Rank-74247 over GF(32)

January 15, 2021

The equation

The equation of the surface is :

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

(0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(32) is 1108379685

General information

Number of lines	3
Number of points	1089
Number of singular points	1
Number of Eckardt points	0
Number of double points	3
Number of single points	93
Number of points off lines	993
Number of Hesse planes	0
Number of axes	0
Type of points on lines	33^3
Type of lines on points	2^3, 1^{93}, 0^{993}

Singular Points

The surface has 1 singular points:

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

The 3 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{bmatrix}_0 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{bmatrix}_0 = \mathbf{Pl}(1,0,0,0,0,0)_0$$

$$\ell_1 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{33} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{33} = \mathbf{Pl}(1,0,1,0,1,0)_{1153}$$

$$\ell_2 = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{34914} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{34914} = \mathbf{Pl}(1,0,1,1,1,1)_{70563}$$

Rank of lines: (0, 33, 34914)
Rank of points on Klein quadric: (0, 1153, 70563)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

The surface has 3 Double points:
The double points on the surface are:

$P_0 = (1,0,0,0) = \ell_0 \cap \ell_1$
$P_5 = (1,1,0,0) = \ell_0 \cap \ell_2$
$P_{2114} = (0,1,1,1) = \ell_1 \cap \ell_2$

Single Points

The surface has 93 single points:
The single points on the surface are:

0 : $P_1 = (0,1,0,0)$ lies on line ℓ_0
1 : $P_4 = (1,1,1,1)$ lies on line ℓ_1
2 : $P_6 = (2,1,0,0)$ lies on line ℓ_0
3 : $P_7 = (3,1,0,0)$ lies on line ℓ_0
4 : $P_8 = (4,1,0,0)$ lies on line ℓ_0
5 : $P_9 = (5,1,0,0)$ lies on line ℓ_0
6 : $P_{10} = (6,1,0,0)$ lies on line ℓ_0
7 : $P_{11} = (7,1,0,0)$ lies on line ℓ_0
8 : $P_{12} = (8,1,0,0)$ lies on line ℓ_0
9 : $P_{13} = (9,1,0,0)$ lies on line ℓ_0
10 : $P_{14} = (10,1,0,0)$ lies on line ℓ_0
11 : $P_{15} = (11,1,0,0)$ lies on line ℓ_0
12 : $P_{16} = (12,1,0,0)$ lies on line ℓ_0
13 : $P_{17} = (13,1,0,0)$ lies on line ℓ_0
14 : $P_{18} = (14,1,0,0)$ lies on line ℓ_0
15 : $P_{19} = (15,1,0,0)$ lies on line ℓ_0
16 : $P_{20} = (16,1,0,0)$ lies on line ℓ_0
17 : $P_{21} = (17,1,0,0)$ lies on line ℓ_0
18 : $P_{22} = (18,1,0,0)$ lies on line ℓ_0
19 : $P_{23} = (19,1,0,0)$ lies on line ℓ_0
20 : $P_{24} = (20,1,0,0)$ lies on line ℓ_0
21 : $P_{25} = (21,1,0,0)$ lies on line ℓ_0
22 : $P_{26} = (22,1,0,0)$ lies on line ℓ_0
23 : $P_{27} = (23,1,0,0)$ lies on line ℓ_0
24 : $P_{28} = (24,1,0,0)$ lies on line ℓ_0
25 : $P_{29} = (25,1,0,0)$ lies on line ℓ_0
26 : $P_{30} = (26,1,0,0)$ lies on line ℓ_0
27 : $P_{31} = (27,1,0,0)$ lies on line ℓ_0
28 : $P_{32} = (28,1,0,0)$ lies on line ℓ_0
29 : $P_{33} = (29,1,0,0)$ lies on line ℓ_0
30 : $P_{34} = (30,1,0,0)$ lies on line ℓ_0
31 : $P_{35} = (31,1,0,0)$ lies on line ℓ_0
32 : $P_{2083} = (1,0,1,1)$ lies on line ℓ_2
33 : $P_{2115} = (2,1,1,1)$ lies on line ℓ_1
34 : $P_{2116} = (3,1,1,1)$ lies on line ℓ_1
35 : $P_{2117} = (4,1,1,1)$ lies on line ℓ_1
36 : $P_{2118} = (5,1,1,1)$ lies on line ℓ_1
37 : $P_{2119} = (6,1,1,1)$ lies on line ℓ_1
38 : $P_{2120} = (7,1,1,1)$ lies on line ℓ_1
39 : $P_{2121} = (8,1,1,1)$ lies on line ℓ_1
40 : $P_{2122} = (9,1,1,1)$ lies on line ℓ_1
41 : $P_{2123} = (10,1,1,1)$ lies on line ℓ_1
42 : $P_{2124} = (11,1,1,1)$ lies on line ℓ_1
43 : $P_{2125} = (12,1,1,1)$ lies on line ℓ_1
44 : $P_{2126} = (13,1,1,1)$ lies on line ℓ_1
45 : $P_{2127} = (14,1,1,1)$ lies on line ℓ_1
46 : $P_{2128} = (15,1,1,1)$ lies on line ℓ_1
47 : $P_{2129} = (16,1,1,1)$ lies on line ℓ_1
48 : $P_{2130} = (17,1,1,1)$ lies on line ℓ_1
49 : $P_{2131} = (18,1,1,1)$ lies on line ℓ_1
50 : $P_{2132} = (19,1,1,1)$ lies on line ℓ_1
51 : $P_{2133} = (20,1,1,1)$ lies on line ℓ_1

52 : $P_{2134} = (21, 1, 1, 1)$ lies on line ℓ_1
53 : $P_{2135} = (22, 1, 1, 1)$ lies on line ℓ_1
54 : $P_{2136} = (23, 1, 1, 1)$ lies on line ℓ_1
55 : $P_{2137} = (24, 1, 1, 1)$ lies on line ℓ_1
56 : $P_{2138} = (25, 1, 1, 1)$ lies on line ℓ_1
57 : $P_{2139} = (26, 1, 1, 1)$ lies on line ℓ_1
58 : $P_{2140} = (27, 1, 1, 1)$ lies on line ℓ_1
59 : $P_{2141} = (28, 1, 1, 1)$ lies on line ℓ_1
60 : $P_{2142} = (29, 1, 1, 1)$ lies on line ℓ_1
61 : $P_{2143} = (30, 1, 1, 1)$ lies on line ℓ_1
62 : $P_{2144} = (31, 1, 1, 1)$ lies on line ℓ_1
63 : $P_{2148} = (3, 2, 1, 1)$ lies on line ℓ_2
64 : $P_{2179} = (2, 3, 1, 1)$ lies on line ℓ_2
65 : $P_{2214} = (5, 4, 1, 1)$ lies on line ℓ_2
66 : $P_{2245} = (4, 5, 1, 1)$ lies on line ℓ_2
67 : $P_{2280} = (7, 6, 1, 1)$ lies on line ℓ_2
68 : $P_{2311} = (6, 7, 1, 1)$ lies on line ℓ_2
69 : $P_{2346} = (9, 8, 1, 1)$ lies on line ℓ_2
70 : $P_{2377} = (8, 9, 1, 1)$ lies on line ℓ_2
71 : $P_{2412} = (11, 10, 1, 1)$ lies on line ℓ_2
72 : $P_{2443} = (10, 11, 1, 1)$ lies on line ℓ_2
73 : $P_{2478} = (13, 12, 1, 1)$ lies on line ℓ_2
74 : $P_{2509} = (12, 13, 1, 1)$ lies on line ℓ_2
75 : $P_{2544} = (15, 14, 1, 1)$ lies on line ℓ_2
76 : $P_{2575} = (14, 15, 1, 1)$ lies on line ℓ_2
77 : $P_{2610} = (17, 16, 1, 1)$ lies on line ℓ_2
78 : $P_{2641} = (16, 17, 1, 1)$ lies on line ℓ_2
79 : $P_{2676} = (19, 18, 1, 1)$ lies on line ℓ_2
80 : $P_{2707} = (18, 19, 1, 1)$ lies on line ℓ_2
81 : $P_{2742} = (21, 20, 1, 1)$ lies on line ℓ_2
82 : $P_{2773} = (20, 21, 1, 1)$ lies on line ℓ_2
83 : $P_{2808} = (23, 22, 1, 1)$ lies on line ℓ_2
84 : $P_{2839} = (22, 23, 1, 1)$ lies on line ℓ_2
85 : $P_{2874} = (25, 24, 1, 1)$ lies on line ℓ_2
86 : $P_{2905} = (24, 25, 1, 1)$ lies on line ℓ_2
87 : $P_{2940} = (27, 26, 1, 1)$ lies on line ℓ_2
88 : $P_{2971} = (26, 27, 1, 1)$ lies on line ℓ_2
89 : $P_{3006} = (29, 28, 1, 1)$ lies on line ℓ_2
90 : $P_{3037} = (28, 29, 1, 1)$ lies on line ℓ_2
91 : $P_{3072} = (31, 30, 1, 1)$ lies on line ℓ_2
92 : $P_{3103} = (30, 31, 1, 1)$ lies on line ℓ_2

