3325} = (12, 14, 11, 1)
                                                                242: P_{4117} = (4, 0, 15, 1)
195: P_{3335} = (6, 15, 11, 1)
                                                                243: P_{4168} = (7, 3, 15, 1)
                                                                244: P_{4176} = (15, 3, 15, 1)
196: P_{3340} = (11, 15, 11, 1)
197: P_{3359} = (14, 0, 12, 1)
                                                                245: P_{4205} = (12, 5, 15, 1)
198: P_{3368} = (7, 1, 12, 1)
                                                                246: P_{4206} = (13, 5, 15, 1)
                                                                247: P_{4249} = (8, 8, 15, 1)
199: P_{3372} = (11, 1, 12, 1)
200: P_{3389} = (12, 2, 12, 1)
                                                                248: P_{4254} = (13, 8, 15, 1)
201: P_{3390} = (13, 2, 12, 1)
                                                                249: P_{4261} = (4, 9, 15, 1)
202: P_{3427} = (2, 5, 12, 1)
                                                                250: P_{4271} = (14, 9, 15, 1)
203: P_{3437} = (12, 5, 12, 1)
                                                                251: P_{4295} = (6, 11, 15, 1)
204: P_{3446} = (5, 6, 12, 1)
                                                                252: P_{4300} = (11, 11, 15, 1)
205: P_{3447} = (6, 6, 12, 1)
                                                                253: P_{4306} = (1, 12, 15, 1)
206: P_{3460} = (3, 7, 12, 1)
                                                                254: P_{4315} = (10, 12, 15, 1)
                                                                255: P_{4330} = (9, 13, 15, 1)
207: P_{3469} = (12, 7, 12, 1)
208: P_{3557} = (4, 13, 12, 1)
                                                                256: P_{4334} = (13, 13, 15, 1)
209: P_{3567} = (14, 13, 12, 1)
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Line Intersection Graph

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

4

The points on the surface are:

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0: P_0 = (1, 0, 0, 0)
                                                                                        102: P_{1757} = (12, 12, 5, 1)
                                            51: P_{864} = (15, 4, 2, 1)
1: P_{35} = (0, 1, 1, 0)
                                            52: P_{869} = (4, 5, 2, 1)
                                                                                        103: P_{1762} = (1, 13, 5, 1)
                                                                                        104: P_{1771} = (10, 13, 5, 1)
2: P_{59} = (8, 2, 1, 0)
                                            53: P_{879} = (14, 5, 2, 1)
3: P_{80} = (13, 3, 1, 0)
                                            54: P_{930} = (1, 9, 2, 1)
                                                                                        105: P_{1805} = (12, 15, 5, 1)
4: P_{98} = (15, 4, 1, 0)
                                            55: P_{939} = (10, 9, 2, 1)
                                                                                        106: P_{1806} = (13, 15, 5, 1)
5: P_{106} = (7, 5, 1, 0)
                                            56: P_{951} = (6, 10, 2, 1)
                                                                                        107: P_{1811} = (2,0,6,1)
6: P_{124} = (9, 6, 1, 0)
                                            57: P_{956} = (11, 10, 2, 1)
                                                                                        108: P_{1835} = (10, 1, 6, 1)
7: P_{133} = (2, 7, 1, 0)
                                            58: P_{989} = (12, 12, 2, 1)
                                                                                        109: P_{1837} = (12, 1, 6, 1)
8: P_{159} = (12, 8, 1, 0)
                                            59: P_{990} = (13, 12, 2, 1)
                                                                                        110: P_{1858} = (1, 3, 6, 1)
9: P_{166} = (3, 9, 1, 0)
                                            60: P_{1017} = (8, 14, 2, 1)
                                                                                        111: P_{1868} = (11, 3, 6, 1)
10: P_{179} = (0, 10, 1, 0)
                                            61: P_{1022} = (13, 14, 2, 1)
                                                                                        112: P_{1879} = (6, 4, 6, 1)
11: P_{195} = (0, 11, 1, 0)
                                                                                        113: P_{1880} = (7, 4, 6, 1)
                                            62: P_{1050} = (9, 0, 3, 1)
12: P_{215} = (4, 12, 1, 0)
                                            63: P_{1124} = (3, 5, 3, 1)
                                                                                        114: P_{1923} = (2,7,6,1)
13: P_{241} = (14, 13, 1, 0)
                                            64: P_{1133} = (12, 5, 3, 1)
                                                                                        115: P_{1930} = (9, 7, 6, 1)
14: P_{248} = (5, 14, 1, 0)
