Rank-65550 over GF(32)

January 15, 2021

The equation

The equation of the surface is :

$$X_0^3 + X_1^3 + X_3^3 + X_0X_1X_2 = 0$$

(1, 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(32) is 1108411462

General information

Number of lines	3
Number of points	1057
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	961
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^{961}

Singular Points

The surface has 1 singular points:

$0: \ P_2 = \mathbf{P}(0,0,1,0) = \mathbf{P}(0,0,1,0)$

The 3 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{34848} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{34848} = \mathbf{Pl}(0,1,1,0,0,0)_{34}$$

$$\ell_1 = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082401} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082401} = \mathbf{Pl}(0,1,0,0,0,1)_{34881}$$

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

Rank of lines: (34848, 1082401, 34914)
Rank of points on Klein quadric: (34, 34881, 70563)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

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

$P_2 = (0,0,1,0) = \ell_0 \cap \ell_1$
$P_{2083} = (1,0,1,1) = \ell_0 \cap \ell_2$
$P_{2114} = (0,1,1,1) = \ell_1 \cap \ell_2$

Single Points

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

0 : $P_5 = (1,1,0,0)$ lies on line ℓ_2
1 : $P_{1059} = (1,0,0,1)$ lies on line ℓ_0
2 : $P_{1090} = (0,1,0,1)$ lies on line ℓ_1
3 : $P_{2148} = (3,2,1,1)$ lies on line ℓ_2
4 : $P_{2179} = (2,3,1,1)$ lies on line ℓ_2
5 : $P_{2214} = (5,4,1,1)$ lies on line ℓ_2
6 : $P_{2245} = (4,5,1,1)$ lies on line ℓ_2
7 : $P_{2280} = (7,6,1,1)$ lies on line ℓ_2
8 : $P_{2311} = (6,7,1,1)$ lies on line ℓ_2
9 : $P_{2346} = (9,8,1,1)$ lies on line ℓ_2
10 : $P_{2377} = (8,9,1,1)$ lies on line ℓ_2
11 : $P_{2412} = (11,10,1,1)$ lies on line ℓ_2
12 : $P_{2443} = (10,11,1,1)$ lies on line ℓ_2
13 : $P_{2478} = (13,12,1,1)$ lies on line ℓ_2
14 : $P_{2509} = (12,13,1,1)$ lies on line ℓ_2
15 : $P_{2544} = (15,14,1,1)$ lies on line ℓ_2
16 : $P_{2575} = (14,15,1,1)$ lies on line ℓ_2
17 : $P_{2610} = (17,16,1,1)$ lies on line ℓ_2
18 : $P_{2641} = (16,17,1,1)$ lies on line ℓ_2
19 : $P_{2676} = (19,18,1,1)$ lies on line ℓ_2
20 : $P_{2707} = (18,19,1,1)$ lies on line ℓ_2
21 : $P_{2742} = (21,20,1,1)$ lies on line ℓ_2
22 : $P_{2773} = (20,21,1,1)$ lies on line ℓ_2
23 : $P_{2808} = (23,22,1,1)$ lies on line ℓ_2
24 : $P_{2839} = (22,23,1,1)$ lies on line ℓ_2
25 : $P_{2874} = (25,24,1,1)$ lies on line ℓ_2
26 : $P_{2905} = (24,25,1,1)$ lies on line ℓ_2
27 : $P_{2940} = (27,26,1,1)$ lies on line ℓ_2
28 : $P_{2971} = (26,27,1,1)$ lies on line ℓ_2
29 : $P_{3006} = (29,28,1,1)$ lies on line ℓ_2
30 : $P_{3037} = (28,29,1,1)$ lies on line ℓ_2
31 : $P_{3072} = (31,30,1,1)$ lies on line ℓ_2
32 : $P_{3103} = (30,31,1,1)$ lies on line ℓ_2
33 : $P_{3106} = (1,0,2,1)$ lies on line ℓ_0
34 : $P_{3137} = (0,1,2,1)$ lies on line ℓ_1
35 : $P_{4130} = (1,0,3,1)$ lies on line ℓ_0
36 : $P_{4161} = (0,1,3,1)$ lies on line ℓ_1
37 : $P_{5154} = (1,0,4,1)$ lies on line ℓ_0
38 : $P_{5185} = (0,1,4,1)$ lies on line ℓ_1
39 : $P_{6178} = (1,0,5,1)$ lies on line ℓ_0
40 : $P_{6209} = (0,1,5,1)$ lies on line ℓ_1
41 : $P_{7202} = (1,0,6,1)$ lies on line ℓ_0
42 : $P_{7233} = (0,1,6,1)$ lies on line ℓ_1
43 : $P_{8226} = (1,0,7,1)$ lies on line ℓ_0
44 : $P_{8257} = (0,1,7,1)$ lies on line ℓ_1
45 : $P_{9250} = (1,0,8,1)$ lies on line ℓ_0
46 : $P_{9281} = (0,1,8,1)$ lies on line ℓ_1
47 : $P_{10274} = (1,0,9,1)$ lies on line ℓ_0
48 : $P_{10305} = (0,1,9,1)$ lies on line ℓ_1
49 : $P_{11298} = (1,0,10,1)$ lies on line ℓ_0
50 : $P_{11329} = (0,1,10,1)$ lies on line ℓ_1
51 : $P_{12322} = (1,0,11,1)$ lies on line ℓ_0
52 : $P_{12353} = (0,1,11,1)$ lies on line ℓ_1
53 : $P_{13346} = (1,0,12,1)$ lies on line ℓ_0
54 : $P_{13377} = (0,1,12,1)$ lies on line ℓ_1
55 : $P_{14370} = (1,0,13,1)$ lies on line ℓ_0