The single points on the surface are:

Points on surface but on no line

The surface has 993 points not on any line:
The points on the surface but not on lines are:

0 : $P_3 = (0, 0, 0, 1)$
1 : $P_{68} = (1, 1, 1, 0)$
2 : $P_{117} = (18, 2, 1, 0)$
3 : $P_{159} = (28, 3, 1, 0)$
4 : $P_{172} = (9, 4, 1, 0)$
5 : $P_{218} = (23, 5, 1, 0)$
6 : $P_{241} = (14, 6, 1, 0)$
7 : $P_{271} = (12, 7, 1, 0)$
8 : $P_{313} = (22, 8, 1, 0)$
9 : $P_{327} = (4, 9, 1, 0)$
10 : $P_{380} = (25, 10, 1, 0)$
11 : $P_{403} = (16, 11, 1, 0)$
12 : $P_{426} = (7, 12, 1, 0)$
13 : $P_{466} = (15, 13, 1, 0)$
14 : $P_{489} = (6, 14, 1, 0)$
15 : $P_{528} = (13, 15, 1, 0)$
16 : $P_{558} = (11, 16, 1, 0)$
17 : $P_{603} = (24, 17, 1, 0)$
18 : $P_{613} = (2, 18, 1, 0)$
19 : $P_{672} = (29, 19, 1, 0)$
20 : $P_{705} = (30, 20, 1, 0)$
21 : $P_{733} = (26, 21, 1, 0)$
22 : $P_{747} = (8, 22, 1, 0)$
23 : $P_{776} = (5, 23, 1, 0)$
24 : $P_{820} = (17, 24, 1, 0)$
25 : $P_{845} = (10, 25, 1, 0)$
26 : $P_{888} = (21, 26, 1, 0)$
27 : $P_{930} = (31, 27, 1, 0)$
28 : $P_{934} = (3, 28, 1, 0)$
29 : $P_{982} = (19, 29, 1, 0)$
30 : $P_{1015} = (20, 30, 1, 0)$
31 : $P_{1054} = (27, 31, 1, 0)$
32 : $P_{1091} = (1, 1, 0, 1)$
33 : $P_{1126} = (4, 2, 0, 1)$
34 : $P_{1159} = (5, 3, 0, 1)$
35 : $P_{1202} = (16, 4, 0, 1)$
36 : $P_{1235} = (17, 5, 0, 1)$
37 : $P_{1270} = (20, 6, 0, 1)$
38 : $P_{1303} = (21, 7, 0, 1)$
39 : $P_{1324} = (10, 8, 0, 1)$
40 : $P_{1357} = (11, 9, 0, 1)$
41 : $P_{1392} = (14, 10, 0, 1)$
42 : $P_{1425} = (15, 11, 0, 1)$
43 : $P_{1468} = (26, 12, 0, 1)$
44 : $P_{1501} = (27, 13, 0, 1)$
45 : $P_{1536} = (30, 14, 0, 1)$

$46: P_{1569} = (31, 15, 0, 1)$
$47: P_{1583} = (13, 16, 0, 1)$
$48: P_{1614} = (12, 17, 0, 1)$
$49: P_{1643} = (9, 18, 0, 1)$
$50: P_{1674} = (8, 19, 0, 1)$
$51: P_{1727} = (29, 20, 0, 1)$
$52: P_{1758} = (28, 21, 0, 1)$
$53: P_{1787} = (25, 22, 0, 1)$
$54: P_{1818} = (24, 23, 0, 1)$
$55: P_{1833} = (7, 24, 0, 1)$
$56: P_{1864} = (6, 25, 0, 1)$
$57: P_{1893} = (3, 26, 0, 1)$
$58: P_{1924} = (2, 27, 0, 1)$
$59: P_{1977} = (23, 28, 0, 1)$
$60: P_{2008} = (22, 29, 0, 1)$
$61: P_{2037} = (19, 30, 0, 1)$
$62: P_{2068} = (18, 31, 0, 1)$
$63: P_{3113} = (8, 0, 2, 1)$
$64: P_{3144} = (7, 1, 2, 1)$
$65: P_{3200} = (31, 2, 2, 1)$
$66: P_{3223} = (22, 3, 2, 1)$
$67: P_{3248} = (15, 4, 2, 1)$
$68: P_{3274} = (9, 5, 2, 1)$
$69: P_{3302} = (5, 6, 2, 1)$
$70: P_{3350} = (21, 7, 2, 1)$
$71: P_{3382} = (21, 8, 2, 1)$
$72: P_{3395} = (2, 9, 2, 1)$
$73: P_{3447} = (22, 10, 2, 1)$
$74: P_{3484} = (27, 11, 2, 1)$
$75: P_{3494} = (5, 12, 2, 1)$
$76: P_{3523} = (2, 13, 2, 1)$
$77: P_{3582} = (29, 14, 2, 1)$
$78: P_{3592} = (7, 15, 2, 1)$
$79: P_{3625} = (8, 16, 2, 1)$
$80: P_{3678} = (29, 17, 2, 1)$
$81: P_{3713} = (0, 19, 2, 1)$
$82: P_{3749} = (4, 20, 2, 1)$
$83: P_{3800} = (23, 21, 2, 1)$
$84: P_{3829} = (20, 22, 2, 1)$
$85: P_{3850} = (9, 23, 2, 1)$
$86: P_{3900} = (27, 24, 2, 1)$
$87: P_{3936} = (31, 25, 2, 1)$
$88: P_{3952} = (15, 26, 2, 1)$
$89: P_{3989} = (20, 27, 2, 1)$
$90: P_{4005} = (4, 28, 2, 1)$
$91: P_{4034} = (1, 29, 2, 1)$
$92: P_{4088} = (23, 30, 2, 1)$
$93: P_{4098} = (1, 31, 2, 1)$
$94: P_{4144} = (15, 0, 3, 1)$
$95: P_{4168} = (7, 1, 3, 1)$
$96: P_{4220} = (27, 2, 3, 1)$
$97: P_{4241} = (16, 3, 3, 1)$
$98: P_{4277} = (20, 4, 3, 1)$
$99: P_{4303} = (14, 5, 3, 1)$
$100: P_{4333} = (12, 6, 3, 1)$
$101: P_{4363} = (10, 7, 3, 1)$
$102: P_{4392} = (7, 8, 3, 1)$
$103: P_{4447} = (30, 9, 3, 1)$
$104: P_{4476} = (27, 10, 3, 1)$
$105: P_{4481} = (0, 11, 3, 1)$
$106: P_{4514} = (1, 12, 3, 1)$
$107: P_{4562} = (17, 13, 3, 1)$
$108: P_{4607} = (30, 14, 3, 1)$
$109: P_{4610} = (1, 15, 3, 1)$
$110: P_{4666} = (25, 16, 3, 1)$
$111: P_{4688} = (15, 17, 3, 1)$
$112: P_{4717} = (12, 18, 3, 1)$
$113: P_{4739} = (2, 19, 3, 1)$
$114: P_{4795} = (26, 20, 3, 1)$
$115: P_{4803} = (2, 21, 3, 1)$
$116: P_{4849} = (16, 22, 3, 1)$
$117: P_{4879} = (14, 23, 3, 1)$
$118: P_{4926} = (29, 24, 3, 1)$
$119: P_{4939} = (10, 25, 3, 1)$
$120: P_{4990} = (29, 26, 3, 1)$
$121: P_{5010} = (17, 27, 3, 1)$
$122: P_{5077} = (20, 29, 3, 1)$
$123: P_{5114} = (25, 30, 3, 1)$
$124: P_{5147} = (26, 31, 3, 1)$
$125: P_{5163} = (10, 0, 4, 1)$
$126: P_{5206} = (21, 1, 4, 1)$
$127: P_{5246} = (29, 2, 4, 1)$
$128: P_{5280} = (31, 3, 4, 1)$
$129: P_{5299} = (18, 4, 4, 1)$
$130: P_{5338} = (25, 5, 4, 1)$
$131: P_{5363} = (18, 6, 4, 1)$
$132: P_{5379} = (2, 7, 4, 1)$
$133: P_{5409} = (0, 8, 4, 1)$
$134: P_{5501} = (28, 10, 4, 1)$
$135: P_{5509} = (4, 11, 4, 1)$
$136: P_{5559} = (22, 12, 4, 1)$
$137: P_{5579} = (10, 13, 4, 1)$
$138: P_{5626} = (25, 14, 4, 1)$
$139: P_{5635} = (2, 15, 4, 1)$
$140: P_{5696} = (31, 16, 4, 1)$
$141: P_{5708} = (11, 17, 4, 1)$
$142: P_{5730} = (1, 18, 4, 1)$
$143: P_{5785} = (24, 19, 4, 1)$
$144: P_{5810} = (17, 20, 4, 1)$
$145: P_{5853} = (28, 21, 4, 1)$
$146: P_{5858} = (1, 22, 4, 1)$
$147: P_{5905} = (16, 23, 4, 1)$
$148: P_{5932} = (11, 24, 4, 1)$
$149: P_{5982} = (29, 25, 4, 1)$
$150: P_{6002} = (17, 26, 4, 1)$
$151: P_{6021} = (4, 27, 4, 1)$
$152: P_{6073} = (24, 28, 4, 1)$
$153: P_{6097} = (16, 29, 4, 1)$

