# Rank-65666 over GF(16)

# January 15, 2021

# The equation

The equation of the surface is:

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

( 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0 ) The point rank of the equation over GF(16) is 304226854

## General information

Number of lines	0
Number of points	225
Number of singular points	0
Number of Eckardt points	0
Number of double points	0
Number of single points	0
Number of points off lines	225
Number of Hesse planes	0
Number of axes	0
Type of points on lines	
Type of lines on points	$0^{225}$

# Singular Points

The surface has 0 singular points:

## 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 225 points not on any line: The points on the surface but not on lines are:

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0: P_4 = (1, 1, 1, 1)
                                                                  27: P_{398} = (12, 7, 0, 1)
1: P_{35} = (0, 1, 1, 0)
                                                                  28: P_{407} = (5, 8, 0, 1)
2: P_{36} = (1, 1, 1, 0)
                                                                  29: P_{408} = (6, 8, 0, 1)
3: P_{62} = (11, 2, 1, 0)
                                                                  30: P_{412} = (10, 8, 0, 1)
4: P_{93} = (10, 4, 1, 0)
                                                                  31: P_{431} = (13, 9, 0, 1)
                                                                  32: P_{434} = (0, 10, 0, 1)
5: P_{129} = (14, 6, 1, 0)
6: P_{135} = (4,7,1,0)
                                                                  33: P_{445} = (11, 10, 0, 1)
7: P_{174} = (11, 9, 1, 0)
                                                                  34: P_{450} = (0, 11, 0, 1)
8: P_{179} = (0, 10, 1, 0)
                                                                  35: P_{460} = (10, 11, 0, 1)
9: P_{180} = (1, 10, 1, 0)
                                                                  36: P_{472} = (6, 12, 0, 1)
10: P_{189} = (10, 10, 1, 0)
                                                                  37: P_{489} = (7, 13, 0, 1)
11: P_{195} = (0, 11, 1, 0)
                                                                  38: P_{505} = (7, 14, 0, 1)
12: P_{196} = (1, 11, 1, 0)
                                                                  39: P_{522} = (8, 15, 0, 1)
13: P_{206} = (11, 11, 1, 0)
                                                                  40: P_{525} = (11, 15, 0, 1)
14: P_{220} = (9, 12, 1, 0)
                                                                  41: P_{527} = (13, 15, 0, 1)
15: P_{229} = (2, 13, 1, 0)
                                                                  42: P_{530} = (0,0,1,1)
16: P_{253} = (10, 14, 1, 0)
                                                                  43: P_{590} = (13, 3, 1, 1)
17: P_{290} = (0, 1, 0, 1)
                                                                  44: P_{616} = (7, 5, 1, 1)
18: P_{318} = (12, 2, 0, 1)
                                                                  45: P_{627} = (2, 6, 1, 1)
19: P_{329} = (7, 3, 0, 1)
                                                                  46: P_{650} = (9,7,1,1)
20: P_{332} = (10, 3, 0, 1)
                                                                  47: P_{669} = (12, 8, 1, 1)
21: P_{337} = (15, 3, 0, 1)
                                                                  48: P_{690} = (1, 10, 1, 1)
22: P_{344} = (6, 4, 0, 1)
                                                                  49: P_{692} = (3, 10, 1, 1)
23: P_{357} = (3, 5, 0, 1)
                                                                  50: P_{697} = (8, 10, 1, 1)
