# Rank-139 over GF(32)

January 15, 2021

# The equation

The equation of the surface is:

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

(0, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0)The point rank of the equation over GF(32) is 69273679

### General information

Number of lines	6
Number of points	1121
Number of singular points	1
Number of Eckardt points	2
Number of double points	3
Number of single points	186
Number of points off lines	930
Number of Hesse planes	0
Number of axes	0
Type of points on lines	$33^{6}$
Type of lines on points	$3^2, 2^3, 1^{186}, 0^{930}$

# Singular Points

The surface has 1 singular points:

$$0: P_4 = \mathbf{P}(1, 1, 1, 1) = \mathbf{P}(1, 1, 1, 1)$$

## The 6 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \left[ \begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 \end{array} \right]_1 = \left[ \begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 \end{array} \right]_1 = \mathbf{Pl}(1,0,1,0,0,0)_3$$

$$\ell_{1} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{32} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{32} = \mathbf{Pl}(1,0,0,0,1,0)_{1090}$$

$$\ell_{2} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1025} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1025} = \mathbf{Pl}(0,0,1,0,1,0)_{1152}$$

$$\ell_{3} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{2082} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{2082} = \mathbf{Pl}(0,0,1,1,1,1)_{70562}$$

$$\ell_{4} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{1089} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{1089} = \mathbf{Pl}(1,1,0,0,1,1)_{68609}$$

$$\ell_{5} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{33825} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{33825} = \mathbf{Pl}(1,1,1,1,0,0)_{128}$$

Rank of lines: (1, 32, 1025, 2082, 1089, 33825)

Rank of points on Klein quadric: (3, 1090, 1152, 70562, 68609, 128)

#### **Eckardt Points**

The surface has 2 Eckardt points:

$$0: P_0 = \mathbf{P}(1, 0, 0, 0) = \mathbf{P}(1, 0, 0, 0),$$

$$1: P_4 = \mathbf{P}(1, 1, 1, 1) = \mathbf{P}(1, 1, 1, 1).$$

#### **Double Points**

The surface has 3 Double points:

The double points on the surface are:

$$P_{67} = (0, 1, 1, 0) = \ell_0 \cap \ell_5$$
  
 $P_{1090} = (0, 1, 0, 1) = \ell_1 \cap \ell_4$ 

$$P_{2082} = (0, 0, 1, 1) = \ell_2 \cap \ell_3$$

#### Single Points

The surface has 186 single points:

The single points on the surface are:

 $0: P_5 = (1, 1, 0, 0)$  lies on line  $\ell_3$ 16:  $P_{82} = (15, 1, 1, 0)$  lies on line  $\ell_0$ 1:  $P_{36} = (1, 0, 1, 0)$  lies on line  $\ell_4$ 17:  $P_{83} = (16, 1, 1, 0)$  lies on line  $\ell_0$ 2:  $P_{68} = (1, 1, 1, 0)$  lies on line  $\ell_0$ 18:  $P_{84} = (17, 1, 1, 0)$  lies on line  $\ell_0$ 19:  $P_{85} = (18, 1, 1, 0)$  lies on line  $\ell_0$  $3: P_{69} = (2, 1, 1, 0)$  lies on line  $\ell_0$ 4:  $P_{70} = (3, 1, 1, 0)$  lies on line  $\ell_0$ 20:  $P_{86} = (19, 1, 1, 0)$  lies on line  $\ell_0$ 5:  $P_{71} = (4, 1, 1, 0)$  lies on line  $\ell_0$ 21:  $P_{87} = (20, 1, 1, 0)$  lies on line  $\ell_0$ 6:  $P_{72} = (5, 1, 1, 0)$  lies on line  $\ell_0$ 22:  $P_{88} = (21, 1, 1, 0)$  lies on line  $\ell_0$ 7:  $P_{73} = (6, 1, 1, 0)$  lies on line  $\ell_0$ 23:  $P_{89} = (22, 1, 1, 0)$  lies on line  $\ell_0$ 8:  $P_{74} = (7, 1, 1, 0)$  lies on line  $\ell_0$ 24:  $P_{90} = (23, 1, 1, 0)$  lies on line  $\ell_0$ 9:  $P_{75} = (8, 1, 1, 0)$  lies on line  $\ell_0$ 25:  $P_{91} = (24, 1, 1, 0)$  lies on line  $\ell_0$ 10:  $P_{76} = (9, 1, 1, 0)$  lies on line  $\ell_0$ 26:  $P_{92} = (25, 1, 1, 0)$  lies on line  $\ell_0$ 11:  $P_{77} = (10, 1, 1, 0)$  lies on line  $\ell_0$ 27:  $P_{93} = (26, 1, 1, 0)$  lies on line  $\ell_0$ 12:  $P_{78} = (11, 1, 1, 0)$  lies on line  $\ell_0$ 28:  $P_{94} = (27, 1, 1, 0)$  lies on line  $\ell_0$ 13:  $P_{79} = (12, 1, 1, 0)$  lies on line  $\ell_0$ 29:  $P_{95} = (28, 1, 1, 0)$  lies on line  $\ell_0$ 14:  $P_{80} = (13, 1, 1, 0)$  lies on line  $\ell_0$  $30: P_{96} = (29, 1, 1, 0)$  lies on line  $\ell_0$ 15 :  $P_{81} = (14,1,1,0)$  lies on line  $\ell_0$  $31: P_{97} = (30, 1, 1, 0)$  lies on line  $\ell_0$ 