$154: P_{6135} = (22, 30, 4, 1)$
$155: P_{6166} = (21, 31, 4, 1)$
$156: P_{6208} = (31, 0, 5, 1)$
$157: P_{6230} = (21, 1, 5, 1)$
$158: P_{6253} = (12, 2, 5, 1)$
$159: P_{6295} = (22, 3, 5, 1)$
$160: P_{6307} = (2, 4, 5, 1)$
$161: P_{6350} = (13, 5, 5, 1)$
$162: P_{6383} = (14, 6, 5, 1)$
$163: P_{6423} = (22, 7, 5, 1)$
$164: P_{6437} = (4, 8, 5, 1)$
$165: P_{6491} = (26, 9, 5, 1)$
$166: P_{6518} = (21, 10, 5, 1)$
$167: P_{6548} = (19, 11, 5, 1)$
$168: P_{6592} = (31, 12, 5, 1)$
$169: P_{6599} = (6, 13, 5, 1)$
$170: P_{6627} = (2, 14, 5, 1)$
$171: P_{6657} = (0, 15, 5, 1)$
$172: P_{6718} = (29, 16, 5, 1)$
$173: P_{6751} = (30, 17, 5, 1)$
$174: P_{6756} = (3, 18, 5, 1)$
$175: P_{6791} = (6, 19, 5, 1)$
$176: P_{6843} = (26, 20, 5, 1)$
$177: P_{6863} = (14, 21, 5, 1)$
$178: P_{6910} = (29, 22, 5, 1)$
$179: P_{6975} = (30, 24, 5, 1)$
$180: P_{6990} = (13, 25, 5, 1)$
$181: P_{7010} = (1, 26, 5, 1)$
$182: P_{7053} = (12, 27, 5, 1)$
$183: P_{7077} = (4, 28, 5, 1)$
$184: P_{7108} = (3, 29, 5, 1)$
$185: P_{7156} = (19, 30, 5, 1)$
$186: P_{7170} = (1, 31, 5, 1)$
$187: P_{7224} = (23, 0, 6, 1)$
$188: P_{7252} = (19, 1, 6, 1)$
$189: P_{7291} = (26, 2, 6, 1)$
$190: P_{7305} = (8, 3, 6, 1)$
$191: P_{7348} = (19, 4, 6, 1)$
$192: P_{7377} = (16, 5, 6, 1)$
$193: P_{7404} = (11, 6, 6, 1)$
$194: P_{7456} = (31, 7, 6, 1)$
$195: P_{7477} = (20, 8, 6, 1)$
$196: P_{7518} = (29, 9, 6, 1)$
$197: P_{7537} = (16, 10, 6, 1)$
$198: P_{7575} = (22, 11, 6, 1)$
$199: P_{7591} = (6, 12, 6, 1)$
$200: P_{7646} = (29, 13, 6, 1)$
$201: P_{7712} = (31, 15, 6, 1)$
$202: P_{7735} = (22, 16, 6, 1)$
$203: P_{7773} = (28, 17, 6, 1)$
$204: P_{7792} = (15, 18, 6, 1)$
$205: P_{7837} = (28, 19, 6, 1)$
$206: P_{7867} = (26, 20, 6, 1)$
$207: P_{7888} = (15, 21, 6, 1)$
$208: P_{7913} = (8, 22, 6, 1)$
$209: P_{7954} = (17, 23, 6, 1)$
$210: P_{7975} = (6, 24, 6, 1)$
$211: P_{8012} = (11, 25, 6, 1)$
$212: P_{8047} = (14, 26, 6, 1)$
$213: P_{8079} = (14, 27, 6, 1)$
$214: P_{8097} = (0, 28, 6, 1)$
$215: P_{8152} = (23, 29, 6, 1)$
$216: P_{8178} = (17, 30, 6, 1)$
$217: P_{8213} = (20, 31, 6, 1)$
$218: P_{8229} = (4, 0, 7, 1)$
$219: P_{8276} = (19, 1, 7, 1)$
$220: P_{8289} = (0, 2, 7, 1)$
$221: P_{8343} = (22, 3, 7, 1)$
$222: P_{8383} = (30, 4, 7, 1)$
$223: P_{8413} = (28, 5, 7, 1)$
$224: P_{8420} = (3, 6, 7, 1)$
$225: P_{8457} = (8, 7, 7, 1)$
$226: P_{8499} = (18, 8, 7, 1)$
$227: P_{8533} = (20, 9, 7, 1)$
$228: P_{8565} = (20, 10, 7, 1)$
$229: P_{8582} = (5, 11, 7, 1)$
$230: P_{8657} = (16, 13, 7, 1)$
$231: P_{8695} = (22, 14, 7, 1)$
$232: P_{8708} = (3, 15, 7, 1)$
$233: P_{8742} = (5, 16, 7, 1)$
$234: P_{8795} = (26, 17, 7, 1)$
$235: P_{8817} = (16, 18, 7, 1)$
$236: P_{8858} = (25, 19, 7, 1)$
$237: P_{8895} = (30, 20, 7, 1)$
$238: P_{8924} = (27, 21, 7, 1)$
$239: P_{8954} = (25, 22, 7, 1)$
$240: P_{8980} = (19, 23, 7, 1)$
$241: P_{8994} = (1, 24, 7, 1)$
$242: P_{9043} = (18, 25, 7, 1)$
$243: P_{9065} = (8, 26, 7, 1)$
$244: P_{9117} = (28, 27, 7, 1)$
$245: P_{9125} = (4, 28, 7, 1)$
$246: P_{9179} = (26, 29, 7, 1)$
$247: P_{9212} = (27, 30, 7, 1)$
$248: P_{9218} = (1, 31, 7, 1)$
$249: P_{9275} = (26, 0, 8, 1)$
$250: P_{9284} = (3, 1, 8, 1)$
$251: P_{9342} = (29, 2, 8, 1)$
$252: P_{9369} = (24, 3, 8, 1)$
$253: P_{9393} = (16, 4, 8, 1)$
$254: P_{9429} = (20, 5, 8, 1)$
$255: P_{9446} = (5, 6, 8, 1)$
$256: P_{9490} = (17, 7, 8, 1)$
$257: P_{9518} = (13, 8, 8, 1)$
$258: P_{9552} = (15, 9, 8, 1)$
$259: P_{9590} = (21, 10, 8, 1)$
$260: P_{9606} = (5, 11, 8, 1)$
$261: P_{9633} = (0, 12, 8, 1)$