24: P_{365} = (11, 5, 0, 1)
                                                                  51: P_{706} = (1, 11, 1, 1)
25: P_{366} = (12, 5, 0, 1)
                                                                  52: P_{710} = (5, 11, 1, 1)
26: P_{383} = (13, 6, 0, 1)
                                                                  53: P_{720} = (15, 11, 1, 1)
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54: P_{735} = (14, 12, 1, 1)
                                                                 108: P_{2036} = (3, 14, 6, 1)
55: P_{741} = (4, 13, 1, 1)
                                                                 109: P_{2040} = (7, 14, 6, 1)
56: P_{775} = (6, 15, 1, 1)
                                                                 110: P_{2046} = (13, 14, 6, 1)
57: P_{797} = (12, 0, 2, 1)
                                                                 111: P_{2077} = (12, 0, 7, 1)
58: P_{825} = (8, 2, 2, 1)
                                                                 112: P_{2090} = (9, 1, 7, 1)
59: P_{863} = (14, 4, 2, 1)
                                                                 113: P_{2105} = (8, 2, 7, 1)
60: P_{873} = (8, 5, 2, 1)
                                                                 114: P_{2123} = (10, 3, 7, 1)
61: P_{896} = (15, 6, 2, 1)
                                                                 115: P_{2135} = (6, 4, 7, 1)
62: P_{905} = (8,7,2,1)
                                                                 116: P_{2137} = (8, 4, 7, 1)
63: P_{998} = (5, 13, 2, 1)
                                                                 117: P_{2141} = (12, 4, 7, 1)
64: P_{1000} = (7, 13, 2, 1)
                                                                 118: P_{2164} = (3, 6, 7, 1)
65: P_{1005} = (12, 13, 2, 1)
                                                                 119: P_{2169} = (8, 6, 7, 1)
66: P_{1018} = (9, 14, 2, 1)
                                                                 120: P_{2172} = (11, 6, 7, 1)
67: P_{1048} = (7,0,3,1)
                                                                 121: P_{2214} = (5, 9, 7, 1)
68: P_{1051} = (10, 0, 3, 1)
                                                                 122: P_{2242} = (1, 11, 7, 1)
69: P_{1056} = (15, 0, 3, 1)
                                                                 123: P_{2261} = (4, 12, 7, 1)
                                                                 124: P_{2275} = (2, 13, 7, 1)
70: P_{1070} = (13, 1, 3, 1)
                                                                 125: P_{2326} = (5, 0, 8, 1)
71: P_{1096} = (7, 3, 3, 1)
                                                                 126: P_{2327} = (6, 0, 8, 1)
72: P_{1163} = (10, 7, 3, 1)
73: P_{1216} = (15, 10, 3, 1)
                                                                 127: P_{2331} = (10, 0, 8, 1)
74: P_{1219} = (2, 11, 3, 1)
                                                                 128: P_{2349} = (12, 1, 8, 1)
                                                                 129: P_{2400} = (15, 4, 8, 1)
75: P_{1226} = (9, 11, 3, 1)
                                                                 130: P_{2427} = (10, 6, 8, 1)
76: P_{1270} = (5, 14, 3, 1)
77: P_{1303} = (6, 0, 4, 1)
                                                                 131: P_{2455} = (6, 8, 8, 1)
78: P_{1343} = (14, 2, 4, 1)
                                                                 132: P_{2486} = (5, 10, 8, 1)
79: P_{1376} = (15, 4, 4, 1)
                                                                 133: P_{2499} = (2, 11, 8, 1)
                                                                 134: P_{2506} = (9, 11, 8, 1)
80: P_{1415} = (6,7,4,1)