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32: P_{98} = (31, 1, 1, 0) lies on line \ell_0
                                                                      86: P_{2104} = (22, 0, 1, 1) lies on line \ell_2
33: P_{1059} = (1,0,0,1) lies on line \ell_5
                                                                     87: P_{2105} = (23, 0, 1, 1) lies on line \ell_2
34: P_{1091} = (1, 1, 0, 1) lies on line \ell_1
                                                                      88: P_{2106} = (24, 0, 1, 1) lies on line \ell_2
                                                                      89: P_{2107} = (25, 0, 1, 1) lies on line \ell_2
35: P_{1092} = (2, 1, 0, 1) lies on line \ell_1
                                                                     90 : P_{2108} = (26, 0, 1, 1) lies on line \ell_2
36: P_{1093} = (3, 1, 0, 1) lies on line \ell_1
                                                                     91: P_{2109} = (27, 0, 1, 1) lies on line \ell_2
37: P_{1094} = (4, 1, 0, 1) lies on line \ell_1
38: P_{1095} = (5, 1, 0, 1) lies on line \ell_1
                                                                     92: P_{2110} = (28, 0, 1, 1) lies on line \ell_2
39: P_{1096} = (6,1,0,1) lies on line \ell_1
                                                                     93: P_{2111} = (29, 0, 1, 1) lies on line \ell_2
40: P_{1097} = (7, 1, 0, 1) lies on line \ell_1
                                                                     94: P_{2112} = (30, 0, 1, 1) lies on line \ell_2
41: P_{1098} = (8, 1, 0, 1) lies on line \ell_1
                                                                      95: P_{2113} = (31, 0, 1, 1) lies on line \ell_2
42: P_{1099} = (9, 1, 0, 1) lies on line \ell_1
                                                                     96: P_{2147} = (2, 2, 1, 1) lies on line \ell_3
                                                                     97: P_{2180} = (3, 3, 1, 1) lies on line \ell_3
43: P_{1100} = (10, 1, 0, 1) lies on line \ell_1
44: P_{1101} = (11, 1, 0, 1) lies on line \ell_1
                                                                     98: P_{2213} = (4, 4, 1, 1) lies on line \ell_3
                                                                     99: P_{2246} = (5, 5, 1, 1) lies on line \ell_3
45: P_{1102} = (12, 1, 0, 1) lies on line \ell_1
                                                                     100: P_{2279} = (6, 6, 1, 1) lies on line \ell_3
46: P_{1103} = (13, 1, 0, 1) lies on line \ell_1
47: P_{1104} = (14, 1, 0, 1) lies on line \ell_1
                                                                     101: P_{2312} = (7, 7, 1, 1) lies on line \ell_3
48: P_{1105} = (15, 1, 0, 1) lies on line \ell_1
                                                                     102: P_{2345} = (8, 8, 1, 1) lies on line \ell_3
49: P_{1106} = (16, 1, 0, 1) lies on line \ell_1
                                                                     103: P_{2378} = (9, 9, 1, 1) lies on line \ell_3
50: P_{1107} = (17, 1, 0, 1) lies on line \ell_1
                                                                     104: P_{2411} = (10, 10, 1, 1) lies on line \ell_3
51: P_{1108} = (18, 1, 0, 1) lies on line \ell_1
                                                                     105: P_{2444} = (11, 11, 1, 1) lies on line \ell_3
52: P_{1109} = (19, 1, 0, 1) lies on line \ell_1
                                                                     106: P_{2477} = (12, 12, 1, 1) lies on line \ell_3
53: P_{1110} = (20, 1, 0, 1) lies on line \ell_1
                                                                     107: P_{2510} = (13, 13, 1, 1) lies on line \ell_3
54: P_{1111} = (21, 1, 0, 1) lies on line \ell_1
                                                                      108: P_{2543} = (14, 14, 1, 1) lies on line \ell_3
55: P_{1112} = (22, 1, 0, 1) lies on line \ell_1
                                                                     109: P_{2576} = (15, 15, 1, 1) lies on line \ell_3
56: P_{1113} = (23, 1, 0, 1) lies on line \ell_1
                                                                     110: P_{2609} = (16, 16, 1, 1) lies on line \ell_3
57: P_{1114} = (24, 1, 0, 1) lies on line \ell_1
                                                                     111: P_{2642} = (17, 17, 1, 1) lies on line \ell_3
58: P_{1115} = (25, 1, 0, 1) lies on line \ell_1
                                                                     112: P_{2675} = (18, 18, 1, 1) lies on line \ell_3
59: P_{1116} = (26, 1, 0, 1) lies on line \ell_1
                                                                     113: P_{2708} = (19, 19, 1, 1) lies on line \ell_3
                                                                     114: P_{2741} = (20, 20, 1, 1) lies on line \ell_3
60: P_{1117} = (27, 1, 0, 1) lies on line \ell_1
61: P_{1118} = (28, 1, 0, 1) lies on line \ell_1
                                                                     115: P_{2774} = (21, 21, 1, 1) lies on line \ell_3
62: P_{1119} = (29, 1, 0, 1) lies on line \ell_1
                                                                     116: P_{2807} = (22, 22, 1, 1) lies on line \ell_3
63: P_{1120} = (30, 1, 0, 1) lies on line \ell_1
                                                                     117: P_{2840} = (23, 23, 1, 1) lies on line \ell_3
64: P_{1121} = (31, 1, 0, 1) lies on line \ell_1
                                                                     118: P_{2873} = (24, 24, 1, 1) lies on line \ell_3
65: P_{2083} = (1,0,1,1) lies on line \ell_2
                                                                     119: P_{2906} = (25, 25, 1, 1) lies on line \ell_3
66: P_{2084} = (2,0,1,1) lies on line \ell_2
                                                                     120: P_{2939} = (26, 26, 1, 1) lies on line \ell_3
                                                                     121: P_{2972} = (27, 27, 1, 1) lies on line \ell_3
67: P_{2085} = (3,0,1,1) lies on line \ell_2
68: P_{2086} = (4, 0, 1, 1) lies on line \ell_2
                                                                     122: P_{3005} = (28, 28, 1, 1) lies on line \ell_3
69: P_{2087} = (5, 0, 1, 1) lies on line \ell_2
                                                                     123: P_{3038} = (29, 29, 1, 1) lies on line \ell_3
70: P_{2088} = (6,0,1,1) lies on line \ell_2
                                                                     124: P_{3071} = (30, 30, 1, 1) lies on line \ell_3
71: P_{2089} = (7, 0, 1, 1) lies on line \ell_2
                                                                     125: P_{3104} = (31, 31, 1, 1) lies on line \ell_3
72: P_{2090} = (8,0,1,1) lies on line \ell_2
                                                                     126: P_{3139} = (2, 1, 2, 1) lies on line \ell_4
73: P_{2091} = (9, 0, 1, 1) lies on line \ell_2
                                                                     127: P_{3170} = (1, 2, 2, 1) lies on line \ell_5
74: P_{2092} = (10, 0, 1, 1) lies on line \ell_2
                                                                     128: P_{4164} = (3, 1, 3, 1) lies on line \ell_4
75: P_{2093} = (11, 0, 1, 1) lies on line \ell_2
                                                                     129: P_{4226} = (1, 3, 3, 1) lies on line \ell_5
76: P_{2094} = (12, 0, 1, 1) lies on line \ell_2
                                                                     130: P_{5189} = (4, 1, 4, 1) lies on line \ell_4
77: P_{2095} = (13, 0, 1, 1) lies on line \ell_2
                                                                      131: P_{5282} = (1, 4, 4, 1) lies on line \ell_5
78: P_{2096} = (14, 0, 1, 1) lies on line \ell_2
                                                                     132: P_{6214} = (5, 1, 5, 1) lies on line \ell_4
79: P_{2097} = (15, 0, 1, 1) lies on line \ell_2
                                                                     133: P_{6338} = (1, 5, 5, 1) lies on line \ell_5
80: P_{2098} = (16, 0, 1, 1) lies on line \ell_2
                                                                     134: P_{7239} = (6, 1, 6, 1) lies on line \ell_4
81: P_{2099} = (17, 0, 1, 1) lies on line \ell_2
                                                                     135: P_{7394} = (1, 6, 6, 1) lies on line \ell_5
82: P_{2100} = (18, 0, 1, 1) lies on line \ell_2
                                                                     136: P_{8264} = (7, 1, 7, 1) lies on line \ell_4
83: P_{2101} = (19, 0, 1, 1) lies on line \ell_2
                                                                     137: P_{8450} = (1,7,7,1) lies on line \ell_5
84: P_{2102} = (20, 0, 1, 1) lies on line \ell_2
                                                                     138: P_{9289} = (8, 1, 8, 1) lies on line \ell_4
85: P_{2103} = (21, 0, 1, 1) lies on line \ell_2
                                                                     139: P_{9506} = (1, 8, 8, 1) lies on line \ell_5
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140: P_{10314} = (9, 1, 9, 1) lies on line \ell_4
                                                                     164: P_{22614} = (21, 1, 21, 1) lies on line \ell_4
                                                                     165: P_{23234} = (1, 21, 21, 1) lies on line \ell_5
141: P_{10562} = (1, 9, 9, 1) lies on line \ell_5
                                                                     166: P_{23639} = (22, 1, 22, 1) lies on line \ell_4
142: P_{11339} = (10, 1, 10, 1) lies on line \ell_4
143: P_{11618} = (1, 10, 10, 1) lies on line \ell_5
                                                                     167: P_{24290} = (1, 22, 22, 1) lies on line \ell_5
144: P_{12364} = (11, 1, 11, 1) lies on line \ell_4
                                                                     168: P_{24664} = (23, 1, 23, 1) lies on line \ell_4
145: P_{12674} = (1, 11, 11, 1) lies on line \ell_5
                                                                     169: P_{25346} = (1, 23, 23, 1) lies on line \ell_5
146: P_{13389} = (12, 1, 12, 1) lies on line \ell_4
                                                                     170: P_{25689} = (24, 1, 24, 1) lies on line \ell_4
147: P_{13730} = (1, 12, 12, 1) lies on line \ell_5
                                                                     171: P_{26402} = (1, 24, 24, 1) lies on line \ell_5
148: P_{14414} = (13, 1, 13, 1) lies on line \ell_4
                                                                     172: P_{26714} = (25, 1, 25, 1) lies on line \ell_4
149: P_{14786} = (1, 13, 13, 1) lies on line \ell_5
                                                                     173: P_{27458} = (1, 25, 25, 1) lies on line \ell_5
150: P_{15439} = (14, 1, 14, 1) lies on line \ell_4
                                                                     174: P_{27739} = (26, 1, 26, 1) lies on line \ell_4
151: P_{15842} = (1, 14, 14, 1) lies on line \ell_5
                                                                     175: P_{28514} = (1, 26, 26, 1) lies on line \ell_5
152: P_{16464} = (15, 1, 15, 1) lies on line \ell_4
                                                                     176: P_{28764} = (27, 1, 27, 1) lies on line \ell_4
                                                                     177: P_{29570} = (1, 27, 27, 1) lies on line \ell_5
153: P_{16898} = (1, 15, 15, 1) lies on line \ell_5
                                                                     178: P_{29789} = (28, 1, 28, 1) lies on line \ell_4
154: P_{17489} = (16, 1, 16, 1) lies on line \ell_4
155: P_{17954} = (1, 16, 16, 1) lies on line \ell_5
                                                                     179: P_{30626} = (1, 28, 28, 1) lies on line \ell_5
                                                                     180 : P_{30814} = (29, 1, 29, 1) lies on line \ell_4
156: P_{18514} = (17, 1, 17, 1) lies on line \ell_4
157: P_{19010} = (1, 17, 17, 1) lies on line \ell_5
                                                                     181: P_{31682} = (1, 29, 29, 1) lies on line \ell_5
158: P_{19539} = (18, 1, 18, 1) lies on line \ell_4
                                                                     182: P_{31839} = (30, 1, 30, 1) lies on line \ell_4
159: P_{20066} = (1, 18, 18, 1) lies on line \ell_5
                                                                     183: P_{32738} = (1, 30, 30, 1) lies on line \ell_5
160: P_{20564} = (19, 1, 19, 1) lies on line \ell_4
                                                                     184: P_{32864} = (31, 1, 31, 1) lies on line \ell_4
                                                                     185 : P_{33794} = (1, 31, 31, 1) lies on line \ell_5
161: P_{21122} = (1, 19, 19, 1) lies on line \ell_5
162: P_{21589} = (20, 1, 20, 1) lies on line \ell_4
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The single points on the surface are:

163:  $P_{22178} = (1, 20, 20, 1)$  lies on line  $\ell_5$ 

#### Points on surface but on no line

The surface has 930 points not on any line: The points on the surface but not on lines are:

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0: P_{123} = (24, 2, 1, 0)
                                                                  20: P_{749} = (10, 22, 1, 0)
1: P_{155} = (24, 3, 1, 0)
                                                                  21: P_{781} = (10, 23, 1, 0)
2: P_{170} = (7, 4, 1, 0)
                                                                  22: P_{817} = (14, 24, 1, 0)
3: P_{202} = (7, 5, 1, 0)
                                                                  23: P_{849} = (14, 25, 1, 0)
4: P_{257} = (30, 6, 1, 0)
                                                                  24: P_{890} = (23, 26, 1, 0)
5: P_{289} = (30, 7, 1, 0)
                                                                  25: P_{922} = (23, 27, 1, 0)
                                                                  26: P_{939} = (8, 28, 1, 0)
6: P_{317} = (26, 8, 1, 0)
7: P_{349} = (26, 9, 1, 0)
                                                                  27: P_{971} = (8, 29, 1, 0)
8: P_{358} = (3, 10, 1, 0)
                                                                  28: P_{1012} = (17, 30, 1, 0)
9: P_{390} = (3, 11, 1, 0)
                                                                  29: P_{1044} = (17, 31, 1, 0)
10: P_{447} = (28, 12, 1, 0)
                                                                  30: P_{1146} = (24, 2, 0, 1)
                                                                  31: P_{1178} = (24, 3, 0, 1)
11: P_{479} = (28, 13, 1, 0)
12: P_{488} = (5, 14, 1, 0)
                                                                  32: P_{1193} = (7, 4, 0, 1)
13: P_{520} = (5, 15, 1, 0)
                                                                  33: P_{1225} = (7, 5, 0, 1)
14: P_{568} = (21, 16, 1, 0)
                                                                  34: P_{1280} = (30, 6, 0, 1)
                                                                  35: P_{1312} = (30, 7, 0, 1)
15: P_{600} = (21, 17, 1, 0)
16: P_{623} = (12, 18, 1, 0)
                                                                  36: P_{1340} = (26, 8, 0, 1)
17: P_{655} = (12, 19, 1, 0)
                                                                  37: P_{1372} = (26, 9, 0, 1)
18: P_{694} = (19, 20, 1, 0)
                                                                  38: P_{1381} = (3, 10, 0, 1)
19: P_{726} = (19, 21, 1, 0)
                                                                  39: P_{1413} = (3, 11, 0, 1)
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40: P_{1470} = (28, 12, 0, 1)
                                                                 94: P_{4412} = (27, 8, 3, 1)
                                                                 95: P_{4448} = (31, 9, 3, 1)
41: P_{1502} = (28, 13, 0, 1)
42: P_{1511} = (5, 14, 0, 1)
                                                                 96: P_{4452} = (3, 10, 3, 1)
                                                                 97: P_{4484} = (3, 11, 3, 1)
43: P_{1543} = (5, 15, 0, 1)
44: P_{1591} = (21, 16, 0, 1)
                                                                 98: P_{4544} = (31, 12, 3, 1)
45: P_{1623} = (21, 17, 0, 1)
                                                                 99: P_{4555} = (10, 13, 3, 1)
46: P_{1646} = (12, 18, 0, 1)
                                                                 100: P_{4583} = (6, 14, 3, 1)
47: P_{1678} = (12, 19, 0, 1)
                                                                 101: P_{4636} = (27, 15, 3, 1)
48: P_{1717} = (19, 20, 0, 1)
                                                                 102: P_{4641} = (0, 16, 3, 1)
49: P_{1749} = (19, 21, 0, 1)
                                                                 103: P_{4682} = (9, 17, 3, 1)
50: P_{1772} = (10, 22, 0, 1)
                                                                 104: P_{4735} = (30, 18, 3, 1)
51: P_{1804} = (10, 23, 0, 1)
                                                                 105: P_{4744} = (7, 19, 3, 1)
52: P_{1840} = (14, 24, 0, 1)
                                                                 106: P_{4770} = (1, 20, 3, 1)
53: P_{1872} = (14, 25, 0, 1)
                                                                 107: P_{4819} = (18, 21, 3, 1)
54: P_{1913} = (23, 26, 0, 1)
                                                                 108: P_{4845} = (12, 22, 3, 1)
55: P_{1945} = (23, 27, 0, 1)
                                                                 109: P_{4866} = (1, 23, 3, 1)
                                                                 110: P_{4921} = (24, 24, 3, 1)
56: P_{1962} = (8, 28, 0, 1)
                                                                 111: P_{4949} = (20, 25, 3, 1)
57: P_{1994} = (8, 29, 0, 1)
58: P_{2035} = (17, 30, 0, 1)
                                                                 112: P_{4976} = (15, 26, 3, 1)
59: P_{2067} = (17, 31, 0, 1)
                                                                 113: P_{5010} = (17, 27, 3, 1)
60: P_{3129} = (24, 0, 2, 1)
                                                                 114: P_{5047} = (22, 28, 3, 1)
61: P_{3239} = (6, 4, 2, 1)
                                                                 115: P_{5077} = (20, 29, 3, 1)
                                                                 116: P_{5091} = (2, 30, 3, 1)
62: P_{3277} = (12, 5, 2, 1)
63: P_{3322} = (25, 6, 2, 1)
                                                                 117: P_{5140} = (19, 31, 3, 1)
64: P_{3337} = (8,7,2,1)
                                                                 118: P_{5160} = (7, 0, 4, 1)
65: P_{3384} = (23, 8, 2, 1)
                                                                 119: P_{5223} = (6, 2, 4, 1)
                                                                 120: P_{5269} = (20, 3, 4, 1)
66: P_{3411} = (18, 9, 2, 1)
67: P_{3441} = (16, 10, 2, 1)
                                                                 121: P_{5373} = (28, 6, 4, 1)
68: P_{3474} = (17, 11, 2, 1)
                                                                 122: P_{5384} = (7,7,4,1)
69: P_{3489} = (0, 12, 2, 1)
                                                                 123: P_{5411} = (2, 8, 4, 1)
70: P_{3541} = (20, 13, 2, 1)
                                                                 124: P_{5446} = (5, 9, 4, 1)
71: P_{3563} = (10, 14, 2, 1)
                                                                 125: P_{5497} = (24, 10, 4, 1)
72: P_{3607} = (22, 15, 2, 1)
                                                                 126: P_{5514} = (9, 11, 4, 1)
                                                                 127: P_{5556} = (19, 12, 4, 1)
73: P_{3639} = (22, 16, 2, 1)
                                                                 128: P_{5594} = (25, 13, 4, 1)
74: P_{3679} = (30, 17, 2, 1)
75: P_{3684} = (3, 18, 2, 1)
                                                                 129: P_{5614} = (13, 14, 4, 1)
76: P_{3740} = (27, 19, 2, 1)
                                                                 130: P_{5645} = (12, 15, 4, 1)
                                                                 131: P_{5685} = (20, 16, 4, 1)
77: P_{3760} = (15, 20, 2, 1)
78: P_{3806} = (29, 21, 2, 1)
                                                                 132: P_{5723} = (26, 17, 4, 1)
79: P_{3816} = (7, 22, 2, 1)
                                                                 133: P_{5754} = (25, 18, 4, 1)
80: P_{3852} = (11, 23, 2, 1)
                                                                 134: P_{5781} = (20, 19, 4, 1)
                                                                 135: P_{5799} = (6, 20, 4, 1)
81: P_{3897} = (24, 24, 2, 1)
82: P_{3926} = (21, 25, 2, 1)
                                                                 136: P_{5835} = (10, 21, 4, 1)
                                                                 137: P_{5863} = (6, 22, 4, 1)
83: P_{3943} = (6, 26, 2, 1)
84: P_{3994} = (25, 27, 2, 1)
                                                                 138: P_{5892} = (3, 23, 4, 1)
                                                                 139: P_{5936} = (15, 24, 4, 1)
85: P_{4027} = (26, 28, 2, 1)
86: P_{4058} = (25, 29, 2, 1)
                                                                 140: P_{5974} = (21, 25, 4, 1)
87: P_{4071} = (6, 30, 2, 1)
                                                                 141: P_{5985} = (0, 26, 4, 1)
88: P_{4119} = (22, 31, 2, 1)
                                                                 142: P_{6046} = (29, 27, 4, 1)
89: P_{4153} = (24, 0, 3, 1)
                                                                 143: P_{6071} = (22, 28, 4, 1)
90: P_{4277} = (20, 4, 3, 1)
                                                                 144: P_{6112} = (31, 29, 4, 1)
91: P_{4320} = (31, 5, 3, 1)
                                                                 145: P_{6127} = (14, 30, 4, 1)
92: P_{4332} = (11, 6, 3, 1)
                                                                 146: P_{6170} = (25, 31, 4, 1)
93: P_{4380} = (27, 7, 3, 1)
                                                                 147: P_{6184} = (7, 0, 5, 1)
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148: P_{6253} = (12, 2, 5, 1)
                                                                 202: P_{8156} = (27, 29, 6, 1)
149: P_{6304} = (31, 3, 5, 1)
                                                                 203: P_{8191} = (30, 30, 6, 1)
                                                                 204: P_{8201} = (8, 31, 6, 1)
150: P_{6398} = (29, 6, 5, 1)
                                                                 205: P_{8255} = (30, 0, 7, 1)
151: P_{6408} = (7, 7, 5, 1)
152: P_{6454} = (21, 8, 5, 1)
                                                                 206: P_{8297} = (8, 2, 7, 1)
                                                                 207: P_{8348} = (27, 3, 7, 1)
153: P_{6484} = (19, 9, 5, 1)
154: P_{6499} = (2, 10, 5, 1)
                                                                 208: P_{8360} = (7, 4, 7, 1)
155: P_{6547} = (18, 11, 5, 1)
                                                                 209: P_{8392} = (7, 5, 7, 1)
156: P_{6572} = (11, 12, 5, 1)
                                                                 210: P_{8500} = (19, 8, 7, 1)
157: P_{6593} = (0, 13, 5, 1)
                                                                 211: P_{8536} = (23, 9, 7, 1)
158: P_{6630} = (5, 14, 5, 1)
                                                                 212: P_{8576} = (31, 10, 7, 1)
159: P_{6662} = (5, 15, 5, 1)
                                                                 213: P_{8582} = (5, 11, 7, 1)
160: P_{6718} = (29, 16, 5, 1)
                                                                 214: P_{8629} = (20, 12, 7, 1)
                                                                 215: P_{8658} = (17, 13, 7, 1)
161: P_{6739} = (18, 17, 5, 1)
162: P_{6761} = (8, 18, 5, 1)
                                                                 216: P_{8673} = (0, 14, 7, 1)
163: P_{6789} = (4, 19, 5, 1)
                                                                 217: P_{8715} = (10, 15, 7, 1)
                                                                 218: P_{8768} = (31, 16, 7, 1)
164: P_{6832} = (15, 20, 5, 1)
                                                                 219: P_{8770} = (1, 17, 7, 1)
165: P_{6851} = (2, 21, 5, 1)