$262: P_{9679} = (14, 13, 8, 1)$
$263: P_{9723} = (26, 14, 8, 1)$
$264: P_{9742} = (13, 15, 8, 1)$
$265: P_{9777} = (16, 16, 8, 1)$
$266: P_{9822} = (29, 17, 8, 1)$
$267: P_{9839} = (14, 18, 8, 1)$
$268: P_{9878} = (21, 19, 8, 1)$
$269: P_{9909} = (20, 20, 8, 1)$
$270: P_{9930} = (9, 21, 8, 1)$
$271: P_{9994} = (9, 23, 8, 1)$
$272: P_{10035} = (18, 24, 8, 1)$
$273: P_{10052} = (3, 25, 8, 1)$
$274: P_{10085} = (4, 26, 8, 1)$
$275: P_{10130} = (17, 27, 8, 1)$
$276: P_{10163} = (18, 28, 8, 1)$
$277: P_{10201} = (24, 29, 8, 1)$
$278: P_{10224} = (15, 30, 8, 1)$
$279: P_{10245} = (4, 31, 8, 1)$
$280: P_{10298} = (25, 0, 9, 1)$
$281: P_{10308} = (3, 1, 9, 1)$
$282: P_{10359} = (22, 2, 9, 1)$
$283: P_{10385} = (16, 3, 9, 1)$
$284: P_{10438} = (5, 5, 9, 1)$
$285: P_{10491} = (26, 6, 9, 1)$
$286: P_{10513} = (16, 7, 9, 1)$
$287: P_{10547} = (18, 8, 9, 1)$
$288: P_{10591} = (30, 9, 9, 1)$
$289: P_{10620} = (27, 10, 9, 1)$
$290: P_{10645} = (20, 11, 9, 1)$
$291: P_{10676} = (19, 12, 9, 1)$
$292: P_{10694} = (5, 13, 9, 1)$
$293: P_{10741} = (20, 14, 9, 1)$
$294: P_{10778} = (25, 15, 9, 1)$
$295: P_{10789} = (4, 16, 9, 1)$
$296: P_{10821} = (4, 17, 9, 1)$
$297: P_{10875} = (26, 18, 9, 1)$
$298: P_{10900} = (19, 19, 9, 1)$
$299: P_{10914} = (1, 20, 9, 1)$
$300: P_{10967} = (22, 21, 9, 1)$
$301: P_{10977} = (0, 22, 9, 1)$
$302: P_{11036} = (27, 23, 9, 1)$
$303: P_{11069} = (28, 24, 9, 1)$
$304: P_{11081} = (8, 25, 9, 1)$
$305: P_{11108} = (3, 26, 9, 1)$
$306: P_{11145} = (8, 27, 9, 1)$
$307: P_{11199} = (30, 28, 9, 1)$
$308: P_{11202} = (1, 29, 9, 1)$
$309: P_{11251} = (18, 30, 9, 1)$
$310: P_{11293} = (28, 31, 9, 1)$
$311: P_{11300} = (3, 0, 10, 1)$
$312: P_{11334} = (5, 1, 10, 1)$
$313: P_{11373} = (12, 2, 10, 1)$
$314: P_{11409} = (16, 3, 10, 1)$
$315: P_{11447} = (22, 4, 10, 1)$
$316: P_{11464} = (7, 5, 10, 1)$
$317: P_{11494} = (5, 6, 10, 1)$
$318: P_{11530} = (9, 7, 10, 1)$
$319: P_{11581} = (28, 8, 10, 1)$
$320: P_{11615} = (30, 9, 10, 1)$
$321: P_{11644} = (27, 10, 10, 1)$
$322: P_{11680} = (31, 11, 10, 1)$
$323: P_{11703} = (22, 12, 10, 1)$
$324: P_{11726} = (13, 13, 10, 1)$
$325: P_{11773} = (28, 14, 10, 1)$
$326: P_{11794} = (17, 15, 10, 1)$
$327: P_{11822} = (13, 16, 10, 1)$
$328: P_{11870} = (29, 17, 10, 1)$
$329: P_{11889} = (16, 18, 10, 1)$
$330: P_{11936} = (31, 19, 10, 1)$
$331: P_{11954} = (17, 20, 10, 1)$
$332: P_{11981} = (12, 21, 10, 1)$
$333: P_{12008} = (7, 22, 10, 1)$
$334: P_{12042} = (9, 23, 10, 1)$
$335: P_{12076} = (11, 24, 10, 1)$
$336: P_{12129} = (0, 26, 10, 1)$
$337: P_{12191} = (30, 27, 10, 1)$
$338: P_{12204} = (11, 28, 10, 1)$
$339: P_{12254} = (29, 29, 10, 1)$
$340: P_{12260} = (3, 30, 10, 1)$
$341: P_{12316} = (27, 31, 10, 1)$
$342: P_{12327} = (6, 0, 11, 1)$
$343: P_{12358} = (5, 1, 11, 1)$
$344: P_{12395} = (10, 2, 11, 1)$
$345: P_{12422} = (5, 3, 11, 1)$
$346: P_{12474} = (25, 4, 11, 1)$
$347: P_{12494} = (13, 5, 11, 1)$
$348: P_{12523} = (10, 6, 11, 1)$
$349: P_{12568} = (23, 7, 11, 1)$
$350: P_{12585} = (8, 8, 11, 1)$
$351: P_{12612} = (3, 9, 11, 1)$
$352: P_{12650} = (9, 10, 11, 1)$
$353: P_{12692} = (19, 11, 11, 1)$
$354: P_{12721} = (16, 12, 11, 1)$
$355: P_{12753} = (16, 13, 11, 1)$
$356: P_{12771} = (2, 14, 11, 1)$
$357: P_{12830} = (29, 15, 11, 1)$
$358: P_{12882} = (17, 17, 11, 1)$
$359: P_{12920} = (23, 18, 11, 1)$
$360: P_{12938} = (9, 19, 11, 1)$
$361: P_{12964} = (3, 20, 11, 1)$
$362: P_{13006} = (13, 21, 11, 1)$
$363: P_{13026} = (1, 22, 11, 1)$
$364: P_{13076} = (19, 23, 11, 1)$
$365: P_{13091} = (2, 24, 11, 1)$
$366: P_{13121} = (0, 25, 11, 1)$
$367: P_{13161} = (8, 26, 11, 1)$
$368: P_{13202} = (17, 27, 11, 1)$
$369: P_{13242} = (25, 28, 11, 1)$

$370: P_{13250} = (1, 29, 11, 1)$
$371: P_{13310} = (29, 30, 11, 1)$
$372: P_{13319} = (6, 31, 11, 1)$
$373: P_{13354} = (9, 0, 12, 1)$
$374: P_{13400} = (23, 1, 12, 1)$
$375: P_{13438} = (29, 2, 12, 1)$
$376: P_{13450} = (9, 3, 12, 1)$
$377: P_{13476} = (3, 4, 12, 1)$
$378: P_{13506} = (1, 5, 12, 1)$
$379: P_{13562} = (25, 6, 12, 1)$
$380: P_{13611} = (10, 8, 12, 1)$
$381: P_{13634} = (1, 9, 12, 1)$
$382: P_{13694} = (29, 10, 12, 1)$
$383: P_{13714} = (17, 11, 12, 1)$
$384: P_{13731} = (2, 12, 12, 1)$
$385: P_{13777} = (16, 13, 12, 1)$
$386: P_{13806} = (13, 14, 12, 1)$
$387: P_{13830} = (5, 15, 12, 1)$
$388: P_{13860} = (3, 16, 12, 1)$
$389: P_{13895} = (6, 17, 12, 1)$
$390: P_{13921} = (0, 18, 12, 1)$
$391: P_{13969} = (16, 19, 12, 1)$
$392: P_{13987} = (2, 20, 12, 1)$
$393: P_{14025} = (8, 21, 12, 1)$
$394: P_{14054} = (5, 22, 12, 1)$
$395: P_{14100} = (19, 23, 12, 1)$
$396: P_{14126} = (13, 24, 12, 1)$
$397: P_{14162} = (17, 25, 12, 1)$
$398: P_{14185} = (8, 26, 12, 1)$
$399: P_{14234} = (25, 27, 12, 1)$
$400: P_{14247} = (6, 28, 12, 1)$
$401: P_{14292} = (19, 29, 12, 1)$
$402: P_{14328} = (23, 30, 12, 1)$
$403: P_{14347} = (10, 31, 12, 1)$
$404: P_{14399} = (30, 0, 13, 1)$
$405: P_{14424} = (23, 1, 13, 1)$
$406: P_{14463} = (30, 2, 13, 1)$
$407: P_{14471} = (6, 3, 13, 1)$
$408: P_{14510} = (13, 4, 13, 1)$
$409: P_{14555} = (26, 5, 13, 1)$
$410: P_{14562} = (1, 6, 13, 1)$
$411: P_{14620} = (27, 7, 13, 1)$
$412: P_{14631} = (6, 8, 13, 1)$
$413: P_{14680} = (23, 9, 13, 1)$
$414: P_{14710} = (21, 10, 13, 1)$
$415: P_{14722} = (1, 11, 13, 1)$
$416: P_{14773} = (20, 12, 13, 1)$
$417: P_{14796} = (11, 13, 13, 1)$
$418: P_{14817} = (0, 14, 13, 1)$
$419: P_{14906} = (25, 16, 13, 1)$
$420: P_{14922} = (9, 17, 13, 1)$
$421: P_{14961} = (16, 18, 13, 1)$
$422: P_{14997} = (20, 19, 13, 1)$
$423: P_{15034} = (25, 20, 13, 1)$
$424: P_{15072} = (31, 21, 13, 1)$
$425: P_{15099} = (26, 22, 13, 1)$
$426: P_{15129} = (24, 23, 13, 1)$
$427: P_{15158} = (21, 24, 13, 1)$
$428: P_{15196} = (27, 25, 13, 1)$
$429: P_{15232} = (31, 26, 13, 1)$
$430: P_{15242} = (9, 27, 13, 1)$
$431: P_{15281} = (16, 28, 13, 1)$
$432: P_{15308} = (11, 29, 13, 1)$
$433: P_{15353} = (24, 30, 13, 1)$
$434: P_{15374} = (13, 31, 13, 1)$
$435: P_{15398} = (5, 0, 14, 1)$
$436: P_{15442} = (17, 1, 14, 1)$
$437: P_{15476} = (19, 2, 14, 1)$
$438: P_{15489} = (0, 3, 14, 1)$
$439: P_{15547} = (26, 4, 14, 1)$
$440: P_{15566} = (13, 5, 14, 1)$
$441: P_{15632} = (15, 7, 14, 1)$
$442: P_{15667} = (18, 8, 14, 1)$
$443: P_{15694} = (13, 9, 14, 1)$
$444: P_{15736} = (23, 10, 14, 1)$
$445: P_{15764} = (19, 11, 14, 1)$
$446: P_{15799} = (22, 12, 14, 1)$
$447: P_{15836} = (27, 13, 14, 1)$
$448: P_{15843} = (2, 14, 14, 1)$
$449: P_{15891} = (18, 15, 14, 1)$
$450: P_{15930} = (25, 16, 14, 1)$
$451: P_{15958} = (21, 17, 14, 1)$
$452: P_{15971} = (2, 18, 14, 1)$
$453: P_{16006} = (5, 19, 14, 1)$
$454: P_{16050} = (17, 20, 14, 1)$
$455: P_{16076} = (11, 21, 14, 1)$
$456: P_{16119} = (22, 22, 14, 1)$
$457: P_{16144} = (15, 23, 14, 1)$
$458: P_{16172} = (11, 24, 14, 1)$
$459: P_{16214} = (21, 25, 14, 1)$
$460: P_{16250} = (25, 26, 14, 1)$
$461: P_{16284} = (27, 27, 14, 1)$
$462: P_{16315} = (26, 28, 14, 1)$
$463: P_{16333} = (12, 29, 14, 1)$
$464: P_{16376} = (23, 30, 14, 1)$
$465: P_{16397} = (12, 31, 14, 1)$
$466: P_{16437} = (20, 0, 15, 1)$
$467: P_{16466} = (17, 1, 15, 1)$
$468: P_{16493} = (12, 2, 15, 1)$
$469: P_{16523} = (10, 3, 15, 1)$
$470: P_{16559} = (14, 4, 15, 1)$
$471: P_{16594} = (17, 5, 15, 1)$
$472: P_{16609} = (0, 6, 15, 1)$
$473: P_{16645} = (4, 7, 15, 1)$
$474: P_{16684} = (11, 8, 15, 1)$
$475: P_{16729} = (24, 9, 15, 1)$
$476: P_{16747} = (10, 10, 15, 1)$
$477: P_{16774} = (5, 11, 15, 1)$