81: P_{1417} = (8,7,4,1)
                                                                 135: P_{2590} = (13, 0, 9, 1)
82: P_{1421} = (12, 7, 4, 1)
                                                                 136: P_{2643} = (2,4,9,1)
83: P_{1440} = (15, 8, 4, 1)
                                                                 137: P_{2676} = (3, 6, 9, 1)
84: P_{1443} = (2, 9, 4, 1)
                                                                 138: P_{2694} = (5, 7, 9, 1)
85: P_{1504} = (15, 12, 4, 1)
                                                                 139: P_{2724} = (3, 9, 9, 1)
86: P_{1508} = (3, 13, 4, 1)
                                                                 140: P_{2775} = (6, 12, 9, 1)
87: P_{1556} = (3,0,5,1)
                                                                 141: P_{2782} = (13, 12, 9, 1)
88: P_{1564} = (11, 0, 5, 1)
                                                                 142: P_{2784} = (15, 12, 9, 1)
                                                                 143: P_{2805} = (4, 14, 9, 1)
89: P_{1565} = (12, 0, 5, 1)
90: P_{1576} = (7, 1, 5, 1)
                                                                 144: P_{2820} = (3, 15, 9, 1)
                                                                 145: P_{2833} = (0, 0, 10, 1)
91: P_{1593} = (8, 2, 5, 1)
92: P_{1645} = (12, 5, 5, 1)
                                                                 146: P_{2844} = (11, 0, 10, 1)
93: P_{1717} = (4, 10, 5, 1)
                                                                 147: P_{2850} = (1, 1, 10, 1)
94: P_{1727} = (14, 10, 5, 1)
                                                                 148: P_{2852} = (3, 1, 10, 1)
                                                                 149: P_{2857} = (8, 1, 10, 1)
95: P_{1732} = (3, 11, 5, 1)
96: P_{1756} = (11, 12, 5, 1)
                                                                 150: P_{2896} = (15, 3, 10, 1)
97: P_{1822} = (13, 0, 6, 1)
                                                                 151: P_{2917} = (4, 5, 10, 1)
98: P_{1827} = (2, 1, 6, 1)
                                                                 152: P_{2927} = (14, 5, 10, 1)
99: P_{1856} = (15, 2, 6, 1)
                                                                 153: P_{2966} = (5, 8, 10, 1)
100: P_{1924} = (3,7,6,1)
                                                                 154: P_{2997} = (4, 10, 10, 1)
101: P_{1929} = (8, 7, 6, 1)
                                                                 155: P_{3004} = (11, 10, 10, 1)
102: P_{1932} = (11, 7, 6, 1)
                                                                 156: P_{3007} = (14, 10, 10, 1)
103: P_{1947} = (10, 8, 6, 1)
                                                                 157: P_{3026} = (1, 12, 10, 1)
104: P_{1956} = (3, 9, 6, 1)
                                                                 158: P_{3042} = (1, 13, 10, 1)
105: P_{1986} = (1, 11, 6, 1)
                                                                 159: P_{3077} = (4, 15, 10, 1)
106: P_{2010} = (9, 12, 6, 1)
                                                                 160: P_{3087} = (14, 15, 10, 1)
107: P_{2031} = (14, 13, 6, 1)
                                                                 161: P_{3089} = (0, 0, 11, 1)
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162: P_{3099} = (10, 0, 11, 1)
                                                                 194: P_{3640} = (7, 2, 13, 1)
163: P_{3106} = (1, 1, 11, 1)
                                                                 195: P_{3645} = (12, 2, 13, 1)
                                                                 196: P_{3668} = (3, 4, 13, 1)