56 : $P_{14401} = (0, 1, 13, 1)$ lies on line ℓ_1
57 : $P_{15394} = (1, 0, 14, 1)$ lies on line ℓ_0
58 : $P_{15425} = (0, 1, 14, 1)$ lies on line ℓ_1
59 : $P_{16418} = (1, 0, 15, 1)$ lies on line ℓ_0
60 : $P_{16449} = (0, 1, 15, 1)$ lies on line ℓ_1
61 : $P_{17442} = (1, 0, 16, 1)$ lies on line ℓ_0
62 : $P_{17473} = (0, 1, 16, 1)$ lies on line ℓ_1
63 : $P_{18466} = (1, 0, 17, 1)$ lies on line ℓ_0
64 : $P_{18497} = (0, 1, 17, 1)$ lies on line ℓ_1
65 : $P_{19490} = (1, 0, 18, 1)$ lies on line ℓ_0
66 : $P_{19521} = (0, 1, 18, 1)$ lies on line ℓ_1
67 : $P_{20514} = (1, 0, 19, 1)$ lies on line ℓ_0
68 : $P_{20545} = (0, 1, 19, 1)$ lies on line ℓ_1
69 : $P_{21538} = (1, 0, 20, 1)$ lies on line ℓ_0
70 : $P_{21569} = (0, 1, 20, 1)$ lies on line ℓ_1
71 : $P_{22562} = (1, 0, 21, 1)$ lies on line ℓ_0
72 : $P_{22593} = (0, 1, 21, 1)$ lies on line ℓ_1
73 : $P_{23586} = (1, 0, 22, 1)$ lies on line ℓ_0
74 : $P_{23617} = (0, 1, 22, 1)$ lies on line ℓ_1
75 : $P_{24610} = (1, 0, 23, 1)$ lies on line ℓ_0
76 : $P_{24641} = (0, 1, 23, 1)$ lies on line ℓ_1
77 : $P_{25634} = (1, 0, 24, 1)$ lies on line ℓ_0
78 : $P_{25665} = (0, 1, 24, 1)$ lies on line ℓ_1
79 : $P_{26658} = (1, 0, 25, 1)$ lies on line ℓ_0
80 : $P_{26689} = (0, 1, 25, 1)$ lies on line ℓ_1
81 : $P_{27682} = (1, 0, 26, 1)$ lies on line ℓ_0
82 : $P_{27713} = (0, 1, 26, 1)$ lies on line ℓ_1
83 : $P_{28706} = (1, 0, 27, 1)$ lies on line ℓ_0
84 : $P_{28737} = (0, 1, 27, 1)$ lies on line ℓ_1
85 : $P_{29730} = (1, 0, 28, 1)$ lies on line ℓ_0
86 : $P_{29761} = (0, 1, 28, 1)$ lies on line ℓ_1
87 : $P_{30754} = (1, 0, 29, 1)$ lies on line ℓ_0
88 : $P_{30785} = (0, 1, 29, 1)$ lies on line ℓ_1
89 : $P_{31778} = (1, 0, 30, 1)$ lies on line ℓ_0
90 : $P_{31809} = (0, 1, 30, 1)$ lies on line ℓ_1
91 : $P_{32802} = (1, 0, 31, 1)$ lies on line ℓ_0
92 : $P_{32833} = (0, 1, 31, 1)$ lies on line ℓ_1