$478: P_{16813} = (12, 12, 15, 1)$
$479: P_{16876} = (11, 14, 15, 1)$
$480: P_{16905} = (8, 15, 15, 1)$
$481: P_{16935} = (6, 16, 15, 1)$
$482: P_{16988} = (27, 17, 15, 1)$
$483: P_{17013} = (20, 18, 15, 1)$
$484: P_{17047} = (22, 19, 15, 1)$
$485: P_{17071} = (14, 20, 15, 1)$
$486: P_{17113} = (24, 21, 15, 1)$
$487: P_{17122} = (1, 22, 15, 1)$
$488: P_{17159} = (6, 23, 15, 1)$
$489: P_{17193} = (8, 24, 15, 1)$
$490: P_{17218} = (1, 25, 15, 1)$
$491: P_{17262} = (13, 26, 15, 1)$
$492: P_{17294} = (13, 27, 15, 1)$
$493: P_{17340} = (27, 28, 15, 1)$
$494: P_{17350} = (5, 29, 15, 1)$
$495: P_{17381} = (4, 30, 15, 1)$
$496: P_{17431} = (22, 31, 15, 1)$
$497: P_{17455} = (14, 0, 16, 1)$
$498: P_{17501} = (28, 1, 16, 1)$
$499: P_{17521} = (16, 2, 16, 1)$
$500: P_{17549} = (12, 3, 16, 1)$
$501: P_{17591} = (22, 4, 16, 1)$
$502: P_{17619} = (18, 5, 16, 1)$
$503: P_{17655} = (22, 6, 16, 1)$
$504: P_{17680} = (15, 7, 16, 1)$
$505: P_{17704} = (7, 8, 16, 1)$
$506: P_{17730} = (1, 9, 16, 1)$
$507: P_{17761} = (0, 10, 16, 1)$
$508: P_{17840} = (15, 12, 16, 1)$
$509: P_{17875} = (18, 13, 16, 1)$
$510: P_{17912} = (23, 14, 16, 1)$
$511: P_{17937} = (16, 15, 16, 1)$
$512: P_{17962} = (9, 16, 16, 1)$
$513: P_{17991} = (6, 17, 16, 1)$
$514: P_{18045} = (28, 18, 16, 1)$
$515: P_{18074} = (25, 19, 16, 1)$
$516: P_{18090} = (9, 20, 16, 1)$
$517: P_{18117} = (4, 21, 16, 1)$
$518: P_{18158} = (13, 22, 16, 1)$
$519: P_{18184} = (7, 23, 16, 1)$
$520: P_{18222} = (13, 24, 16, 1)$
$521: P_{18242} = (1, 25, 16, 1)$
$522: P_{18298} = (25, 26, 16, 1)$
$523: P_{18319} = (14, 27, 16, 1)$
$524: P_{18360} = (23, 28, 16, 1)$
$525: P_{18381} = (12, 29, 16, 1)$
$526: P_{18407} = (6, 30, 16, 1)$
$527: P_{18437} = (4, 31, 16, 1)$
$528: P_{18483} = (18, 0, 17, 1)$
$529: P_{18525} = (28, 1, 17, 1)$
$530: P_{18555} = (26, 2, 17, 1)$
$531: P_{18562} = (1, 3, 17, 1)$
$532: P_{18619} = (26, 4, 17, 1)$
$533: P_{18650} = (25, 5, 17, 1)$
$534: P_{18684} = (27, 6, 17, 1)$
$535: P_{18708} = (19, 7, 17, 1)$
$536: P_{18741} = (20, 8, 17, 1)$
$537: P_{18758} = (5, 9, 17, 1)$
$538: P_{18801} = (16, 10, 17, 1)$
$539: P_{18820} = (3, 11, 17, 1)$
$540: P_{18868} = (19, 12, 17, 1)$
$541: P_{18903} = (22, 13, 17, 1)$
$542: P_{18941} = (28, 14, 17, 1)$
$543: P_{18953} = (8, 15, 17, 1)$
$544: P_{18981} = (4, 16, 17, 1)$
$545: P_{19036} = (27, 17, 17, 1)$
$546: P_{19042} = (1, 18, 17, 1)$
$547: P_{19081} = (8, 19, 17, 1)$
$548: P_{19135} = (30, 20, 17, 1)$
$549: P_{19162} = (25, 21, 17, 1)$
$550: P_{19174} = (5, 22, 17, 1)$
$551: P_{19217} = (16, 23, 17, 1)$
$552: P_{19287} = (22, 25, 17, 1)$
$553: P_{19315} = (18, 26, 17, 1)$
$554: P_{19349} = (20, 27, 17, 1)$
$555: P_{19391} = (30, 28, 17, 1)$
$556: P_{19396} = (3, 29, 17, 1)$
$557: P_{19429} = (4, 30, 17, 1)$
$558: P_{19457} = (0, 31, 17, 1)$
$559: P_{19511} = (22, 0, 18, 1)$
$560: P_{19547} = (26, 1, 18, 1)$
$561: P_{19588} = (3, 3, 18, 1)$
$562: P_{19619} = (2, 4, 18, 1)$
$563: P_{19651} = (2, 5, 18, 1)$
$564: P_{19682} = (1, 6, 18, 1)$
$565: P_{19742} = (29, 7, 18, 1)$
$566: P_{19758} = (13, 8, 18, 1)$
$567: P_{19783} = (6, 9, 18, 1)$
$568: P_{19815} = (6, 10, 18, 1)$
$569: P_{19863} = (22, 11, 18, 1)$
$570: P_{19899} = (26, 12, 18, 1)$
$571: P_{19924} = (19, 13, 18, 1)$
$572: P_{19968} = (31, 14, 18, 1)$
$573: P_{19990} = (21, 15, 18, 1)$
$574: P_{20004} = (3, 16, 18, 1)$
$575: P_{20063} = (30, 17, 18, 1)$
$576: P_{20079} = (14, 18, 18, 1)$
$577: P_{20128} = (31, 19, 18, 1)$
$578: P_{20130} = (1, 20, 18, 1)$
$579: P_{20175} = (14, 21, 18, 1)$
$580: P_{20212} = (19, 22, 18, 1)$
$581: P_{20246} = (21, 23, 18, 1)$
$582: P_{20261} = (4, 24, 18, 1)$
$583: P_{20301} = (12, 25, 18, 1)$
$584: P_{20325} = (4, 26, 18, 1)$
$585: P_{20382} = (29, 27, 18, 1)$