164: P_{3110} = (5, 1, 11, 1)
                                                                 197: P_{3711} = (14, 6, 13, 1)
165: P_{3120} = (15, 1, 11, 1)
166: P_{3139} = (2, 3, 11, 1)
                                                                 198: P_{3715} = (2, 7, 13, 1)
167: P_{3146} = (9, 3, 11, 1)
                                                                 199: P_{3762} = (1, 10, 13, 1)
168: P_{3172} = (3, 5, 11, 1)
                                                                 200: P_{3798} = (5, 12, 13, 1)
169: P_{3186} = (1, 6, 11, 1)
                                                                 201: P_{3803} = (10, 12, 13, 1)
170: P_{3202} = (1, 7, 11, 1)
                                                                 202: P_{3808} = (15, 12, 13, 1)
171: P_{3219} = (2, 8, 11, 1)
                                                                 203: P_{3830} = (5, 14, 13, 1)
172: P_{3226} = (9, 8, 11, 1)
                                                                 204: P_{3852} = (11, 15, 13, 1)
                                                                 205: P_{3864} = (7, 0, 14, 1)
173: P_{3267} = (2, 11, 11, 1)
174: P_{3274} = (9, 11, 11, 1)
                                                                 206: P_{3898} = (9, 2, 14, 1)
175: P_{3275} = (10, 11, 11, 1)
                                                                 207: P_{3910} = (5, 3, 14, 1)
                                                                 208: P_{3956} = (3, 6, 14, 1)
176: P_{3337} = (8, 15, 11, 1)
177: P_{3351} = (6, 0, 12, 1)
                                                                 209: P_{3960} = (7, 6, 14, 1)
178: P_{3375} = (14, 1, 12, 1)
                                                                 210: P_{3966} = (13, 6, 14, 1)
                                                                 211: P_{4005} = (4, 9, 14, 1)
179: P_{3424} = (15, 4, 12, 1)
180: P_{3436} = (11, 5, 12, 1)
                                                                 212: P_{4057} = (8, 12, 14, 1)
                                                                 213: P_{4070} = (5, 13, 14, 1)
181: P_{3450} = (9, 6, 12, 1)
182: P_{3461} = (4, 7, 12, 1)
                                                                 214: P_{4086} = (5, 14, 14, 1)
                                                                 215: P_{4121} = (8, 0, 15, 1)
183: P_{3495} = (6, 9, 12, 1)
184: P_{3502} = (13, 9, 12, 1)
                                                                 216: P_{4124} = (11, 0, 15, 1)
185: P_{3504} = (15, 9, 12, 1)
                                                                 217: P_{4126} = (13, 0, 15, 1)
186: P_{3506} = (1, 10, 12, 1)
                                                                 218: P_{4135} = (6, 1, 15, 1)
187: P_{3558} = (5, 13, 12, 1)
                                                                 219: P_{4260} = (3, 9, 15, 1)
188: P_{3563} = (10, 13, 12, 1)
                                                                 220: P_{4277} = (4, 10, 15, 1)
189: P_{3568} = (15, 13, 12, 1)
                                                                 221: P_{4287} = (14, 10, 15, 1)
                                                                 222: P_{4297} = (8, 11, 15, 1)
190: P_{3577} = (8, 14, 12, 1)
191: P_{3608} = (7, 0, 13, 1)
                                                                 223: P_{4332} = (11, 13, 15, 1)
                                                                 224: P_{4366} = (13, 15, 15, 1)
192: P_{3621} = (4, 1, 13, 1)
193: P_{3638} = (5, 2, 13, 1)
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## Line Intersection Graph