The single points on the surface are:

Points on surface but on no line

The surface has 961 points not on any line:
The points on the surface but not on lines are:

0 : $P_4 = (1, 1, 1, 1)$
1 : $P_{129} = (30, 2, 1, 0)$
2 : $P_{155} = (24, 3, 1, 0)$
3 : $P_{182} = (19, 4, 1, 0)$
4 : $P_{202} = (7, 5, 1, 0)$
5 : $P_{264} = (5, 7, 1, 0)$
6 : $P_{305} = (14, 8, 1, 0)$
7 : $P_{307} = (16, 8, 1, 0)$
8 : $P_{321} = (30, 8, 1, 0)$
9 : $P_{368} = (13, 10, 1, 0)$
10 : $P_{374} = (19, 10, 1, 0)$
11 : $P_{385} = (30, 10, 1, 0)$
12 : $P_{447} = (28, 12, 1, 0)$
13 : $P_{461} = (10, 13, 1, 0)$
14 : $P_{491} = (8, 14, 1, 0)$
15 : $P_{502} = (19, 14, 1, 0)$
16 : $P_{510} = (27, 14, 1, 0)$
17 : $P_{555} = (8, 16, 1, 0)$
18 : $P_{600} = (21, 17, 1, 0)$
19 : $P_{647} = (4, 19, 1, 0)$
20 : $P_{653} = (10, 19, 1, 0)$
21 : $P_{657} = (14, 19, 1, 0)$
22 : $P_{724} = (17, 21, 1, 0)$
23 : $P_{797} = (26, 23, 1, 0)$
24 : $P_{806} = (3, 24, 1, 0)$
25 : $P_{890} = (23, 26, 1, 0)$
26 : $P_{913} = (14, 27, 1, 0)$
27 : $P_{943} = (12, 28, 1, 0)$
28 : $P_{997} = (2, 30, 1, 0)$
29 : $P_{1003} = (8, 30, 1, 0)$
30 : $P_{1005} = (10, 30, 1, 0)$
31 : $P_{1134} = (12, 2, 0, 1)$
32 : $P_{1170} = (16, 3, 0, 1)$
33 : $P_{1212} = (26, 4, 0, 1)$
34 : $P_{1231} = (13, 5, 0, 1)$
35 : $P_{1268} = (18, 6, 0, 1)$
36 : $P_{1296} = (14, 7, 0, 1)$
37 : $P_{1337} = (23, 8, 0, 1)$
38 : $P_{1366} = (20, 9, 0, 1)$
39 : $P_{1402} = (24, 10, 0, 1)$
40 : $P_{1439} = (29, 11, 0, 1)$
41 : $P_{1444} = (2, 12, 0, 1)$
42 : $P_{1479} = (5, 13, 0, 1)$
43 : $P_{1513} = (7, 14, 0, 1)$
44 : $P_{1560} = (22, 15, 0, 1)$
45 : $P_{1573} = (3, 16, 0, 1)$
46 : $P_{1629} = (27, 17, 0, 1)$
47 : $P_{1640} = (6, 18, 0, 1)$
48 : $P_{1694} = (28, 19, 0, 1)$
49 : $P_{1707} = (9, 20, 0, 1)$