                                                                 220: P_{8806} = (5, 18, 7, 1)
166: P_{6910} = (29, 22, 5, 1)
167: P_{6938} = (25, 23, 5, 1)
                                                                 221: P_{8839} = (6, 19, 7, 1)
168: P_{6946} = (1, 24, 5, 1)
                                                                 222: P_{8880} = (15, 20, 7, 1)
169: P_{7003} = (26, 25, 5, 1)
                                                                 223: P_{8900} = (3, 21, 7, 1)
170: P_{7027} = (18, 26, 5, 1)
                                                                 224: P_{8930} = (1, 22, 7, 1)
171: P_{7055} = (14, 27, 5, 1)
                                                                 225: P_{8981} = (20, 23, 7, 1)
172: P_{7082} = (9, 28, 5, 1)
                                                                 226: P_{9019} = (26, 24, 7, 1)
173: P_{7106} = (1, 29, 5, 1)
                                                                 227: P_{9030} = (5, 25, 7, 1)
174: P_{7157} = (20, 30, 5, 1)
                                                                 228: P_{9088} = (31, 26, 7, 1)
175: P_{7171} = (2, 31, 5, 1)
                                                                 229: P_{9109} = (20, 27, 7, 1)
176: P_{7231} = (30, 0, 6, 1)
                                                                 230: P_{9143} = (22, 28, 7, 1)
177: P_{7290} = (25, 2, 6, 1)
                                                                 231: P_{9166} = (13, 29, 7, 1)
178: P_{7308} = (11, 3, 6, 1)
                                                                 232: P_{9215} = (30, 30, 7, 1)
179: P_{7357} = (28, 4, 6, 1)
                                                                 233: P_{9226} = (9, 31, 7, 1)
180: P_{7390} = (29, 5, 6, 1)
                                                                 234: P_{9275} = (26, 0, 8, 1)
181: P_{7486} = (29, 8, 6, 1)
                                                                 235: P_{9336} = (23, 2, 8, 1)
182: P_{7513} = (24, 9, 6, 1)
                                                                 236: P_{9372} = (27, 3, 8, 1)
                                                                 237: P_{9379} = (2,4,8,1)
183: P_{7541} = (20, 10, 6, 1)
184: P_{7568} = (15, 11, 6, 1)
                                                                 238: P_{9430} = (21, 5, 8, 1)
185: P_{7610} = (25, 12, 6, 1)
                                                                 239: P_{9470} = (29, 6, 8, 1)
186: P_{7646} = (29, 13, 6, 1)
                                                                 240: P_{9492} = (19, 7, 8, 1)
187: P_{7674} = (25, 14, 6, 1)
                                                                 241: P_{9588} = (19, 10, 8, 1)
188: P_{7699} = (18, 15, 6, 1)
                                                                 242: P_{9622} = (21, 11, 8, 1)
189: P_{7741} = (28, 16, 6, 1)
                                                                 243: P_{9655} = (22, 12, 8, 1)
190: P_{7748} = (3, 17, 6, 1)
                                                                 244: P_{9684} = (19, 13, 8, 1)
191: P_{7777} = (0, 18, 6, 1)
                                                                 245: P_{9718} = (21, 14, 8, 1)
192: P_{7811} = (2, 19, 6, 1)
                                                                 246: P_{9733} = (4, 15, 8, 1)
193: P_{7869} = (28, 20, 6, 1)
                                                                 247: P_{9790} = (29, 16, 8, 1)
194: P_{7890} = (17, 21, 6, 1)
                                                                 248: P_{9809} = (16, 17, 8, 1)
195: P_{7921} = (16, 22, 6, 1)
                                                                 249: P_{9836} = (11, 18, 8, 1)
196: P_{7941} = (4, 23, 6, 1)
                                                                 250: P_{9887} = (30, 19, 8, 1)
197: P_{7980} = (11, 24, 6, 1)
                                                                 251: P_{9893} = (4, 20, 8, 1)
198: P_{8022} = (21, 25, 6, 1)
                                                                 252: P_{9941} = (20, 21, 8, 1)
199: P_{8034} = (1, 26, 6, 1)
                                                                 253: P_{9982} = (29, 22, 8, 1)
200: P_{8076} = (11, 27, 6, 1)
                                                                 254: P_{9985} = (0, 23, 8, 1)
201: P_{8098} = (1, 28, 6, 1)
                                                                 255: P_{10032} = (15, 24, 8, 1)
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256: P_{10055} = (6, 25, 8, 1)
                                                                310: P_{11977} = (8, 21, 10, 1)
257: P_{10107} = (26, 26, 8, 1)
                                                                311: P_{12011} = (10, 22, 10, 1)
258: P_{10117} = (4, 27, 8, 1)
                                                                312: P_{12043} = (10, 23, 10, 1)
259: P_{10153} = (8, 28, 8, 1)
                                                                313: P_{12065} = (0, 24, 10, 1)
                                                                314: P_{12119} = (22, 25, 10, 1)
260: P_{10185} = (8, 29, 8, 1)
261: P_{10233} = (24, 30, 8, 1)
                                                                315: P_{12154} = (25, 26, 10, 1)
262: P_{10248} = (7, 31, 8, 1)
                                                                316: P_{12169} = (8, 27, 10, 1)
263: P_{10299} = (26, 0, 9, 1)
                                                                317: P_{12222} = (29, 28, 10, 1)
264: P_{10355} = (18, 2, 9, 1)
                                                                318: P_{12241} = (16, 29, 10, 1)
265: P_{10400} = (31, 3, 9, 1)
                                                                319: P_{12285} = (28, 30, 10, 1)
266: P_{10406} = (5, 4, 9, 1)
                                                                320: P_{12305} = (16, 31, 10, 1)
267: P_{10452} = (19, 5, 9, 1)
                                                                321: P_{12324} = (3, 0, 11, 1)
268: P_{10489} = (24, 6, 9, 1)
                                                                322: P_{12402} = (17, 2, 11, 1)
                                                                323: P_{12420} = (3, 3, 11, 1)
269: P_{10520} = (23, 7, 9, 1)
270: P_{10608} = (15, 10, 9, 1)
                                                                324: P_{12458} = (9, 4, 11, 1)
271: P_{10633} = (8, 11, 9, 1)
                                                                325: P_{12499} = (18, 5, 11, 1)
272: P_{10673} = (16, 12, 9, 1)
                                                                326: P_{12528} = (15, 6, 11, 1)
273: P_{10709} = (20, 13, 9, 1)
                                                                327: P_{12550} = (5, 7, 11, 1)
274: P_{10749} = (28, 14, 9, 1)
                                                                328: P_{12598} = (21, 8, 11, 1)
275: P_{10765} = (12, 15, 9, 1)
                                                                329: P_{12617} = (8, 9, 11, 1)
276: P_{10791} = (6, 16, 9, 1)
                                                                330: P_{12719} = (14, 12, 11, 1)
277: P_{10827} = (10, 17, 9, 1)
                                                                331: P_{12757} = (20, 13, 11, 1)
278: P_{10868} = (19, 18, 9, 1)
                                                                332: P_{12800} = (31, 14, 11, 1)
279: P_{10888} = (7, 19, 9, 1)
                                                                333: P_{12811} = (10, 15, 11, 1)
280: P_{10913} = (0, 20, 9, 1)
                                                                334: P_{12850} = (17, 16, 11, 1)
281: P_{10962} = (17, 21, 9, 1)
                                                                335: P_{12873} = (8, 17, 11, 1)
282: P_{10992} = (15, 22, 9, 1)
                                                                336: P_{12914} = (17, 18, 11, 1)
283: P_{11028} = (19, 23, 9, 1)
                                                                337: P_{12931} = (2, 19, 11, 1)
284: P_{11044} = (3, 24, 9, 1)
                                                                338: P_{12968} = (7, 20, 11, 1)
285: P_{11084} = (11, 25, 9, 1)
                                                                339: P_{13017} = (24, 21, 11, 1)
286: P_{11131} = (26, 26, 9, 1)
                                                                340: P_{13055} = (30, 22, 11, 1)
287: P_{11142} = (5, 27, 9, 1)
                                                                341: P_{13088} = (31, 23, 11, 1)
288: P_{11184} = (15, 28, 9, 1)
                                                                342: P_{13097} = (8, 24, 11, 1)
289: P_{11215} = (14, 29, 9, 1)
                                                                343: P_{13152} = (31, 25, 11, 1)
290: P_{11260} = (27, 30, 9, 1)
                                                                344: P_{13166} = (13, 26, 11, 1)
291: P_{11270} = (5, 31, 9, 1)
                                                                345: P_{13214} = (29, 27, 11, 1)
292: P_{11300} = (3, 0, 10, 1)
                                                                346: P_{13229} = (12, 28, 11, 1)
293: P_{11377} = (16, 2, 10, 1)
                                                                347: P_{13249} = (0, 29, 11, 1)
294: P_{11396} = (3, 3, 10, 1)
                                                                348: P_{13304} = (23, 30, 11, 1)
295: P_{11449} = (24, 4, 10, 1)
                                                                349: P_{13339} = (26, 31, 11, 1)
296: P_{11459} = (2, 5, 10, 1)
                                                                350: P_{13373} = (28, 0, 12, 1)
297: P_{11509} = (20, 6, 10, 1)
                                                                351: P_{13409} = (0, 2, 12, 1)
298: P_{11552} = (31, 7, 10, 1)
                                                                352: P_{13472} = (31, 3, 12, 1)
299: P_{11572} = (19, 8, 10, 1)
                                                                353: P_{13492} = (19, 4, 12, 1)
300: P_{11600} = (15, 9, 10, 1)
                                                                354: P_{13516} = (11, 5, 12, 1)
301: P_{11694} = (13, 12, 10, 1)
                                                                355: P_{13562} = (25, 6, 12, 1)
302: P_{11735} = (22, 13, 10, 1)
                                                                356: P_{13589} = (20, 7, 12, 1)
303: P_{11753} = (8, 14, 10, 1)
                                                                357: P_{13623} = (22, 8, 12, 1)
304: P_{11805} = (28, 15, 10, 1)
                                                                358: P_{13649} = (16, 9, 12, 1)
305: P_{11813} = (4, 16, 10, 1)
                                                                359: P_{13678} = (13, 10, 12, 1)
306: P_{11869} = (28, 17, 10, 1)
                                                                360: P_{13711} = (14, 11, 12, 1)
307: P_{11894} = (21, 18, 10, 1)
                                                                361: P_{13816} = (23, 14, 12, 1)
308: P_{11912} = (7, 19, 10, 1)
                                                                362: P_{13835} = (10, 15, 12, 1)
309: P_{11959} = (22, 20, 10, 1)
                                                                363: P_{13860} = (3, 16, 12, 1)
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364: P_{13898} = (9, 17, 12, 1)