Neighbor sets in the line intersection graph:

The surface has 225 points:

The points on the surface are:

```
0: P_4 = (1, 1, 1, 1)
                                            12: P_{196} = (1, 11, 1, 0)
                                                                                         24: P_{365} = (11, 5, 0, 1)
1: P_{35} = (0, 1, 1, 0)
                                            13: P_{206} = (11, 11, 1, 0)
                                                                                         25: P_{366} = (12, 5, 0, 1)
                                                                                         26: P_{383} = (13, 6, 0, 1)
2: P_{36} = (1, 1, 1, 0)
                                            14: P_{220} = (9, 12, 1, 0)
3: P_{62} = (11, 2, 1, 0)
                                            15: P_{229} = (2, 13, 1, 0)
                                                                                         27: P_{398} = (12, 7, 0, 1)
4: P_{93} = (10, 4, 1, 0)
                                            16: P_{253} = (10, 14, 1, 0)
                                                                                         28: P_{407} = (5, 8, 0, 1)
5: P_{129} = (14, 6, 1, 0)
                                            17: P_{290} = (0, 1, 0, 1)
                                                                                         29: P_{408} = (6, 8, 0, 1)
6: P_{135} = (4,7,1,0)
                                            18: P_{318} = (12, 2, 0, 1)
                                                                                         30: P_{412} = (10, 8, 0, 1)
                                            19: P_{329} = (7, 3, 0, 1)
                                                                                         31: P_{431} = (13, 9, 0, 1)
7: P_{174} = (11, 9, 1, 0)
8: P_{179} = (0, 10, 1, 0)
                                            20: P_{332} = (10, 3, 0, 1)
                                                                                         32: P_{434} = (0, 10, 0, 1)
9: P_{180} = (1, 10, 1, 0)
                                            21: P_{337} = (15, 3, 0, 1)
                                                                                         33: P_{445} = (11, 10, 0, 1)
10: P_{189} = (10, 10, 1, 0)
                                            22: P_{344} = (6, 4, 0, 1)
                                                                                         34: P_{450} = (0, 11, 0, 1)
11: P_{195} = (0, 11, 1, 0)
                                            23: P_{357} = (3, 5, 0, 1)
                                                                                         35: P_{460} = (10, 11, 0, 1)
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36: P_{472} = (6, 12, 0, 1)
                                           90: P_{1576} = (7, 1, 5, 1)
                                                                                       144: P_{2820} = (3, 15, 9, 1)
37: P_{489} = (7, 13, 0, 1)
                                                                                       145: P_{2833} = (0, 0, 10, 1)
                                           91: P_{1593} = (8, 2, 5, 1)
                                                                                       146: P_{2844} = (11, 0, 10, 1)
38: P_{505} = (7, 14, 0, 1)
                                           92: P_{1645} = (12, 5, 5, 1)
39: P_{522} = (8, 15, 0, 1)
                                                                                       147: P_{2850} = (1, 1, 10, 1)
                                           93: P_{1717} = (4, 10, 5, 1)
40: P_{525} = (11, 15, 0, 1)
                                           94: P_{1727} = (14, 10, 5, 1)
                                                                                       148: P_{2852} = (3, 1, 10, 1)
41: P_{527} = (13, 15, 0, 1)
                                           95: P_{1732} = (3, 11, 5, 1)
                                                                                       149: P_{2857} = (8, 1, 10, 1)
42: P_{530} = (0,0,1,1)
                                           96: P_{1756} = (11, 12, 5, 1)
                                                                                       150: P_{2896} = (15, 3, 10, 1)
43: P_{590} = (13, 3, 1, 1)
                                           97: P_{1822} = (13, 0, 6, 1)
                                                                                       151: P_{2917} = (4, 5, 10, 1)
44: P_{616} = (7, 5, 1, 1)
                                           98: P_{1827} = (2, 1, 6, 1)
                                                                                       152: P_{2927} = (14, 5, 10, 1)
45: P_{627} = (2, 6, 1, 1)
                                           99: P_{1856} = (15, 2, 6, 1)
                                                                                       153: P_{2966} = (5, 8, 10, 1)
46: P_{650} = (9,7,1,1)
                                           100: P_{1924} = (3,7,6,1)
                                                                                       154: P_{2997} = (4, 10, 10, 1)
47: P_{669} = (12, 8, 1, 1)
                                           101: P_{1929} = (8,7,6,1)
                                                                                       155: P_{3004} = (11, 10, 10, 1)
48: P_{690} = (1, 10, 1, 1)
                                           102: P_{1932} = (11, 7, 6, 1)