$50: P_{1760} = (30, 21, 0, 1)$
$51: P_{1777} = (15, 22, 0, 1)$
$52: P_{1802} = (8, 23, 0, 1)$
$53: P_{1836} = (10, 24, 0, 1)$
$54: P_{1889} = (31, 25, 0, 1)$
$55: P_{1894} = (4, 26, 0, 1)$
$56: P_{1939} = (17, 27, 0, 1)$
$57: P_{1973} = (19, 28, 0, 1)$
$58: P_{1997} = (11, 29, 0, 1)$
$59: P_{2039} = (21, 30, 0, 1)$
$60: P_{2075} = (25, 31, 0, 1)$
$61: P_{3164} = (27, 1, 2, 1)$
$62: P_{3223} = (22, 3, 2, 1)$
$63: P_{3277} = (12, 5, 2, 1)$
$64: P_{3324} = (27, 6, 2, 1)$
$65: P_{3337} = (8, 7, 2, 1)$
$66: P_{3348} = (19, 7, 2, 1)$
$67: P_{3356} = (27, 7, 2, 1)$
$68: P_{3368} = (7, 8, 2, 1)$
$69: P_{3385} = (24, 8, 2, 1)$
$70: P_{3392} = (31, 8, 2, 1)$
$71: P_{3437} = (12, 10, 2, 1)$
$72: P_{3494} = (5, 12, 2, 1)$
$73: P_{3499} = (10, 12, 2, 1)$
$74: P_{3504} = (15, 12, 2, 1)$
$75: P_{3543} = (22, 13, 2, 1)$
$76: P_{3575} = (22, 14, 2, 1)$
$77: P_{3597} = (12, 15, 2, 1)$
$78: P_{3677} = (28, 17, 2, 1)$
$79: P_{3720} = (7, 19, 2, 1)$
$80: P_{3812} = (3, 22, 2, 1)$
$81: P_{3822} = (13, 22, 2, 1)$
$82: P_{3823} = (14, 22, 2, 1)$
$83: P_{3872} = (31, 23, 2, 1)$
$84: P_{3881} = (8, 24, 2, 1)$
$85: P_{3934} = (29, 25, 2, 1)$
$86: P_{3970} = (1, 27, 2, 1)$
$87: P_{3975} = (6, 27, 2, 1)$
$88: P_{3976} = (7, 27, 2, 1)$
$89: P_{4018} = (17, 28, 2, 1)$
$90: P_{4058} = (25, 29, 2, 1)$
$91: P_{4105} = (8, 31, 2, 1)$
$92: P_{4120} = (23, 31, 2, 1)$
$93: P_{4128} = (31, 31, 2, 1)$
$94: P_{4187} = (26, 1, 3, 1)$
$95: P_{4212} = (19, 2, 3, 1)$
$96: P_{4230} = (5, 3, 3, 1)$
$97: P_{4250} = (25, 3, 3, 1)$
$98: P_{4253} = (28, 3, 3, 1)$
$99: P_{4292} = (3, 5, 3, 1)$
$100: P_{4313} = (24, 5, 3, 1)$
$101: P_{4316} = (27, 5, 3, 1)$
$102: P_{4376} = (23, 7, 3, 1)$
$103: P_{4479} = (30, 10, 3, 1)$
$104: P_{4544} = (31, 12, 3, 1)$
$105: P_{4704} = (31, 17, 3, 1)$
$106: P_{4732} = (27, 18, 3, 1)$
$107: P_{4739} = (2, 19, 3, 1)$
$108: P_{4797} = (28, 20, 3, 1)$
$109: P_{4822} = (21, 21, 3, 1)$
$110: P_{4872} = (7, 23, 3, 1)$
$111: P_{4892} = (27, 23, 3, 1)$
$112: P_{4893} = (28, 23, 3, 1)$
$113: P_{4902} = (5, 24, 3, 1)$
$114: P_{4932} = (3, 25, 3, 1)$
$115: P_{4962} = (1, 26, 3, 1)$
$116: P_{4998} = (5, 27, 3, 1)$
$117: P_{5011} = (18, 27, 3, 1)$
$118: P_{5016} = (23, 27, 3, 1)$
$119: P_{5028} = (3, 28, 3, 1)$
$120: P_{5045} = (20, 28, 3, 1)$
$121: P_{5048} = (23, 28, 3, 1)$
$122: P_{5088} = (31, 29, 3, 1)$
$123: P_{5099} = (10, 30, 3, 1)$
$124: P_{5133} = (12, 31, 3, 1)$
$125: P_{5138} = (17, 31, 3, 1)$
$126: P_{5150} = (29, 31, 3, 1)$
$127: P_{5187} = (2, 1, 4, 1)$
$128: P_{5218} = (1, 2, 4, 1)$
$129: P_{5237} = (20, 2, 4, 1)$
$130: P_{5238} = (21, 2, 4, 1)$
$131: P_{5338} = (25, 5, 4, 1)$
$132: P_{5367} = (22, 6, 4, 1)$
$133: P_{5387} = (10, 7, 4, 1)$
$134: P_{5430} = (21, 8, 4, 1)$
$135: P_{5480} = (7, 10, 4, 1)$
$136: P_{5491} = (18, 10, 4, 1)$
$137: P_{5494} = (21, 10, 4, 1)$
$138: P_{5560} = (23, 12, 4, 1)$
$139: P_{5627} = (26, 14, 4, 1)$
$140: P_{5723} = (26, 17, 4, 1)$
$141: P_{5739} = (10, 18, 4, 1)$
$142: P_{5747} = (18, 18, 4, 1)$
$143: P_{5753} = (24, 18, 4, 1)$
$144: P_{5795} = (2, 20, 4, 1)$
$145: P_{5827} = (2, 21, 4, 1)$
$146: P_{5833} = (8, 21, 4, 1)$
$147: P_{5835} = (10, 21, 4, 1)$
$148: P_{5863} = (6, 22, 4, 1)$
$149: P_{5901} = (12, 23, 4, 1)$
$150: P_{5939} = (18, 24, 4, 1)$
$151: P_{5958} = (5, 25, 4, 1)$
$152: P_{5980} = (27, 25, 4, 1)$
$153: P_{5983} = (30, 25, 4, 1)$
$154: P_{5999} = (14, 26, 4, 1)$
$155: P_{6002} = (17, 26, 4, 1)$
$156: P_{6016} = (31, 26, 4, 1)$
$157: P_{6042} = (25, 27, 4, 1)$