586 : $P_{20398} = (13, 28, 18, 1)$
587 : $P_{20417} = (0, 29, 18, 1)$
588 : $P_{20479} = (30, 30, 18, 1)$
589 : $P_{20493} = (12, 31, 18, 1)$
590 : $P_{20525} = (12, 0, 19, 1)$
591 : $P_{20571} = (26, 1, 19, 1)$
592 : $P_{20581} = (4, 2, 19, 1)$
593 : $P_{20615} = (6, 3, 19, 1)$
594 : $P_{20645} = (4, 4, 19, 1)$
595 : $P_{20693} = (20, 5, 19, 1)$
596 : $P_{20711} = (6, 6, 19, 1)$
597 : $P_{20755} = (18, 7, 19, 1)$
598 : $P_{20776} = (7, 8, 19, 1)$
599 : $P_{20804} = (3, 9, 19, 1)$
600 : $P_{20845} = (12, 10, 19, 1)$
601 : $P_{20881} = (16, 11, 19, 1)$
602 : $P_{20899} = (2, 12, 19, 1)$
603 : $P_{20934} = (5, 13, 19, 1)$
604 : $P_{20972} = (11, 14, 19, 1)$
605 : $P_{20995} = (2, 15, 19, 1)$
606 : $P_{21035} = (10, 16, 19, 1)$
607 : $P_{21057} = (0, 17, 19, 1)$
608 : $P_{21100} = (11, 18, 19, 1)$
609 : $P_{21137} = (16, 19, 19, 1)$
610 : $P_{21176} = (23, 20, 19, 1)$
611 : $P_{21216} = (31, 21, 19, 1)$
612 : $P_{21243} = (26, 22, 19, 1)$
613 : $P_{21280} = (31, 23, 19, 1)$
614 : $P_{21286} = (5, 24, 19, 1)$
615 : $P_{21316} = (3, 25, 19, 1)$
616 : $P_{21368} = (23, 26, 19, 1)$
617 : $P_{21397} = (20, 27, 19, 1)$
618 : $P_{21427} = (18, 28, 19, 1)$
619 : $P_{21480} = (7, 30, 19, 1)$
620 : $P_{21515} = (10, 31, 19, 1)$
621 : $P_{21561} = (24, 0, 20, 1)$
622 : $P_{21577} = (8, 1, 20, 1)$
623 : $P_{21631} = (30, 2, 20, 1)$
624 : $P_{21663} = (30, 3, 20, 1)$
625 : $P_{21668} = (3, 4, 20, 1)$
626 : $P_{21707} = (10, 5, 20, 1)$
627 : $P_{21744} = (15, 6, 20, 1)$
628 : $P_{21781} = (20, 7, 20, 1)$
629 : $P_{21816} = (23, 8, 20, 1)$
630 : $P_{21856} = (31, 9, 20, 1)$
631 : $P_{21886} = (29, 10, 20, 1)$
632 : $P_{21911} = (22, 11, 20, 1)$
633 : $P_{21944} = (23, 12, 20, 1)$
634 : $P_{21978} = (25, 13, 20, 1)$
635 : $P_{21998} = (13, 14, 20, 1)$
636 : $P_{22042} = (25, 15, 20, 1)$
637 : $P_{22057} = (8, 16, 20, 1)$
638 : $P_{22094} = (13, 17, 20, 1)$
639 : $P_{22142} = (29, 18, 20, 1)$
640 : $P_{22157} = (12, 19, 20, 1)$
641 : $P_{22192} = (15, 20, 20, 1)$
642 : $P_{22227} = (18, 21, 20, 1)$
643 : $P_{22265} = (24, 22, 20, 1)$
644 : $P_{22273} = (0, 23, 20, 1)$
645 : $P_{22317} = (12, 24, 20, 1)$
646 : $P_{22347} = (10, 25, 20, 1)$
647 : $P_{22389} = (20, 26, 20, 1)$
648 : $P_{22423} = (22, 27, 20, 1)$
649 : $P_{22464} = (31, 28, 20, 1)$
650 : $P_{22468} = (3, 29, 20, 1)$
651 : $P_{22547} = (18, 31, 20, 1)$
652 : $P_{22577} = (16, 0, 21, 1)$
653 : $P_{22601} = (8, 1, 21, 1)$
654 : $P_{22648} = (23, 2, 21, 1)$
655 : $P_{22667} = (10, 3, 21, 1)$
656 : $P_{22689} = (0, 4, 21, 1)$
657 : $P_{22746} = (25, 5, 21, 1)$
658 : $P_{22762} = (9, 6, 21, 1)$
659 : $P_{22786} = (1, 7, 21, 1)$
660 : $P_{22823} = (6, 8, 21, 1)$
661 : $P_{22862} = (13, 9, 21, 1)$
662 : $P_{22890} = (9, 10, 21, 1)$
663 : $P_{22942} = (29, 11, 21, 1)$
664 : $P_{22948} = (3, 12, 21, 1)$
665 : $P_{22994} = (17, 13, 21, 1)$
666 : $P_{23038} = (29, 14, 21, 1)$
667 : $P_{23058} = (17, 15, 21, 1)$
668 : $P_{23092} = (19, 16, 21, 1)$
669 : $P_{23128} = (23, 17, 21, 1)$
670 : $P_{23138} = (1, 18, 21, 1)$
671 : $P_{23171} = (2, 19, 21, 1)$
672 : $P_{23206} = (5, 20, 21, 1)$
673 : $P_{23243} = (10, 21, 21, 1)$
674 : $P_{23268} = (3, 22, 21, 1)$
675 : $P_{23313} = (16, 23, 21, 1)$
676 : $P_{23337} = (8, 24, 21, 1)$
677 : $P_{23367} = (6, 25, 21, 1)$
678 : $P_{23438} = (13, 27, 21, 1)$
679 : $P_{23459} = (2, 28, 21, 1)$
680 : $P_{23508} = (19, 29, 21, 1)$
681 : $P_{23546} = (25, 30, 21, 1)$
682 : $P_{23558} = (5, 31, 21, 1)$
683 : $P_{23606} = (21, 0, 22, 1)$
684 : $P_{23631} = (14, 1, 22, 1)$
685 : $P_{23669} = (20, 2, 22, 1)$
686 : $P_{23688} = (7, 3, 22, 1)$
687 : $P_{23719} = (6, 4, 22, 1)$
688 : $P_{23767} = (22, 5, 22, 1)$
689 : $P_{23798} = (21, 6, 22, 1)$
690 : $P_{23809} = (0, 7, 22, 1)$
691 : $P_{23884} = (11, 9, 22, 1)$
692 : $P_{23908} = (3, 10, 22, 1)$
693 : $P_{23962} = (25, 11, 22, 1)$