                                                                418: P_{15776} = (31, 11, 14, 1)
365: P_{13933} = (12, 18, 12, 1)
                                                                419: P_{15800} = (23, 12, 14, 1)
366: P_{13965} = (12, 19, 12, 1)
                                                                420: P_{15825} = (16, 13, 14, 1)
367: P_{13990} = (5, 20, 12, 1)
                                                                421: P_{15912} = (7, 16, 14, 1)
368: P_{14018} = (1, 21, 12, 1)
                                                                422: P_{15941} = (4, 17, 14, 1)
369: P_{14067} = (18, 22, 12, 1)
                                                                423: P_{15982} = (13, 18, 14, 1)
370: P_{14097} = (16, 23, 12, 1)
                                                                424: P_{16024} = (23, 19, 14, 1)
371: P_{14128} = (15, 24, 12, 1)
                                                                425: P_{16062} = (29, 20, 14, 1)
372: P_{14146} = (1, 25, 12, 1)
                                                                426: P_{16083} = (18, 21, 14, 1)
373: P_{14188} = (11, 26, 12, 1)
                                                                427: P_{16110} = (13, 22, 14, 1)
374: P_{14234} = (25, 27, 12, 1)
                                                                428: P_{16151} = (22, 23, 14, 1)
375: P_{14269} = (28, 28, 12, 1)
                                                                429: P_{16175} = (14, 24, 14, 1)
376: P_{14298} = (25, 29, 12, 1)
                                                                430: P_{16207} = (14, 25, 14, 1)
377: P_{14321} = (16, 30, 12, 1)
                                                                431: P_{16252} = (27, 26, 14, 1)
378: P_{14348} = (11, 31, 12, 1)
                                                                432: P_{16282} = (25, 27, 14, 1)
379: P_{14397} = (28, 0, 13, 1)
                                                                433: P_{16299} = (10, 28, 14, 1)
380: P_{14453} = (20, 2, 13, 1)
                                                                434: P_{16346} = (25, 29, 14, 1)
381: P_{14475} = (10, 3, 13, 1)
                                                                435: P_{16363} = (10, 30, 14, 1)
382: P_{14522} = (25, 4, 13, 1)
                                                                436: P_{16408} = (23, 31, 14, 1)
383: P_{14529} = (0, 5, 13, 1)
                                                                437: P_{16422} = (5, 0, 15, 1)
384: P_{14590} = (29, 6, 13, 1)
                                                                438: P_{16503} = (22, 2, 15, 1)
385: P_{14610} = (17, 7, 13, 1)
                                                                439: P_{16540} = (27, 3, 15, 1)
386: P_{14644} = (19, 8, 13, 1)
                                                                440: P_{16557} = (12, 4, 15, 1)
387: P_{14677} = (20, 9, 13, 1)
                                                                441: P_{16582} = (5, 5, 15, 1)
388: P_{14711} = (22, 10, 13, 1)
                                                                442: P_{16627} = (18, 6, 15, 1)
389: P_{14741} = (20, 11, 13, 1)
                                                                443: P_{16651} = (10, 7, 15, 1)
390: P_{14833} = (16, 14, 13, 1)
                                                                444: P_{16677} = (4, 8, 15, 1)
391: P_{14861} = (12, 15, 13, 1)
                                                                445: P_{16717} = (12, 9, 15, 1)
392: P_{14910} = (29, 16, 13, 1)
                                                                446: P_{16765} = (28, 10, 15, 1)
393: P_{14935} = (22, 17, 13, 1)
                                                                447: P_{16779} = (10, 11, 15, 1)
394: P_{14948} = (3, 18, 13, 1)
                                                                448: P_{16811} = (10, 12, 15, 1)
395: P_{14979} = (2, 19, 13, 1)
                                                                449: P_{16845} = (12, 13, 15, 1)
396: P_{15032} = (23, 20, 13, 1)
                                                                450: P_{16940} = (11, 16, 15, 1)
397: P_{15059} = (18, 21, 13, 1)
                                                                451: P_{16970} = (9, 17, 15, 1)
398: P_{15102} = (29, 22, 13, 1)
                                                                452: P_{16996} = (3, 18, 15, 1)
399: P_{15135} = (30, 23, 13, 1)
                                                                453: P_{17049} = (24, 19, 15, 1)
400: P_{15143} = (6, 24, 13, 1)
                                                                454: P_{17088} = (31, 20, 15, 1)
401: P_{15178} = (9, 25, 13, 1)
                                                                455: P_{17106} = (17, 21, 15, 1)
402: P_{15206} = (5, 26, 13, 1)
                                                                456: P_{17121} = (0, 22, 15, 1)
403: P_{15255} = (22, 27, 13, 1)
                                                                457: P_{17179} = (26, 23, 15, 1)
404: P_{15293} = (28, 28, 13, 1)
                                                                458: P_{17203} = (18, 24, 15, 1)
405: P_{15321} = (24, 29, 13, 1)
                                                                459: P_{17236} = (19, 25, 15, 1)
406: P_{15350} = (21, 30, 13, 1)
                                                                460: P_{17279} = (30, 26, 15, 1)
407: P_{15376} = (15, 31, 13, 1)
                                                                461: P_{17310} = (29, 27, 15, 1)
408: P_{15398} = (5, 0, 14, 1)
                                                                462: P_{17320} = (7, 28, 15, 1)
409: P_{15467} = (10, 2, 14, 1)
                                                                463: P_{17366} = (21, 29, 15, 1)
410: P_{15495} = (6, 3, 14, 1)
                                                                464: P_{17395} = (18, 30, 15, 1)
411: P_{15534} = (13, 4, 14, 1)
                                                                465: P_{17423} = (14, 31, 15, 1)
412: P_{15558} = (5, 5, 14, 1)
                                                                466: P_{17462} = (21, 0, 16, 1)
413: P_{15610} = (25, 6, 14, 1)
                                                                467: P_{17527} = (22, 2, 16, 1)
414: P_{15617} = (0, 7, 14, 1)
                                                                468: P_{17537} = (0, 3, 16, 1)
415: P_{15670} = (21, 8, 14, 1)
                                                                469: P_{17589} = (20, 4, 16, 1)
416: P_{15709} = (28, 9, 14, 1)
                                                                470: P_{17630} = (29, 5, 16, 1)
417: P_{15721} = (8, 10, 14, 1)
                                                                471: P_{17661} = (28, 6, 16, 1)
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472: P_{17696} = (31, 7, 16, 1)
                                                                526: P_{19615} = (30, 3, 18, 1)
473: P_{17726} = (29, 8, 16, 1)
                                                                527: P_{19642} = (25, 4, 18, 1)
474: P_{17735} = (6, 9, 16, 1)
                                                                528: P_{19657} = (8, 5, 18, 1)
475: P_{17765} = (4, 10, 16, 1)
                                                                529: P_{19681} = (0, 6, 18, 1)
476: P_{17810} = (17, 11, 16, 1)
                                                                530: P_{19718} = (5, 7, 18, 1)
477: P_{17828} = (3, 12, 16, 1)
                                                                531: P_{19756} = (11, 8, 18, 1)
478: P_{17886} = (29, 13, 16, 1)
                                                                532: P_{19796} = (19, 9, 18, 1)
479: P_{17896} = (7, 14, 16, 1)
                                                                533: P_{19830} = (21, 10, 18, 1)
480: P_{17932} = (11, 15, 16, 1)
                                                                534: P_{19858} = (17, 11, 18, 1)
481: P_{18023} = (6, 18, 16, 1)
                                                                535: P_{19885} = (12, 12, 18, 1)
482: P_{18079} = (30, 19, 16, 1)
                                                                536: P_{19908} = (3, 13, 18, 1)
483: P_{18104} = (23, 20, 16, 1)
                                                                537: P_{19950} = (13, 14, 18, 1)
484: P_{18134} = (21, 21, 16, 1)
                                                                538: P_{19972} = (3, 15, 18, 1)
485: P_{18163} = (18, 22, 16, 1)
                                                                539: P_{20007} = (6, 16, 18, 1)
486: P_{18202} = (25, 23, 16, 1)
                                                                540: P_{20037} = (4, 17, 18, 1)
487: P_{18214} = (5, 24, 16, 1)
                                                                541: P_{20139} = (10, 20, 18, 1)
488: P_{18261} = (20, 25, 16, 1)
                                                                542: P_{20172} = (11, 21, 18, 1)
489: P_{18281} = (8, 26, 16, 1)
                                                                543: P_{20202} = (9, 22, 18, 1)
490: P_{18311} = (6, 27, 16, 1)
                                                                544: P_{20251} = (26, 23, 18, 1)
491: P_{18351} = (14, 28, 16, 1)
                                                                545: P_{20285} = (28, 24, 18, 1)
492: P_{18389} = (20, 29, 16, 1)
                                                                546: P_{20312} = (23, 25, 18, 1)
493: P_{18428} = (27, 30, 16, 1)
                                                                547: P_{20336} = (15, 26, 18, 1)
494: P_{18459} = (26, 31, 16, 1)
                                                                548: P_{20384} = (31, 27, 18, 1)
495: P_{18486} = (21, 0, 17, 1)
                                                                549: P_{20415} = (30, 28, 18, 1)
496: P_{18559} = (30, 2, 17, 1)
                                                                550: P_{20428} = (11, 29, 18, 1)
497: P_{18570} = (9, 3, 17, 1)
                                                                551: P_{20473} = (24, 30, 18, 1)
498: P_{18619} = (26, 4, 17, 1)
                                                                552: P_{20511} = (30, 31, 18, 1)
499: P_{18643} = (18, 5, 17, 1)
                                                                553: P_{20525} = (12, 0, 19, 1)
500: P_{18660} = (3, 6, 17, 1)
                                                                554: P_{20604} = (27, 2, 19, 1)
501: P_{18690} = (1, 7, 17, 1)
                                                                555: P_{20616} = (7, 3, 19, 1)
502: P_{18737} = (16, 8, 17, 1)
                                                                556: P_{20661} = (20, 4, 19, 1)
503: P_{18763} = (10, 9, 17, 1)
                                                                557: P_{20677} = (4, 5, 19, 1)
504: P_{18813} = (28, 10, 17, 1)
                                                                558: P_{20707} = (2, 6, 19, 1)
505: P_{18825} = (8, 11, 17, 1)
                                                                559: P_{20743} = (6, 7, 19, 1)
506: P_{18858} = (9, 12, 17, 1)
                                                                560: P_{20799} = (30, 8, 19, 1)
507: P_{18903} = (22, 13, 17, 1)
                                                                561: P_{20808} = (7, 9, 19, 1)
508: P_{18917} = (4, 14, 17, 1)