158 : $P_{6138} = (25, 30, 4, 1)$
159 : $P_{6171} = (26, 31, 4, 1)$
160 : $P_{6212} = (3, 1, 5, 1)$
161 : $P_{6250} = (9, 2, 5, 1)$
162 : $P_{6258} = (17, 2, 5, 1)$
163 : $P_{6265} = (24, 2, 5, 1)$
164 : $P_{6274} = (1, 3, 5, 1)$
165 : $P_{6313} = (8, 4, 5, 1)$
166 : $P_{6343} = (6, 5, 5, 1)$
167 : $P_{6354} = (17, 5, 5, 1)$
168 : $P_{6360} = (23, 5, 5, 1)$
169 : $P_{6374} = (5, 6, 5, 1)$
170 : $P_{6418} = (17, 7, 5, 1)$
171 : $P_{6437} = (4, 8, 5, 1)$
172 : $P_{6467} = (2, 9, 5, 1)$
173 : $P_{6579} = (18, 12, 5, 1)$
174 : $P_{6644} = (19, 14, 5, 1)$
175 : $P_{6723} = (2, 17, 5, 1)$
176 : $P_{6726} = (5, 17, 5, 1)$
177 : $P_{6728} = (7, 17, 5, 1)$
178 : $P_{6765} = (12, 18, 5, 1)$
179 : $P_{6775} = (22, 18, 5, 1)$
180 : $P_{6779} = (26, 18, 5, 1)$
181 : $P_{6799} = (14, 19, 5, 1)$
182 : $P_{6873} = (24, 21, 5, 1)$
183 : $P_{6899} = (18, 22, 5, 1)$
184 : $P_{6918} = (5, 23, 5, 1)$
185 : $P_{6937} = (24, 23, 5, 1)$
186 : $P_{6942} = (29, 23, 5, 1)$
187 : $P_{6947} = (2, 24, 5, 1)$
188 : $P_{6966} = (21, 24, 5, 1)$
189 : $P_{6968} = (23, 24, 5, 1)$
190 : $P_{7027} = (18, 26, 5, 1)$
191 : $P_{7101} = (28, 28, 5, 1)$
192 : $P_{7128} = (23, 29, 5, 1)$
193 : $P_{7258} = (25, 1, 6, 1)$
194 : $P_{7293} = (28, 2, 6, 1)$
195 : $P_{7303} = (6, 3, 6, 1)$
196 : $P_{7396} = (3, 6, 6, 1)$
197 : $P_{7531} = (10, 10, 6, 1)$
198 : $P_{7538} = (17, 10, 6, 1)$
199 : $P_{7548} = (27, 10, 6, 1)$
200 : $P_{7577} = (24, 11, 6, 1)$
201 : $P_{7667} = (18, 14, 6, 1)$
202 : $P_{7738} = (25, 16, 6, 1)$
203 : $P_{7755} = (10, 17, 6, 1)$
204 : $P_{7764} = (19, 17, 6, 1)$
205 : $P_{7770} = (25, 17, 6, 1)$
206 : $P_{7791} = (14, 18, 6, 1)$
207 : $P_{7826} = (17, 19, 6, 1)$
208 : $P_{7865} = (24, 20, 6, 1)$
209 : $P_{7980} = (11, 24, 6, 1)$
210 : $P_{7989} = (20, 24, 6, 1)$
211 : $P_{8000} = (31, 24, 6, 1)$