                                            65: P_{1138} = (1, 6, 3, 1)
                                                                                        116: P_{1941} = (4, 8, 6, 1)
15: P_{265} = (6, 15, 1, 0)
                                            66: P_{1148} = (11, 6, 3, 1)
                                                                                        117: P_{1943} = (6, 8, 6, 1)
16: P_{275} = (1, 0, 0, 1)
                                            67: P_{1160} = (7,7,3,1)
                                                                                        118: P_{2006} = (5, 12, 6, 1)
17: P_{290} = (0, 1, 0, 1)
                                            68: P_{1167} = (14, 7, 3, 1)
                                                                                        119: P_{2007} = (6, 12, 6, 1)
18: P_{310} = (4, 2, 0, 1)
                                            69: P_{1175} = (6, 8, 3, 1)
                                                                                        120: P_{2025} = (8, 13, 6, 1)
19: P_{331} = (9, 3, 0, 1)
                                                                                        121: P_{2030} = (13, 13, 6, 1)
                                            70: P_{1176} = (7, 8, 3, 1)
20: P_{347} = (9, 4, 0, 1)
                                            71: P_{1211} = (10, 10, 3, 1)
                                                                                        122: P_{2074} = (9, 0, 7, 1)
21: P_{368} = (14, 5, 0, 1)
                                            72: P_{1214} = (13, 10, 3, 1)
                                                                                        123: P_{2091} = (10, 1, 7, 1)
22: P_{372} = (2, 6, 0, 1)
                                            73: P_{1267} = (2, 14, 3, 1)
                                                                                        124: P_{2094} = (13, 1, 7, 1)
23: P_{395} = (9,7,0,1)
                                            74: P_{1274} = (9, 14, 3, 1)
                                                                                        125: P_{2120} = (7, 3, 7, 1)
24: P_{404} = (2, 8, 0, 1)
                                            75: P_{1288} = (7, 15, 3, 1)
                                                                                        126: P_{2127} = (14, 3, 7, 1)
                                            76: P_{1296} = (15, 15, 3, 1)
                                                                                        127: P_{2163} = (2, 6, 7, 1)
25: P_{432} = (14, 9, 0, 1)
26: P_{434} = (0, 10, 0, 1)
                                            77: P_{1306} = (9, 0, 4, 1)
                                                                                        128: P_{2170} = (9, 6, 7, 1)
27: P_{450} = (0, 11, 0, 1)
                                            78: P_{1336} = (7, 2, 4, 1)
                                                                                        129: P_{2194} = (1, 8, 7, 1)
28: P_{480} = (14, 12, 0, 1)
                                            79: P_{1344} = (15, 2, 4, 1)
                                                                                        130: P_{2204} = (11, 8, 7, 1)
29: P_{486} = (4, 13, 0, 1)
                                            80: P_{1368} = (7, 4, 4, 1)
                                                                                        131: P_{2260} = (3, 12, 7, 1)
                                                                                        132: P_{2269} = (12, 12, 7, 1)
30: P_{500} = (2, 14, 0, 1)
                                            81: P_{1375} = (14, 4, 4, 1)
                                                                                        133: P_{2280} = (7, 13, 7, 1)
31: P_{518} = (4, 15, 0, 1)
                                            82: P_{1399} = (6, 6, 4, 1)
                                                                                        134: P_{2288} = (15, 13, 7, 1)
32: P_{530} = (0,0,1,1)
                                            83: P_{1400} = (7, 6, 4, 1)
33: P_{555} = (10, 1, 1, 1)
                                            84: P_{1427} = (2, 8, 4, 1)
                                                                                        135: P_{2295} = (6, 14, 7, 1)
34: P_{556} = (11, 1, 1, 1)
                                            85: P_{1434} = (9, 8, 4, 1)
                                                                                        136: P_{2296} = (7, 14, 7, 1)
35: P_{635} = (10, 6, 1, 1)
                                                                                        137: P_{2323} = (2,0,8,1)
                                            86: P_{1444} = (3, 9, 4, 1)
                                                                                        138: P_{2375} = (6, 3, 8, 1)
36: P_{637} = (12, 6, 1, 1)
                                            87: P_{1453} = (12, 9, 4, 1)
37: P_{651} = (10, 7, 1, 1)
                                            88: P_{1483} = (10, 11, 4, 1)
                                                                                        139: P_{2376} = (7, 3, 8, 1)
38: P_{654} = (13, 7, 1, 1)