                                                                                       156: P_{3007} = (14, 10, 10, 1)
49: P_{692} = (3, 10, 1, 1)
                                           103: P_{1947} = (10, 8, 6, 1)
                                                                                       157: P_{3026} = (1, 12, 10, 1)
                                                                                       158: P_{3042} = (1, 13, 10, 1)
50: P_{697} = (8, 10, 1, 1)
                                           104: P_{1956} = (3, 9, 6, 1)
51: P_{706} = (1, 11, 1, 1)
                                           105: P_{1986} = (1, 11, 6, 1)
                                                                                       159: P_{3077} = (4, 15, 10, 1)
                                           106: P_{2010} = (9, 12, 6, 1)
52: P_{710} = (5, 11, 1, 1)
                                                                                       160: P_{3087} = (14, 15, 10, 1)
53: P_{720} = (15, 11, 1, 1)
                                           107: P_{2031} = (14, 13, 6, 1)
                                                                                       161: P_{3089} = (0, 0, 11, 1)
54: P_{735} = (14, 12, 1, 1)
                                                                                       162: P_{3099} = (10, 0, 11, 1)
                                           108: P_{2036} = (3, 14, 6, 1)
55: P_{741} = (4, 13, 1, 1)
                                           109: P_{2040} = (7, 14, 6, 1)
                                                                                       163: P_{3106} = (1, 1, 11, 1)
56: P_{775} = (6, 15, 1, 1)
                                           110: P_{2046} = (13, 14, 6, 1)
                                                                                       164: P_{3110} = (5, 1, 11, 1)
57: P_{797} = (12, 0, 2, 1)
                                                                                       165: P_{3120} = (15, 1, 11, 1)
                                           111: P_{2077} = (12, 0, 7, 1)
                                           112: P_{2090} = (9, 1, 7, 1)
                                                                                       166: P_{3139} = (2, 3, 11, 1)
58: P_{825} = (8, 2, 2, 1)
59: P_{863} = (14, 4, 2, 1)
                                           113: P_{2105} = (8, 2, 7, 1)
                                                                                       167: P_{3146} = (9, 3, 11, 1)
                                                                                       168: P_{3172} = (3, 5, 11, 1)
60: P_{873} = (8, 5, 2, 1)
                                           114: P_{2123} = (10, 3, 7, 1)
61: P_{896} = (15, 6, 2, 1)
                                           115: P_{2135} = (6, 4, 7, 1)
                                                                                       169: P_{3186} = (1, 6, 11, 1)
62: P_{905} = (8,7,2,1)
                                           116: P_{2137} = (8, 4, 7, 1)
                                                                                       170: P_{3202} = (1, 7, 11, 1)
63: P_{998} = (5, 13, 2, 1)
                                           117: P_{2141} = (12, 4, 7, 1)
                                                                                       171: P_{3219} = (2, 8, 11, 1)
                                                                                       172: P_{3226} = (9, 8, 11, 1)
64: P_{1000} = (7, 13, 2, 1)
                                           118: P_{2164} = (3, 6, 7, 1)
65: P_{1005} = (12, 13, 2, 1)
                                           119: P_{2169} = (8, 6, 7, 1)
                                                                                       173: P_{3267} = (2, 11, 11, 1)
66: P_{1018} = (9, 14, 2, 1)
                                           120: P_{2172} = (11, 6, 7, 1)
                                                                                       174: P_{3274} = (9, 11, 11, 1)
67: P_{1048} = (7, 0, 3, 1)
                                           121: P_{2214} = (5, 9, 7, 1)
                                                                                       175: P_{3275} = (10, 11, 11, 1)
68: P_{1051} = (10, 0, 3, 1)
                                           122: P_{2242} = (1, 11, 7, 1)
                                                                                       176: P_{3337} = (8, 15, 11, 1)
69: P_{1056} = (15, 0, 3, 1)
                                           123: P_{2261} = (4, 12, 7, 1)
                                                                                       177: P_{3351} = (6, 0, 12, 1)
70: P_{1070} = (13, 1, 3, 1)
                                           124: P_{2275} = (2, 13, 7, 1)
                                                                                       178: P_{3375} = (14, 1, 12, 1)
71: P_{1096} = (7, 3, 3, 1)
                                           125: P_{2326} = (5,0,8,1)
                                                                                       179: P_{3424} = (15, 4, 12, 1)
72: P_{1163} = (10, 7, 3, 1)
                                           126: P_{2327} = (6,0,8,1)
                                                                                       180: P_{3436} = (11, 5, 12, 1)
                                           127: P_{2331} = (10, 0, 8, 1)
                                                                                       181: P_{3450} = (9, 6, 12, 1)