212 : $P_{8002} = (1, 25, 6, 1)$
213 : $P_{8017} = (16, 25, 6, 1)$
214 : $P_{8018} = (17, 25, 6, 1)$
215 : $P_{8075} = (10, 27, 6, 1)$
216 : $P_{8099} = (2, 28, 6, 1)$
217 : $P_{8159} = (30, 29, 6, 1)$
218 : $P_{8190} = (29, 30, 6, 1)$
219 : $P_{8217} = (24, 31, 6, 1)$
220 : $P_{8281} = (24, 1, 7, 1)$
221 : $P_{8348} = (27, 3, 7, 1)$
222 : $P_{8384} = (31, 4, 7, 1)$
223 : $P_{8460} = (11, 7, 7, 1)$
224 : $P_{8541} = (28, 9, 7, 1)$
225 : $P_{8584} = (7, 11, 7, 1)$
226 : $P_{8636} = (27, 12, 7, 1)$
227 : $P_{8671} = (30, 13, 7, 1)$
228 : $P_{8732} = (27, 15, 7, 1)$
229 : $P_{8768} = (31, 16, 7, 1)$
230 : $P_{8786} = (17, 17, 7, 1)$
231 : $P_{8896} = (31, 20, 7, 1)$
232 : $P_{8994} = (1, 24, 7, 1)$
233 : $P_{9092} = (3, 27, 7, 1)$
234 : $P_{9101} = (12, 27, 7, 1)$
235 : $P_{9104} = (15, 27, 7, 1)$
236 : $P_{9130} = (9, 28, 7, 1)$
237 : $P_{9198} = (13, 30, 7, 1)$
238 : $P_{9221} = (4, 31, 7, 1)$
239 : $P_{9233} = (16, 31, 7, 1)$
240 : $P_{9237} = (20, 31, 7, 1)$
241 : $P_{9300} = (19, 1, 8, 1)$
242 : $P_{9336} = (23, 2, 8, 1)$
243 : $P_{9365} = (20, 3, 8, 1)$
244 : $P_{9404} = (27, 4, 8, 1)$
245 : $P_{9419} = (10, 5, 8, 1)$
246 : $P_{9503} = (30, 7, 8, 1)$
247 : $P_{9566} = (29, 9, 8, 1)$
248 : $P_{9574} = (5, 10, 8, 1)$
249 : $P_{9661} = (28, 12, 8, 1)$
250 : $P_{9850} = (25, 18, 8, 1)$
251 : $P_{9858} = (1, 19, 8, 1)$
252 : $P_{9887} = (30, 19, 8, 1)$
253 : $P_{9888} = (31, 19, 8, 1)$
254 : $P_{9892} = (3, 20, 8, 1)$
255 : $P_{9918} = (29, 20, 8, 1)$
256 : $P_{9919} = (30, 20, 8, 1)$
257 : $P_{9987} = (2, 23, 8, 1)$
258 : $P_{10067} = (18, 25, 8, 1)$
259 : $P_{10117} = (4, 27, 8, 1)$
260 : $P_{10157} = (12, 28, 8, 1)$
261 : $P_{10186} = (9, 29, 8, 1)$
262 : $P_{10197} = (20, 29, 8, 1)$
263 : $P_{10206} = (29, 29, 8, 1)$
264 : $P_{10216} = (7, 30, 8, 1)$
265 : $P_{10228} = (19, 30, 8, 1)$