                                            89: P_{1486} = (13, 11, 4, 1)
                                                                                        140: P_{2387} = (2, 4, 8, 1)
39: P_{694} = (5, 10, 1, 1)
                                            90: P_{1522} = (1, 14, 4, 1)
                                                                                        141: P_{2394} = (9, 4, 8, 1)
40: P_{704} = (15, 10, 1, 1)
                                            91: P_{1532} = (11, 14, 4, 1)
                                                                                        142: P_{2406} = (5, 5, 8, 1)
41: P_{708} = (3, 11, 1, 1)
                                            92: P_{1567} = (14, 0, 5, 1)
                                                                                        143: P_{2407} = (6, 5, 8, 1)
                                            93: P_{1589} = (4, 2, 5, 1)
42: P_{713} = (8, 11, 1, 1)
                                                                                        144: P_{2421} = (4, 6, 8, 1)
43: P_{728} = (7, 12, 1, 1)
                                            94: P_{1599} = (14, 2, 5, 1)
                                                                                        145: P_{2423} = (6, 6, 8, 1)
44: P_{732} = (11, 12, 1, 1)
                                            95: P_{1604} = (3, 3, 5, 1)
                                                                                        146: P_{2434} = (1, 7, 8, 1)
45: P_{743} = (6, 13, 1, 1)
                                            96: P_{1613} = (12, 3, 5, 1)
                                                                                        147: P_{2444} = (11, 7, 8, 1)
46: P_{748} = (11, 13, 1, 1)
                                            97: P_{1686} = (5, 8, 5, 1)
                                                                                        148: P_{2491} = (10, 10, 8, 1)
47: P_{789} = (4,0,2,1)
                                            98: P_{1687} = (6, 8, 5, 1)
                                                                                        149: P_{2493} = (12, 10, 8, 1)
48: P_{826} = (9, 2, 2, 1)
                                            99: P_{1736} = (7, 11, 5, 1)
                                                                                        150: P_{2569} = (8, 15, 8, 1)
49: P_{830} = (13, 2, 2, 1)
                                            100: P_{1740} = (11, 11, 5, 1)
                                                                                        151: P_{2574} = (13, 15, 8, 1)
50: P_{856} = (7, 4, 2, 1)
                                            101: P_{1747} = (2, 12, 5, 1)
                                                                                        152: P_{2591} = (14, 0, 9, 1)
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223: P_{3797} = (4, 12, 13, 1)
153: P_{2610} = (1, 2, 9, 1)
                                           188: P_{3180} = (11, 5, 11, 1)
154: P_{2619} = (10, 2, 9, 1)
                                           189: P_{3259} = (10, 10, 11, 1)
                                                                                      224: P_{3807} = (14, 12, 13, 1)
155: P_{2644} = (3,4,9,1)
                                           190: P_{3260} = (11, 10, 11, 1)
                                                                                      225: P_{3850} = (9, 15, 13, 1)
156: P_{2653} = (12, 4, 9, 1)
                                           191: P_{3270} = (5, 11, 11, 1)
                                                                                      226: P_{3854} = (13, 15, 13, 1)
157: P_{2723} = (2, 9, 9, 1)
                                           192: P_{3280} = (15, 11, 11, 1)
                                                                                      227: P_{3859} = (2, 0, 14, 1)
158: P_{2733} = (12, 9, 9, 1)
                                           193: P_{3323} = (10, 14, 11, 1)
                                                                                      228: P_{3897} = (8, 2, 14, 1)
159: P_{2744} = (7, 10, 9, 1)
                                           194: P_{3325} = (12, 14, 11, 1)
                                                                                      229: P_{3902} = (13, 2, 14, 1)
160: P_{2748} = (11, 10, 9, 1)
                                           195: P_{3335} = (6, 15, 11, 1)
                                                                                      230: P_{3907} = (2, 3, 14, 1)
161: P_{2797} = (12, 13, 9, 1)
                                           196: P_{3340} = (11, 15, 11, 1)
                                                                                      231: P_{3914} = (9, 3, 14, 1)
162: P_{2798} = (13, 13, 9, 1)
                                           197: P_{3359} = (14, 0, 12, 1)
                                                                                      232: P_{3922} = (1, 4, 14, 1)
163: P_{2806} = (5, 14, 9, 1)
                                           198: P_{3368} = (7, 1, 12, 1)
                                                                                      233: P_{3932} = (11, 4, 14, 1)
164: P_{2807} = (6, 14, 9, 1)