                                                                562: P_{20840} = (7, 10, 19, 1)
                                                                563: P_{20867} = (2, 11, 19, 1)
509: P_{18954} = (9, 15, 17, 1)
510: P_{19045} = (4, 18, 17, 1)
                                                                564: P_{20909} = (12, 12, 19, 1)
511: P_{19102} = (29, 19, 17, 1)
                                                                565: P_{20931} = (2, 13, 19, 1)
512: P_{19127} = (22, 20, 17, 1)
                                                                566: P_{20984} = (23, 14, 19, 1)
513: P_{19158} = (21, 21, 17, 1)
                                                                567: P_{21017} = (24, 15, 19, 1)
514: P_{19170} = (1, 22, 17, 1)
                                                                568: P_{21055} = (30, 16, 19, 1)
                                                                569: P_{21086} = (29, 17, 19, 1)
515: P_{19212} = (11, 23, 17, 1)
516: P_{19239} = (6, 24, 17, 1)
                                                                570: P_{21172} = (19, 20, 19, 1)
517: P_{19287} = (22, 25, 17, 1)
                                                                571: P_{21204} = (19, 21, 19, 1)
518: P_{19312} = (15, 26, 17, 1)
                                                                572: P_{21242} = (25, 22, 19, 1)
519: P_{19329} = (0, 27, 17, 1)
                                                                573: P_{21260} = (11, 23, 19, 1)
520: P_{19365} = (4, 28, 17, 1)
                                                                574: P_{21311} = (30, 24, 19, 1)
521: P_{19424} = (31, 29, 17, 1)
                                                                575: P_{21333} = (20, 25, 19, 1)
522: P_{19442} = (17, 30, 17, 1)
                                                                576: P_{21358} = (13, 26, 19, 1)
523: P_{19474} = (17, 31, 17, 1)
                                                                577: P_{21405} = (28, 27, 19, 1)
524: P_{19501} = (12, 0, 18, 1)
                                                                578: P_{21409} = (0, 28, 19, 1)
525: P_{19556} = (3, 2, 18, 1)
                                                                579: P_{21461} = (20, 29, 19, 1)
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580: P_{21487} = (14, 30, 19, 1)
                                                                634: P_{23422} = (29, 26, 21, 1)
581: P_{21514} = (9, 31, 19, 1)
                                                                635: P_{23437} = (12, 27, 21, 1)
582: P_{21556} = (19, 0, 20, 1)
                                                                636: P_{23462} = (5, 28, 21, 1)
583: P_{21616} = (15, 2, 20, 1)
                                                                637: P_{23520} = (31, 29, 21, 1)
584: P_{21634} = (1, 3, 20, 1)
                                                                638: P_{23521} = (0, 30, 21, 1)
585: P_{21671} = (6, 4, 20, 1)
                                                                639: P_{23567} = (14, 31, 21, 1)
586: P_{21712} = (15, 5, 20, 1)
                                                                640: P_{23595} = (10, 0, 22, 1)
587: P_{21757} = (28, 6, 20, 1)
                                                                641: P_{23656} = (7, 2, 22, 1)
588: P_{21776} = (15, 7, 20, 1)
                                                                642: P_{23693} = (12, 3, 22, 1)
589: P_{21797} = (4, 8, 20, 1)
                                                                643: P_{23719} = (6, 4, 22, 1)
590: P_{21825} = (0, 9, 20, 1)
                                                                644: P_{23774} = (29, 5, 22, 1)
591: P_{21879} = (22, 10, 20, 1)
                                                                645: P_{23793} = (16, 6, 22, 1)
592: P_{21896} = (7, 11, 20, 1)
                                                                646: P_{23810} = (1, 7, 22, 1)
                                                                647: P_{23870} = (29, 8, 22, 1)
593: P_{21926} = (5, 12, 20, 1)
594: P_{21976} = (23, 13, 20, 1)
                                                                648: P_{23888} = (15, 9, 22, 1)
595: P_{22014} = (29, 14, 20, 1)
                                                                649: P_{23915} = (10, 10, 22, 1)
                                                                650: P_{23967} = (30, 11, 22, 1)
596: P_{22048} = (31, 15, 20, 1)
597: P_{22072} = (23, 16, 20, 1)
                                                                651: P_{23987} = (18, 12, 22, 1)
598: P_{22103} = (22, 17, 20, 1)
                                                                652: P_{24030} = (29, 13, 22, 1)
599: P_{22123} = (10, 18, 20, 1)
                                                                653: P_{24046} = (13, 14, 22, 1)
600: P_{22164} = (19, 19, 20, 1)
                                                                654: P_{24065} = (0, 15, 22, 1)
601: P_{22243} = (2, 22, 20, 1)
                                                                655: P_{24115} = (18, 16, 22, 1)
602: P_{22274} = (1, 23, 20, 1)
                                                                656: P_{24130} = (1, 17, 22, 1)
603: P_{22321} = (16, 24, 20, 1)
                                                                657: P_{24170} = (9, 18, 22, 1)
604: P_{22350} = (13, 25, 20, 1)
                                                                658: P_{24218} = (25, 19, 22, 1)
605: P_{22375} = (6, 26, 20, 1)
                                                                659: P_{24227} = (2, 20, 22, 1)
606: P_{22423} = (22, 27, 20, 1)
                                                                660: P_{24284} = (27, 21, 22, 1)
607: P_{22445} = (12, 28, 20, 1)
                                                                661: P_{24356} = (3, 24, 22, 1)
608: P_{22488} = (23, 29, 20, 1)
                                                                662: P_{24392} = (7, 25, 22, 1)
                                                                663: P_{24423} = (6, 26, 22, 1)
609: P_{22503} = (6, 30, 20, 1)
610: P_{22538} = (9, 31, 20, 1)
                                                                664: P_{24456} = (7, 27, 22, 1)
611: P_{22580} = (19, 0, 21, 1)
                                                                665: P_{24499} = (18, 28, 22, 1)
612: P_{22654} = (29, 2, 21, 1)
                                                                666: P_{24537} = (24, 29, 22, 1)
613: P_{22675} = (18, 3, 21, 1)
                                                                667: P_{24551} = (6, 30, 22, 1)
614: P_{22699} = (10, 4, 21, 1)
                                                                668: P_{24605} = (28, 31, 22, 1)
                                                                669: P_{24619} = (10, 0, 23, 1)
615: P_{22723} = (2, 5, 21, 1)
616: P_{22770} = (17, 6, 21, 1)
                                                                670: P_{24684} = (11, 2, 23, 1)
617: P_{22788} = (3, 7, 21, 1)
                                                                671: P_{24706} = (1, 3, 23, 1)
618: P_{22837} = (20, 8, 21, 1)
                                                                672: P_{24740} = (3, 4, 23, 1)
619: P_{22866} = (17, 9, 21, 1)
                                                                673: P_{24794} = (25, 5, 23, 1)
620: P_{22889} = (8, 10, 21, 1)
                                                                674: P_{24805} = (4, 6, 23, 1)
621: P_{22937} = (24, 11, 21, 1)
                                                                675: P_{24853} = (20, 7, 23, 1)
622: P_{22946} = (1, 12, 21, 1)
                                                                676: P_{24865} = (0, 8, 23, 1)
623: P_{22995} = (18, 13, 21, 1)
                                                                677: P_{24916} = (19, 9, 23, 1)
624: P_{23027} = (18, 14, 21, 1)
                                                                678: P_{24939} = (10, 10, 23, 1)
625: P_{23058} = (17, 15, 21, 1)
                                                                679: P_{24992} = (31, 11, 23, 1)
626: P_{23094} = (21, 16, 21, 1)
                                                                680: P_{25009} = (16, 12, 23, 1)
627: P_{23126} = (21, 17, 21, 1)
                                                                681: P_{25055} = (30, 13, 23, 1)
628: P_{23148} = (11, 18, 21, 1)
                                                                682: P_{25079} = (22, 14, 23, 1)
629: P_{23188} = (19, 19, 21, 1)
                                                                683: P_{25115} = (26, 15, 23, 1)
630: P_{23292} = (27, 22, 21, 1)
                                                                684: P_{25146} = (25, 16, 23, 1)
631: P_{23322} = (25, 23, 21, 1)
                                                                685: P_{25164} = (11, 17, 23, 1)
632: P_{23358} = (29, 24, 21, 1)
                                                                686: P_{25211} = (26, 18, 23, 1)
633: P_{23362} = (1, 25, 21, 1)
                                                                687: P_{25228} = (11, 19, 23, 1)
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688: P_{25250} = (1, 20, 23, 1)
                                                                742: P_{27189} = (20, 16, 25, 1)
689: P_{25306} = (25, 21, 23, 1)
                                                                743: P_{27223} = (22, 17, 25, 1)
690: P_{25389} = (12, 24, 23, 1)
                                                                744: P_{27256} = (23, 18, 25, 1)
691: P_{25418} = (9, 25, 23, 1)
                                                                745: P_{27285} = (20, 19, 25, 1)
692: P_{25464} = (23, 26, 23, 1)
                                                                746: P_{27310} = (13, 20, 25, 1)
693: P_{25496} = (23, 27, 23, 1)
                                                                747: P_{27330} = (1, 21, 25, 1)
694: P_{25522} = (17, 28, 23, 1)
                                                                748: P_{27368} = (7, 22, 25, 1)
695: P_{25563} = (26, 29, 23, 1)
                                                                749: P_{27402} = (9, 23, 25, 1)
696: P_{25583} = (14, 30, 23, 1)
                                                                750: P_{27498} = (9, 26, 25, 1)
697: P_{25622} = (21, 31, 23, 1)
                                                                751: P_{27543} = (22, 27, 25, 1)
698: P_{25647} = (14, 0, 24, 1)
                                                                752: P_{27555} = (2, 28, 25, 1)
699: P_{25721} = (24, 2, 24, 1)
                                                                753: P_{27589} = (4, 29, 25, 1)
700: P_{25753} = (24, 3, 24, 1)
                                                                754: P_{27644} = (27, 30, 25, 1)
701: P_{25776} = (15, 4, 24, 1)
                                                                755: P_{27649} = (0, 31, 25, 1)
702: P_{25794} = (1, 5, 24, 1)
                                                                756: P_{27704} = (23, 0, 26, 1)
703: P_{25836} = (11, 6, 24, 1)
                                                                757: P_{27751} = (6, 2, 26, 1)
704: P_{25883} = (26, 7, 24, 1)
                                                                758: P_{27792} = (15, 3, 26, 1)
705: P_{25904} = (15, 8, 24, 1)
                                                                759: P_{27809} = (0, 4, 26, 1)