694 : $P_{23999} = (30, 12, 22, 1)$
695 : $P_{24018} = (17, 13, 22, 1)$
696 : $P_{24040} = (7, 14, 22, 1)$
697 : $P_{24074} = (9, 15, 22, 1)$
698 : $P_{24105} = (8, 16, 22, 1)$
699 : $P_{24137} = (8, 17, 22, 1)$
700 : $P_{24181} = (20, 18, 22, 1)$
701 : $P_{24195} = (2, 19, 22, 1)$
702 : $P_{24255} = (30, 20, 22, 1)$
703 : $P_{24260} = (3, 21, 22, 1)$
704 : $P_{24307} = (18, 22, 22, 1)$
705 : $P_{24332} = (11, 23, 22, 1)$
706 : $P_{24362} = (9, 24, 22, 1)$
707 : $P_{24402} = (17, 25, 22, 1)$
708 : $P_{24419} = (2, 26, 22, 1)$
709 : $P_{24463} = (14, 27, 22, 1)$
710 : $P_{24503} = (22, 28, 22, 1)$
711 : $P_{24531} = (18, 29, 22, 1)$
712 : $P_{24570} = (25, 30, 22, 1)$
713 : $P_{24583} = (6, 31, 22, 1)$
714 : $P_{24636} = (27, 0, 23, 1)$
715 : $P_{24655} = (14, 1, 23, 1)$
716 : $P_{24699} = (26, 2, 23, 1)$
717 : $P_{24722} = (17, 3, 23, 1)$
718 : $P_{24739} = (2, 4, 23, 1)$
719 : $P_{24818} = (17, 6, 23, 1)$
720 : $P_{24860} = (27, 7, 23, 1)$
721 : $P_{24885} = (20, 8, 23, 1)$
722 : $P_{24909} = (12, 9, 23, 1)$
723 : $P_{24945} = (16, 10, 23, 1)$
724 : $P_{24962} = (1, 11, 23, 1)$
725 : $P_{25013} = (20, 12, 23, 1)$
726 : $P_{25025} = (0, 13, 23, 1)$
727 : $P_{25086} = (29, 14, 23, 1)$
728 : $P_{25091} = (2, 15, 23, 1)$
729 : $P_{25128} = (7, 16, 23, 1)$
730 : $P_{25183} = (30, 17, 23, 1)$
731 : $P_{25211} = (26, 18, 23, 1)$
732 : $P_{25242} = (25, 19, 23, 1)$
733 : $P_{25278} = (29, 20, 23, 1)$
734 : $P_{25295} = (14, 21, 23, 1)$
735 : $P_{25325} = (12, 22, 23, 1)$
736 : $P_{25375} = (30, 23, 23, 1)$
737 : $P_{25393} = (16, 24, 23, 1)$
738 : $P_{25419} = (10, 25, 23, 1)$
739 : $P_{25448} = (7, 26, 23, 1)$
740 : $P_{25483} = (10, 27, 23, 1)$
741 : $P_{25506} = (1, 28, 23, 1)$
742 : $P_{25552} = (15, 29, 23, 1)$
743 : $P_{25584} = (15, 30, 23, 1)$
744 : $P_{25626} = (25, 31, 23, 1)$
745 : $P_{25635} = (2, 0, 24, 1)$
746 : $P_{25695} = (30, 1, 24, 1)$
747 : $P_{25711} = (14, 2, 24, 1)$
748 : $P_{25750} = (21, 3, 24, 1)$
749 : $P_{25764} = (3, 4, 24, 1)$
750 : $P_{25805} = (12, 5, 24, 1)$
751 : $P_{25839} = (14, 6, 24, 1)$
752 : $P_{25870} = (13, 7, 24, 1)$
753 : $P_{25895} = (6, 8, 24, 1)$
754 : $P_{25924} = (3, 9, 24, 1)$
755 : $P_{25982} = (29, 10, 24, 1)$
756 : $P_{26011} = (26, 11, 24, 1)$
757 : $P_{26036} = (19, 12, 24, 1)$
758 : $P_{26070} = (21, 13, 24, 1)$
759 : $P_{26094} = (13, 14, 24, 1)$
760 : $P_{26114} = (1, 15, 24, 1)$
761 : $P_{26149} = (4, 16, 24, 1)$
762 : $P_{26215} = (6, 18, 24, 1)$
763 : $P_{26272} = (31, 19, 24, 1)$
764 : $P_{26285} = (12, 20, 24, 1)$
765 : $P_{26307} = (2, 21, 24, 1)$
766 : $P_{26368} = (31, 22, 24, 1)$
767 : $P_{26370} = (1, 23, 24, 1)$
768 : $P_{26420} = (19, 24, 24, 1)$
769 : $P_{26459} = (26, 25, 24, 1)$
770 : $P_{26494} = (29, 26, 24, 1)$
771 : $P_{26497} = (0, 27, 24, 1)$
772 : $P_{26559} = (30, 28, 24, 1)$
773 : $P_{26583} = (22, 29, 24, 1)$
774 : $P_{26615} = (22, 30, 24, 1)$
775 : $P_{26629} = (4, 31, 24, 1)$
776 : $P_{26685} = (28, 0, 25, 1)$
777 : $P_{26719} = (30, 1, 25, 1)$
778 : $P_{26751} = (30, 2, 25, 1)$
779 : $P_{26757} = (4, 3, 25, 1)$
780 : $P_{26814} = (29, 4, 25, 1)$
781 : $P_{26838} = (21, 5, 25, 1)$
782 : $P_{26861} = (12, 6, 25, 1)$
783 : $P_{26892} = (11, 7, 25, 1)$
784 : $P_{26917} = (4, 8, 25, 1)$
785 : $P_{26974} = (29, 9, 25, 1)$
786 : $P_{27024} = (15, 11, 25, 1)$
787 : $P_{27051} = (10, 12, 25, 1)$
788 : $P_{27083} = (10, 13, 25, 1)$
789 : $P_{27110} = (5, 14, 25, 1)$
790 : $P_{27143} = (6, 15, 25, 1)$
791 : $P_{27189} = (20, 16, 25, 1)$
792 : $P_{27226} = (25, 17, 25, 1)$
793 : $P_{27253} = (20, 18, 25, 1)$
794 : $P_{27271} = (6, 19, 25, 1)$
795 : $P_{27325} = (28, 20, 25, 1)$
796 : $P_{27329} = (0, 21, 25, 1)$
797 : $P_{27370} = (9, 22, 25, 1)$
798 : $P_{27418} = (25, 23, 25, 1)$
799 : $P_{27440} = (15, 24, 25, 1)$
800 : $P_{27466} = (9, 25, 25, 1)$
801 : $P_{27508} = (19, 26, 25, 1)$

802 : $P_{27533} = (12, 27, 25, 1)$
803 : $P_{27558} = (5, 28, 25, 1)$
804 : $P_{27604} = (19, 29, 25, 1)$
805 : $P_{27638} = (21, 30, 25, 1)$
806 : $P_{27660} = (11, 31, 25, 1)$
807 : $P_{27692} = (11, 0, 26, 1)$
808 : $P_{27737} = (24, 1, 26, 1)$
809 : $P_{27751} = (6, 2, 26, 1)$
810 : $P_{27787} = (10, 3, 26, 1)$
811 : $P_{27831} = (22, 4, 26, 1)$
812 : $P_{27852} = (11, 5, 26, 1)$
813 : $P_{27885} = (12, 6, 26, 1)$
814 : $P_{27932} = (27, 7, 26, 1)$
815 : $P_{27950} = (13, 8, 26, 1)$
816 : $P_{27969} = (0, 9, 26, 1)$
817 : $P_{28015} = (14, 10, 26, 1)$
818 : $P_{28034} = (1, 11, 26, 1)$
819 : $P_{28085} = (20, 12, 26, 1)$
820 : $P_{28102} = (5, 13, 26, 1)$
821 : $P_{28151} = (22, 14, 26, 1)$
822 : $P_{28173} = (12, 15, 26, 1)$
823 : $P_{28198} = (5, 16, 26, 1)$
824 : $P_{28226} = (1, 17, 26, 1)$
825 : $P_{28271} = (14, 18, 26, 1)$
826 : $P_{28313} = (24, 19, 26, 1)$
827 : $P_{28327} = (6, 20, 26, 1)$
828 : $P_{28393} = (8, 22, 26, 1)$
829 : $P_{28437} = (20, 23, 26, 1)$
830 : $P_{28457} = (8, 24, 26, 1)$
831 : $P_{28498} = (17, 25, 26, 1)$
832 : $P_{28517} = (4, 26, 26, 1)$
833 : $P_{28558} = (13, 27, 26, 1)$
834 : $P_{28587} = (10, 28, 26, 1)$
835 : $P_{28613} = (4, 29, 26, 1)$
836 : $P_{28668} = (27, 30, 26, 1)$
837 : $P_{28690} = (17, 31, 26, 1)$
838 : $P_{28724} = (19, 0, 27, 1)$
839 : $P_{28761} = (24, 1, 27, 1)$
840 : $P_{28780} = (11, 2, 27, 1)$
841 : $P_{28819} = (18, 3, 27, 1)$
842 : $P_{28852} = (19, 4, 27, 1)$
843 : $P_{28885} = (20, 5, 27, 1)$
844 : $P_{28899} = (2, 6, 27, 1)$
845 : $P_{28957} = (28, 7, 27, 1)$
846 : $P_{28990} = (29, 8, 27, 1)$
847 : $P_{29006} = (13, 9, 27, 1)$
848 : $P_{29045} = (20, 10, 27, 1)$
849 : $P_{29081} = (24, 11, 27, 1)$
850 : $P_{29100} = (11, 12, 27, 1)$
851 : $P_{29127} = (6, 13, 27, 1)$
852 : $P_{29181} = (28, 14, 27, 1)$
853 : $P_{29186} = (1, 15, 27, 1)$
854 : $P_{29244} = (27, 16, 27, 1)$
855 : $P_{29252} = (3, 17, 27, 1)$
856 : $P_{29308} = (27, 18, 27, 1)$
857 : $P_{29320} = (7, 19, 27, 1)$
858 : $P_{29346} = (1, 20, 27, 1)$
859 : $P_{29379} = (2, 21, 27, 1)$
860 : $P_{29424} = (15, 22, 27, 1)$
861 : $P_{29454} = (13, 23, 27, 1)$
862 : $P_{29480} = (7, 24, 27, 1)$
863 : $P_{29508} = (3, 25, 27, 1)$
864 : $P_{29566} = (29, 26, 27, 1)$
865 : $P_{29584} = (15, 27, 27, 1)$
866 : $P_{29619} = (18, 28, 27, 1)$
867 : $P_{29639} = (6, 29, 27, 1)$
868 : $P_{29665} = (0, 30, 27, 1)$
869 : $P_{29742} = (13, 0, 28, 1)$
870 : $P_{29771} = (10, 1, 28, 1)$
871 : $P_{29820} = (27, 2, 28, 1)$
872 : $P_{29881} = (24, 4, 28, 1)$
873 : $P_{29903} = (14, 5, 28, 1)$
874 : $P_{29941} = (20, 6, 28, 1)$
875 : $P_{29963} = (10, 7, 28, 1)$
876 : $P_{29989} = (4, 8, 28, 1)$
877 : $P_{30018} = (1, 9, 28, 1)$
878 : $P_{30069} = (20, 10, 28, 1)$
879 : $P_{30108} = (27, 11, 28, 1)$
880 : $P_{30137} = (24, 12, 28, 1)$
881 : $P_{30153} = (8, 13, 28, 1)$
882 : $P_{30188} = (11, 14, 28, 1)$
883 : $P_{30231} = (22, 15, 28, 1)$
884 : $P_{30241} = (0, 16, 28, 1)$
885 : $P_{30279} = (6, 17, 28, 1)$
886 : $P_{30322} = (17, 18, 28, 1)$
887 : $P_{30343} = (6, 19, 28, 1)$
888 : $P_{30380} = (11, 20, 28, 1)$
889 : $P_{30402} = (1, 21, 28, 1)$
890 : $P_{30441} = (8, 22, 28, 1)$
891 : $P_{30469} = (4, 23, 28, 1)$
892 : $P_{30510} = (13, 24, 28, 1)$
893 : $P_{30534} = (5, 25, 28, 1)$
894 : $P_{30566} = (5, 26, 28, 1)$
895 : $P_{30605} = (12, 27, 28, 1)$
896 : $P_{30639} = (14, 28, 28, 1)$
897 : $P_{30674} = (17, 29, 28, 1)$
898 : $P_{30711} = (22, 30, 28, 1)$
899 : $P_{30733} = (12, 31, 28, 1)$
900 : $P_{30760} = (7, 0, 29, 1)$
901 : $P_{30795} = (10, 1, 29, 1)$
902 : $P_{30842} = (25, 2, 29, 1)$
903 : $P_{30878} = (29, 3, 29, 1)$
904 : $P_{30900} = (19, 4, 29, 1)$
905 : $P_{30932} = (19, 5, 29, 1)$
906 : $P_{30959} = (14, 6, 29, 1)$
907 : $P_{31003} = (26, 7, 29, 1)$
908 : $P_{31035} = (26, 8, 29, 1)$
909 : $P_{31063} = (22, 9, 29, 1)$