$266: P_{10229} = (20, 30, 8, 1)$
$267: P_{10260} = (19, 31, 8, 1)$
$268: P_{10323} = (18, 1, 9, 1)$
$269: P_{10339} = (2, 2, 9, 1)$
$270: P_{10415} = (14, 4, 9, 1)$
$271: P_{10464} = (31, 5, 9, 1)$
$272: P_{10473} = (8, 6, 9, 1)$
$273: P_{10481} = (16, 6, 9, 1)$
$274: P_{10489} = (24, 6, 9, 1)$
$275: P_{10535} = (6, 8, 9, 1)$
$276: P_{10578} = (17, 9, 9, 1)$
$277: P_{10640} = (15, 11, 9, 1)$
$278: P_{10641} = (16, 11, 9, 1)$
$279: P_{10656} = (31, 11, 9, 1)$
$280: P_{10705} = (16, 13, 9, 1)$
$281: P_{10725} = (4, 14, 9, 1)$
$282: P_{10748} = (27, 14, 9, 1)$
$283: P_{10752} = (31, 14, 9, 1)$
$284: P_{10764} = (11, 15, 9, 1)$
$285: P_{10791} = (6, 16, 9, 1)$
$286: P_{10796} = (11, 16, 9, 1)$
$287: P_{10798} = (13, 16, 9, 1)$
$288: P_{10826} = (9, 17, 9, 1)$
$289: P_{10840} = (23, 17, 9, 1)$
$290: P_{10847} = (30, 17, 9, 1)$
$291: P_{10850} = (1, 18, 9, 1)$
$292: P_{10901} = (20, 19, 9, 1)$
$293: P_{10932} = (19, 20, 9, 1)$
$294: P_{11004} = (27, 22, 9, 1)$
$295: P_{11026} = (17, 23, 9, 1)$
$296: P_{11047} = (6, 24, 9, 1)$
$297: P_{11068} = (27, 24, 9, 1)$
$298: P_{11070} = (29, 24, 9, 1)$
$299: P_{11151} = (14, 27, 9, 1)$
$300: P_{11159} = (22, 27, 9, 1)$
$301: P_{11161} = (24, 27, 9, 1)$
$302: P_{11225} = (24, 29, 9, 1)$
$303: P_{11250} = (17, 30, 9, 1)$
$304: P_{11270} = (5, 31, 9, 1)$
$305: P_{11276} = (11, 31, 9, 1)$
$306: P_{11279} = (14, 31, 9, 1)$
$307: P_{11337} = (8, 1, 10, 1)$
$308: P_{11377} = (16, 2, 10, 1)$
$309: P_{11449} = (24, 4, 10, 1)$
$310: P_{11486} = (29, 5, 10, 1)$
$311: P_{11498} = (9, 6, 10, 1)$
$312: P_{11554} = (1, 8, 10, 1)$
$313: P_{11571} = (18, 8, 10, 1)$
$314: P_{11572} = (19, 8, 10, 1)$
$315: P_{11591} = (6, 9, 10, 1)$
$316: P_{11671} = (22, 11, 10, 1)$
$317: P_{11762} = (17, 14, 10, 1)$
$318: P_{11811} = (2, 16, 10, 1)$
$319: P_{11855} = (14, 17, 10, 1)$
$320: P_{11881} = (8, 18, 10, 1)$
$321: P_{11913} = (8, 19, 10, 1)$
$322: P_{11926} = (21, 19, 10, 1)$
$323: P_{11934} = (29, 19, 10, 1)$
$324: P_{11988} = (19, 21, 10, 1)$
$325: P_{12012} = (11, 22, 10, 1)$
$326: P_{12023} = (22, 22, 10, 1)$
$327: P_{12030} = (29, 22, 10, 1)$
$328: P_{12059} = (26, 23, 10, 1)$
$329: P_{12069} = (4, 24, 10, 1)$
$330: P_{12152} = (23, 26, 10, 1)$
$331: P_{12230} = (5, 29, 10, 1)$
$332: P_{12244} = (19, 29, 10, 1)$
$333: P_{12247} = (22, 29, 10, 1)$
$334: P_{12362} = (9, 1, 11, 1)$
$335: P_{12392} = (7, 2, 11, 1)$
$336: P_{12410} = (25, 2, 11, 1)$
$337: P_{12415} = (30, 2, 11, 1)$
$338: P_{12453} = (4, 4, 11, 1)$
$339: P_{12547} = (2, 7, 11, 1)$
$340: P_{12565} = (20, 7, 11, 1)$
$341: P_{12567} = (22, 7, 11, 1)$
$342: P_{12606} = (29, 8, 11, 1)$
$343: P_{12610} = (1, 9, 11, 1)$
$344: P_{12661} = (20, 10, 11, 1)$
$345: P_{12685} = (12, 11, 11, 1)$
$346: P_{12716} = (11, 12, 11, 1)$
$347: P_{12724} = (19, 12, 11, 1)$
$348: P_{12729} = (24, 12, 11, 1)$
$349: P_{12752} = (15, 13, 11, 1)$
$350: P_{12757} = (20, 13, 11, 1)$
$351: P_{12764} = (27, 13, 11, 1)$
$352: P_{12814} = (13, 15, 11, 1)$
$353: P_{12819} = (18, 15, 11, 1)$
$354: P_{12832} = (31, 15, 11, 1)$
$355: P_{12863} = (30, 16, 11, 1)$
$356: P_{12883} = (18, 17, 11, 1)$
$357: P_{12912} = (15, 18, 11, 1)$
$358: P_{12914} = (17, 18, 11, 1)$
$359: P_{12927} = (30, 18, 11, 1)$
$360: P_{12941} = (12, 19, 11, 1)$
$361: P_{12968} = (7, 20, 11, 1)$
$362: P_{12971} = (10, 20, 11, 1)$
$363: P_{12974} = (13, 20, 11, 1)$
$364: P_{13032} = (7, 22, 11, 1)$
$365: P_{13101} = (12, 24, 11, 1)$
$366: P_{13123} = (2, 25, 11, 1)$
$367: P_{13198} = (13, 27, 11, 1)$
$368: P_{13257} = (8, 29, 11, 1)$
$369: P_{13283} = (2, 30, 11, 1)$
$370: P_{13297} = (16, 30, 11, 1)$
$371: P_{13299} = (18, 30, 11, 1)$
$372: P_{13328} = (15, 31, 11, 1)$
$373: P_{13394} = (17, 1, 12, 1)$