706: P_{25924} = (3, 9, 24, 1)
                                                                760: P_{27859} = (18, 5, 26, 1)
707: P_{25953} = (0, 10, 24, 1)
                                                                761: P_{27874} = (1, 6, 26, 1)
708: P_{25993} = (8, 11, 24, 1)
                                                                762: P_{27936} = (31, 7, 26, 1)
709: P_{26032} = (15, 12, 24, 1)
                                                                763: P_{27963} = (26, 8, 26, 1)
710: P_{26055} = (6, 13, 24, 1)
                                                                764: P_{27995} = (26, 9, 26, 1)
711: P_{26095} = (14, 14, 24, 1)
                                                                765: P_{28026} = (25, 10, 26, 1)
712: P_{26131} = (18, 15, 24, 1)
                                                                766: P_{28046} = (13, 11, 26, 1)
713: P_{26150} = (5, 16, 24, 1)
                                                                767: P_{28076} = (11, 12, 26, 1)
714: P_{26183} = (6, 17, 24, 1)
                                                                768: P_{28102} = (5, 13, 26, 1)
715: P_{26237} = (28, 18, 24, 1)
                                                                769: P_{28156} = (27, 14, 26, 1)
716: P_{26271} = (30, 19, 24, 1)
                                                                770: P_{28191} = (30, 15, 26, 1)
717: P_{26289} = (16, 20, 24, 1)
                                                                771: P_{28201} = (8, 16, 26, 1)
718: P_{26334} = (29, 21, 24, 1)
                                                                772: P_{28240} = (15, 17, 26, 1)
719: P_{26340} = (3, 22, 24, 1)
                                                                773: P_{28272} = (15, 18, 26, 1)
720: P_{26381} = (12, 23, 24, 1)
                                                                774: P_{28302} = (13, 19, 26, 1)
721: P_{26478} = (13, 26, 24, 1)
                                                                775: P_{28327} = (6, 20, 26, 1)
722: P_{26516} = (19, 27, 24, 1)
                                                                776: P_{28382} = (29, 21, 26, 1)
723: P_{26535} = (6, 28, 24, 1)
                                                                777: P_{28391} = (6, 22, 26, 1)
724: P_{26562} = (1, 29, 24, 1)
                                                                778: P_{28440} = (23, 23, 26, 1)
725: P_{26618} = (25, 30, 24, 1)
                                                                779: P_{28462} = (13, 24, 26, 1)
726: P_{26628} = (3, 31, 24, 1)
                                                                780: P_{28490} = (9, 25, 26, 1)
727: P_{26671} = (14, 0, 25, 1)
                                                                781: P_{28578} = (1, 28, 26, 1)
728: P_{26742} = (21, 2, 25, 1)
                                                                782: P_{28626} = (17, 29, 26, 1)
729: P_{26773} = (20, 3, 25, 1)
                                                                783: P_{28665} = (24, 30, 26, 1)
730: P_{26806} = (21, 4, 25, 1)
                                                                784: P_{28687} = (14, 31, 26, 1)
731: P_{26843} = (26, 5, 25, 1)
                                                                785: P_{28728} = (23, 0, 27, 1)
732: P_{26870} = (21, 6, 25, 1)
                                                                786: P_{28794} = (25, 2, 27, 1)
733: P_{26886} = (5, 7, 25, 1)
                                                                787: P_{28818} = (17, 3, 27, 1)
734: P_{26919} = (6, 8, 25, 1)
                                                                788: P_{28862} = (29, 4, 27, 1)
735: P_{26956} = (11, 9, 25, 1)
                                                                789: P_{28879} = (14, 5, 27, 1)
736: P_{26999} = (22, 10, 25, 1)
                                                                790: P_{28908} = (11, 6, 27, 1)
737: P_{27040} = (31, 11, 25, 1)
                                                                791: P_{28949} = (20, 7, 27, 1)
738: P_{27042} = (1, 12, 25, 1)
                                                                792: P_{28965} = (4, 8, 27, 1)
739: P_{27082} = (9, 13, 25, 1)
                                                                793: P_{28998} = (5, 9, 27, 1)
740: P_{27119} = (14, 14, 25, 1)
                                                                794: P_{29033} = (8, 10, 27, 1)
741: P_{27156} = (19, 15, 25, 1)
                                                                795: P_{29086} = (29, 11, 27, 1)
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850: P_{31017} = (8, 8, 29, 1)
796: P_{29114} = (25, 12, 27, 1)
797: P_{29143} = (22, 13, 27, 1)
                                                                851: P_{31055} = (14, 9, 29, 1)
798: P_{29178} = (25, 14, 27, 1)
                                                                852: P_{31089} = (16, 10, 29, 1)
799: P_{29214} = (29, 15, 27, 1)
                                                                853: P_{31105} = (0, 11, 29, 1)
800: P_{29223} = (6, 16, 27, 1)
                                                                854: P_{31162} = (25, 12, 29, 1)
801: P_{29249} = (0, 17, 27, 1)
                                                                855: P_{31193} = (24, 13, 29, 1)
802: P_{29312} = (31, 18, 27, 1)
                                                                856: P_{31226} = (25, 14, 29, 1)
803: P_{29341} = (28, 19, 27, 1)
                                                                857: P_{31254} = (21, 15, 29, 1)
804: P_{29367} = (22, 20, 27, 1)
                                                                858: P_{31285} = (20, 16, 29, 1)
805: P_{29389} = (12, 21, 27, 1)
                                                                859: P_{31328} = (31, 17, 29, 1)
806: P_{29416} = (7, 22, 27, 1)
                                                                860: P_{31340} = (11, 18, 29, 1)
807: P_{29464} = (23, 23, 27, 1)
                                                                861: P_{31381} = (20, 19, 29, 1)
808: P_{29492} = (19, 24, 27, 1)
                                                                862: P_{31416} = (23, 20, 29, 1)
809: P_{29527} = (22, 25, 27, 1)
                                                                863: P_{31456} = (31, 21, 29, 1)
810: P_{29610} = (9, 28, 27, 1)
                                                                864: P_{31481} = (24, 22, 29, 1)
811: P_{29657} = (24, 29, 27, 1)
                                                                865: P_{31515} = (26, 23, 29, 1)
812: P_{29678} = (13, 30, 27, 1)
                                                                866: P_{31522} = (1, 24, 29, 1)
813: P_{29723} = (26, 31, 27, 1)
                                                                867: P_{31557} = (4, 25, 29, 1)
                                                                868: P_{31602} = (17, 26, 29, 1)
814: P_{29737} = (8, 0, 28, 1)
815: P_{29819} = (26, 2, 28, 1)
                                                                869: P_{31641} = (24, 27, 29, 1)
816: P_{29847} = (22, 3, 28, 1)
                                                                870: P_{31735} = (22, 30, 29, 1)
817: P_{29879} = (22, 4, 28, 1)
                                                                871: P_{31763} = (18, 31, 29, 1)
818: P_{29898} = (9, 5, 28, 1)
                                                                872: P_{31794} = (17, 0, 30, 1)
819: P_{29922} = (1, 6, 28, 1)
                                                                873: P_{31847} = (6, 2, 30, 1)
820: P_{29975} = (22, 7, 28, 1)
                                                                874: P_{31875} = (2, 3, 30, 1)
821: P_{29993} = (8, 8, 28, 1)
                                                                875: P_{31919} = (14, 4, 30, 1)
822: P_{30032} = (15, 9, 28, 1)
                                                                876: P_{31957} = (20, 5, 30, 1)
823: P_{30078} = (29, 10, 28, 1)
                                                                877: P_{31999} = (30, 6, 30, 1)
824: P_{30093} = (12, 11, 28, 1)
                                                                878: P_{32031} = (30, 7, 30, 1)
825: P_{30141} = (28, 12, 28, 1)
                                                                879: P_{32057} = (24, 8, 30, 1)
826: P_{30173} = (28, 13, 28, 1)
                                                                880: P_{32092} = (27, 9, 30, 1)
827: P_{30187} = (10, 14, 28, 1)
                                                                881: P_{32125} = (28, 10, 30, 1)
828: P_{30216} = (7, 15, 28, 1)
                                                                882: P_{32152} = (23, 11, 30, 1)
829: P_{30255} = (14, 16, 28, 1)
                                                                883: P_{32177} = (16, 12, 30, 1)
830: P_{30277} = (4, 17, 28, 1)
                                                                884: P_{32214} = (21, 13, 30, 1)
831: P_{30335} = (30, 18, 28, 1)
                                                                885: P_{32235} = (10, 14, 30, 1)
832: P_{30337} = (0, 19, 28, 1)
                                                                886: P_{32275} = (18, 15, 30, 1)
                                                                887: P_{32316} = (27, 16, 30, 1)
833: P_{30381} = (12, 20, 28, 1)
834: P_{30406} = (5, 21, 28, 1)
                                                                888: P_{32338} = (17, 17, 30, 1)
835: P_{30451} = (18, 22, 28, 1)
                                                                889: P_{32377} = (24, 18, 30, 1)
836: P_{30482} = (17, 23, 28, 1)
                                                                890: P_{32399} = (14, 19, 30, 1)
837: P_{30503} = (6, 24, 28, 1)
                                                                891: P_{32423} = (6, 20, 30, 1)
838: P_{30531} = (2, 25, 28, 1)
                                                                892: P_{32449} = (0, 21, 30, 1)
                                                                893: P_{32487} = (6, 22, 30, 1)
839: P_{30562} = (1, 26, 28, 1)
840: P_{30602} = (9, 27, 28, 1)
                                                                894: P_{32527} = (14, 23, 30, 1)
841: P_{30698} = (9, 30, 28, 1)
                                                                895: P_{32570} = (25, 24, 30, 1)
842: P_{30733} = (12, 31, 28, 1)
                                                                896: P_{32604} = (27, 25, 30, 1)
843: P_{30761} = (8, 0, 29, 1)
                                                                897: P_{32633} = (24, 26, 30, 1)
844: P_{30842} = (25, 2, 29, 1)
                                                                898: P_{32654} = (13, 27, 30, 1)
845: P_{30869} = (20, 3, 29, 1)
                                                                899: P_{32682} = (9, 28, 30, 1)
846: P_{30912} = (31, 4, 29, 1)
                                                                900: P_{32727} = (22, 29, 30, 1)
847: P_{30914} = (1, 5, 29, 1)
                                                                901: P_{32818} = (17, 0, 31, 1)
848: P_{30972} = (27, 6, 29, 1)
                                                                902: P_{32887} = (22, 2, 31, 1)
849: P_{30990} = (13, 7, 29, 1)
                                                                903: P_{32916} = (19, 3, 31, 1)
```