                                           199: P_{3372} = (11, 1, 12, 1)
                                                                                      234: P_{3975} = (6,7,14,1)
165: P_{2821} = (4, 15, 9, 1)
                                                                                      235: P_{3976} = (7,7,14,1)
                                           200: P_{3389} = (12, 2, 12, 1)
166: P_{2831} = (14, 15, 9, 1)
                                           201: P_{3390} = (13, 2, 12, 1)
                                                                                      236: P_{4006} = (5, 9, 14, 1)
                                                                                      237: P_{4007} = (6, 9, 14, 1)
167: P_{2833} = (0, 0, 10, 1)
                                           202: P_{3427} = (2, 5, 12, 1)
168: P_{2854} = (5, 1, 10, 1)
                                           203: P_{3437} = (12, 5, 12, 1)
                                                                                      238: P_{4043} = (10, 11, 14, 1)
                                                                                      239: P_{4045} = (12, 11, 14, 1)
169: P_{2864} = (15, 1, 10, 1)
                                           204: P_{3446} = (5, 6, 12, 1)
                                           205: P_{3447} = (6, 6, 12, 1)
                                                                                      240: P_{4085} = (4, 14, 14, 1)
170: P_{2871} = (6, 2, 10, 1)
171: P_{2876} = (11, 2, 10, 1)
                                           206: P_{3460} = (3, 7, 12, 1)
                                                                                      241: P_{4087} = (6, 14, 14, 1)
172: P_{2891} = (10, 3, 10, 1)
                                           207: P_{3469} = (12, 7, 12, 1)
                                                                                      242: P_{4117} = (4, 0, 15, 1)
173: P_{2894} = (13, 3, 10, 1)
                                           208: P_{3557} = (4, 13, 12, 1)
                                                                                      243: P_{4168} = (7, 3, 15, 1)
                                                                                      244: P_{4176} = (15, 3, 15, 1)
174: P_{2971} = (10, 8, 10, 1)
                                           209: P_{3567} = (14, 13, 12, 1)
                                           210: P_{3586} = (1, 15, 12, 1)
175: P_{2973} = (12, 8, 10, 1)
                                                                                      245: P_{4205} = (12, 5, 15, 1)
176: P_{2984} = (7, 9, 10, 1)
                                           211: P_{3595} = (10, 15, 12, 1)
                                                                                      246: P_{4206} = (13, 5, 15, 1)
177: P_{2988} = (11, 9, 10, 1)
                                           212: P_{3605} = (4, 0, 13, 1)
                                                                                      247: P_{4249} = (8, 8, 15, 1)
178: P_{2996} = (3, 10, 10, 1)
                                           213: P_{3623} = (6, 1, 13, 1)
                                                                                      248: P_{4254} = (13, 8, 15, 1)
179: P_{3001} = (8, 10, 10, 1)
                                                                                      249: P_{4261} = (4, 9, 15, 1)
                                           214: P_{3628} = (11, 1, 13, 1)
180: P_{3019} = (10, 11, 10, 1)
                                           215: P_{3682} = (1, 5, 13, 1)
                                                                                      250: P_{4271} = (14, 9, 15, 1)
                                                                                      251: P_{4295} = (6, 11, 15, 1)
181: P_{3020} = (11, 11, 10, 1)
                                           216: P_{3691} = (10, 5, 13, 1)
182: P_{3089} = (0, 0, 11, 1)
                                           217: P_{3705} = (8, 6, 13, 1)
                                                                                      252: P_{4300} = (11, 11, 15, 1)
183: P_{3108} = (3, 1, 11, 1)
                                           218: P_{3710} = (13, 6, 13, 1)
                                                                                      253: P_{4306} = (1, 12, 15, 1)
184: P_{3113} = (8, 1, 11, 1)
                                           219: P_{3720} = (7, 7, 13, 1)
                                                                                      254: P_{4315} = (10, 12, 15, 1)
185: P_{3163} = (10, 4, 11, 1)
                                           220: P_{3728} = (15, 7, 13, 1)
                                                                                      255: P_{4330} = (9, 13, 15, 1)
                                           221: P_{3757} = (12, 9, 13, 1)
                                                                                      256: P_{4334} = (13, 13, 15, 1)
186: P_{3166} = (13, 4, 11, 1)
187: P_{3176} = (7, 5, 11, 1)
                                           222: P_{3758} = (13, 9, 13, 1)
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