910 : $P_{31097} = (24, 10, 29, 1)$
911 : $P_{31123} = (18, 11, 29, 1)$
912 : $P_{31164} = (27, 12, 29, 1)$
913 : $P_{31179} = (10, 13, 29, 1)$
914 : $P_{31223} = (22, 14, 29, 1)$
915 : $P_{31258} = (25, 15, 29, 1)$
916 : $P_{31270} = (5, 16, 29, 1)$
917 : $P_{31311} = (14, 17, 29, 1)$
918 : $P_{31338} = (9, 18, 29, 1)$
919 : $P_{31424} = (31, 20, 29, 1)$
920 : $P_{31454} = (29, 21, 29, 1)$
921 : $P_{31462} = (5, 22, 29, 1)$
922 : $P_{31507} = (18, 23, 29, 1)$
923 : $P_{31521} = (0, 24, 29, 1)$
924 : $P_{31560} = (7, 25, 29, 1)$
925 : $P_{31609} = (24, 26, 29, 1)$
926 : $P_{31623} = (6, 27, 29, 1)$
927 : $P_{31658} = (9, 28, 29, 1)$
928 : $P_{31712} = (31, 29, 29, 1)$
929 : $P_{31740} = (27, 30, 29, 1)$
930 : $P_{31751} = (6, 31, 29, 1)$
931 : $P_{31794} = (17, 0, 30, 1)$
932 : $P_{31821} = (12, 1, 30, 1)$
933 : $P_{31843} = (2, 2, 30, 1)$
934 : $P_{31879} = (6, 3, 30, 1)$
935 : $P_{31913} = (8, 4, 30, 1)$
936 : $P_{31937} = (0, 5, 30, 1)$
937 : $P_{31997} = (28, 6, 30, 1)$
938 : $P_{32016} = (15, 7, 30, 1)$
939 : $P_{32050} = (17, 8, 30, 1)$
940 : $P_{32069} = (4, 9, 30, 1)$
941 : $P_{32106} = (9, 10, 30, 1)$
942 : $P_{32156} = (27, 11, 30, 1)$
943 : $P_{32189} = (28, 12, 30, 1)$
944 : $P_{32199} = (6, 13, 30, 1)$
945 : $P_{32249} = (24, 14, 30, 1)$
946 : $P_{32265} = (8, 15, 30, 1)$
947 : $P_{32292} = (3, 16, 30, 1)$
948 : $P_{32348} = (27, 17, 30, 1)$
949 : $P_{32379} = (26, 18, 30, 1)$
950 : $P_{32409} = (24, 19, 30, 1)$
951 : $P_{32480} = (31, 21, 30, 1)$
952 : $P_{32507} = (26, 22, 30, 1)$
953 : $P_{32516} = (3, 23, 30, 1)$
954 : $P_{32576} = (31, 24, 30, 1)$
955 : $P_{32602} = (25, 25, 30, 1)$
956 : $P_{32634} = (25, 26, 30, 1)$
957 : $P_{32643} = (2, 27, 30, 1)$
958 : $P_{32688} = (15, 28, 30, 1)$
959 : $P_{32717} = (12, 29, 30, 1)$
960 : $P_{32741} = (4, 30, 30, 1)$
961 : $P_{32778} = (9, 31, 30, 1)$
962 : $P_{32830} = (29, 0, 31, 1)$
963 : $P_{32845} = (12, 1, 31, 1)$
964 : $P_{32892} = (27, 2, 31, 1)$
965 : $P_{32924} = (27, 3, 31, 1)$
966 : $P_{32955} = (26, 4, 31, 1)$
967 : $P_{32975} = (14, 5, 31, 1)$
968 : $P_{32994} = (1, 6, 31, 1)$
969 : $P_{33035} = (10, 7, 31, 1)$
970 : $P_{33082} = (25, 8, 31, 1)$
971 : $P_{33118} = (29, 9, 31, 1)$
972 : $P_{33136} = (15, 10, 31, 1)$
973 : $P_{33160} = (7, 11, 31, 1)$
974 : $P_{33187} = (2, 12, 31, 1)$
975 : $P_{33237} = (20, 13, 31, 1)$
976 : $P_{33263} = (14, 14, 31, 1)$
977 : $P_{33298} = (17, 15, 31, 1)$
978 : $P_{33343} = (30, 16, 31, 1)$
979 : $P_{33357} = (12, 17, 31, 1)$
980 : $P_{33402} = (25, 18, 31, 1)$
981 : $P_{33425} = (16, 19, 31, 1)$
982 : $P_{33441} = (0, 20, 31, 1)$
983 : $P_{33489} = (16, 21, 31, 1)$
984 : $P_{33522} = (17, 22, 31, 1)$
985 : $P_{33539} = (2, 23, 31, 1)$
986 : $P_{33589} = (20, 24, 31, 1)$
987 : $P_{33602} = (1, 25, 31, 1)$
988 : $P_{33659} = (26, 26, 31, 1)$
989 : $P_{33704} = (7, 28, 31, 1)$
990 : $P_{33759} = (30, 29, 31, 1)$
991 : $P_{33776} = (15, 30, 31, 1)$
992 : $P_{33803} = (10, 31, 31, 1)$

Line Intersection Graph

	0 1 2
0	0 1 1
1	1 0 1
2	1 1 0

Neighbor sets in the line intersection graph:
Line 0 intersects

Line	ℓ_1	ℓ_2
in point	P_0	P_5

Line 1 intersects

Line	ℓ_0	ℓ_2
in point	P_0	P_{2114}

Line 2 intersects

Line	ℓ_0	ℓ_1
in point	P_5	P_{2114}

The surface has 1089 points:
Too many to print.