73: P_{1216} = (15, 10, 3, 1)
                                                                                       182: P_{3461} = (4, 7, 12, 1)
74: P_{1219} = (2, 11, 3, 1)
                                           128: P_{2349} = (12, 1, 8, 1)
                                                                                       183: P_{3495} = (6, 9, 12, 1)
75: P_{1226} = (9, 11, 3, 1)
                                           129: P_{2400} = (15, 4, 8, 1)
76: P_{1270} = (5, 14, 3, 1)
                                           130: P_{2427} = (10, 6, 8, 1)
                                                                                       184: P_{3502} = (13, 9, 12, 1)
                                           131: P_{2455} = (6, 8, 8, 1)
                                                                                       185: P_{3504} = (15, 9, 12, 1)
77: P_{1303} = (6,0,4,1)
78: P_{1343} = (14, 2, 4, 1)
                                           132: P_{2486} = (5, 10, 8, 1)
                                                                                       186: P_{3506} = (1, 10, 12, 1)
79: P_{1376} = (15, 4, 4, 1)
                                           133: P_{2499} = (2, 11, 8, 1)
                                                                                       187: P_{3558} = (5, 13, 12, 1)
80: P_{1415} = (6,7,4,1)
                                           134: P_{2506} = (9, 11, 8, 1)
                                                                                       188: P_{3563} = (10, 13, 12, 1)
                                           135: P_{2590} = (13, 0, 9, 1)
                                                                                       189: P_{3568} = (15, 13, 12, 1)
81: P_{1417} = (8,7,4,1)
82: P_{1421} = (12, 7, 4, 1)
                                           136: P_{2643} = (2, 4, 9, 1)
                                                                                       190: P_{3577} = (8, 14, 12, 1)
83: P_{1440} = (15, 8, 4, 1)
                                           137: P_{2676} = (3, 6, 9, 1)
                                                                                       191: P_{3608} = (7, 0, 13, 1)
                                                                                       192: P_{3621} = (4, 1, 13, 1)
84: P_{1443} = (2, 9, 4, 1)
                                           138: P_{2694} = (5, 7, 9, 1)
85: P_{1504} = (15, 12, 4, 1)
                                           139: P_{2724} = (3, 9, 9, 1)
                                                                                       193: P_{3638} = (5, 2, 13, 1)
86: P_{1508} = (3, 13, 4, 1)
                                           140: P_{2775} = (6, 12, 9, 1)
                                                                                       194: P_{3640} = (7, 2, 13, 1)
87: P_{1556} = (3,0,5,1)
                                           141: P_{2782} = (13, 12, 9, 1)
                                                                                       195: P_{3645} = (12, 2, 13, 1)
88: P_{1564} = (11, 0, 5, 1)
                                           142: P_{2784} = (15, 12, 9, 1)
                                                                                       196: P_{3668} = (3, 4, 13, 1)
89: P_{1565} = (12, 0, 5, 1)
                                           143: P_{2805} = (4, 14, 9, 1)
                                                                                       197: P_{3711} = (14, 6, 13, 1)
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198: P_{3715} = (2, 7, 13, 1)
                                                                                      218: P_{4135} = (6, 1, 15, 1)
                                           208: P_{3956} = (3, 6, 14, 1)
199 : P_{3762} = (1, 10, 13, 1)
                                           209: P_{3960} = (7, 6, 14, 1)
                                                                                      219: P_{4260} = (3, 9, 15, 1)
200: P_{3798} = (5, 12, 13, 1)
                                                                                      220: P_{4277} = (4, 10, 15, 1)
                                           210: P_{3966} = (13, 6, 14, 1)
201: P_{3803} = (10, 12, 13, 1)
                                           211: P_{4005} = (4, 9, 14, 1)
                                                                                      221: P_{4287} = (14, 10, 15, 1)
202: P_{3808} = (15, 12, 13, 1)
                                           212: P_{4057} = (8, 12, 14, 1)
                                                                                      222: P_{4297} = (8, 11, 15, 1)
                                          213: P_{4070} = (5, 13, 14, 1)
203: P_{3830} = (5, 14, 13, 1)
                                                                                      223: P_{4332} = (11, 13, 15, 1)
204: P_{3852} = (11, 15, 13, 1)
                                           214: P_{4086} = (5, 14, 14, 1)
                                                                                      224: P_{4366} = (13, 15, 15, 1)
                                           215: P_{4121} = (8, 0, 15, 1)
205: P_{3864} = (7, 0, 14, 1)
206: P_{3898} = (9, 2, 14, 1)
                                           216: P_{4124} = (11, 0, 15, 1)
                                           217: P_{4126} = (13, 0, 15, 1)
207: P_{3910} = (5, 3, 14, 1)
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