```
904: P_{32954} = (25, 4, 31, 1)
                                                                918: P_{33407} = (30, 18, 31, 1)
905: P_{32963} = (2, 5, 31, 1)
                                                                919: P_{33418} = (9, 19, 31, 1)
906: P_{33001} = (8, 6, 31, 1)
                                                                920: P_{33450} = (9, 20, 31, 1)
907: P_{33034} = (9, 7, 31, 1)
                                                                921: P_{33487} = (14, 21, 31, 1)
908: P_{33064} = (7, 8, 31, 1)
                                                                922: P_{33533} = (28, 22, 31, 1)
909: P_{33094} = (5, 9, 31, 1)
                                                                923: P_{33558} = (21, 23, 31, 1)
910: P_{33137} = (16, 10, 31, 1)
                                                                924: P_{33572} = (3, 24, 31, 1)
911: P_{33179} = (26, 11, 31, 1)
                                                                925: P_{33601} = (0, 25, 31, 1)
912: P_{33196} = (11, 12, 31, 1)
                                                                926: P_{33647} = (14, 26, 31, 1)
913: P_{33232} = (15, 13, 31, 1)
                                                                927: P_{33691} = (26, 27, 31, 1)
914: P_{33272} = (23, 14, 31, 1)
                                                                928: P_{33709} = (12, 28, 31, 1)
                                                                929 : P_{33747} = (18, 29, 31, 1)
915: P_{33295} = (14, 15, 31, 1)
916: P_{33339} = (26, 16, 31, 1)
917: P_{33362} = (17, 17, 31, 1)
```

## Line Intersection Graph

	012345
0	011001
1	101010
2	110100
3	001011
4	010101
5	$\begin{array}{c} 011001 \\ 101010 \\ 110100 \\ 001011 \\ 010101 \\ 100110 \end{array}$

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	$\ell_1$	$\ell_2$	$\ell_5$
in point	$P_0$	$P_0$	$P_{67}$

Line 1 intersects

Line	$\ell_0$	$\ell_2$	$\ell_4$
in point	$P_0$	$P_0$	$P_{1090}$

Line 2 intersects

Line	$\ell_0$	$\ell_1$	$\ell_3$
in point	$P_0$	$P_0$	$P_{2082}$

Line 3 intersects

Line	$\ell_2$	$\ell_4$	$\ell_5$
in point	$P_{2082}$	$P_4$	$P_4$

Line 4 intersects

Line	$\ell_1$	$\ell_3$	$\ell_5$
in point	$P_{1090}$	$P_4$	$P_4$

Line 5 intersects

Line	$\ell_0$	$\ell_3$	$\ell_4$
in point	$P_{67}$	$P_4$	$P_4$

The surface has 1121 points:

Too many to print.