374 : $P_{13452} = (11, 3, 12, 1)$
375 : $P_{13516} = (11, 5, 12, 1)$
376 : $P_{13548} = (11, 6, 12, 1)$
377 : $P_{13581} = (12, 7, 12, 1)$
378 : $P_{13590} = (21, 7, 12, 1)$
379 : $P_{13594} = (25, 7, 12, 1)$
380 : $P_{13684} = (19, 10, 12, 1)$
381 : $P_{13700} = (3, 11, 12, 1)$
382 : $P_{13702} = (5, 11, 12, 1)$
383 : $P_{13703} = (6, 11, 12, 1)$
384 : $P_{13736} = (7, 12, 12, 1)$
385 : $P_{13755} = (26, 12, 12, 1)$
386 : $P_{13758} = (29, 12, 12, 1)$
387 : $P_{13775} = (14, 13, 12, 1)$
388 : $P_{13806} = (13, 14, 12, 1)$
389 : $P_{13841} = (16, 15, 12, 1)$
390 : $P_{13872} = (15, 16, 12, 1)$
391 : $P_{13878} = (21, 16, 12, 1)$
392 : $P_{13883} = (26, 16, 12, 1)$
393 : $P_{13890} = (1, 17, 12, 1)$
394 : $P_{13963} = (10, 19, 12, 1)$
395 : $P_{14024} = (7, 21, 12, 1)$
396 : $P_{14033} = (16, 21, 12, 1)$
397 : $P_{14040} = (23, 21, 12, 1)$
398 : $P_{14102} = (21, 23, 12, 1)$
399 : $P_{14137} = (24, 24, 12, 1)$
400 : $P_{14152} = (7, 25, 12, 1)$
401 : $P_{14189} = (12, 26, 12, 1)$
402 : $P_{14193} = (16, 26, 12, 1)$
403 : $P_{14205} = (28, 26, 12, 1)$
404 : $P_{14267} = (26, 28, 12, 1)$
405 : $P_{14285} = (12, 29, 12, 1)$
406 : $P_{14417} = (16, 1, 13, 1)$
407 : $P_{14472} = (7, 3, 13, 1)$
408 : $P_{14517} = (20, 4, 13, 1)$
409 : $P_{14538} = (9, 5, 13, 1)$
410 : $P_{14548} = (19, 5, 13, 1)$
411 : $P_{14555} = (26, 5, 13, 1)$
412 : $P_{14590} = (29, 6, 13, 1)$
413 : $P_{14596} = (3, 7, 13, 1)$
414 : $P_{14645} = (20, 8, 13, 1)$
415 : $P_{14662} = (5, 9, 13, 1)$
416 : $P_{14732} = (11, 11, 13, 1)$
417 : $P_{14742} = (21, 11, 13, 1)$
418 : $P_{14751} = (30, 11, 13, 1)$
419 : $P_{14773} = (20, 12, 13, 1)$
420 : $P_{14840} = (23, 14, 13, 1)$
421 : $P_{14882} = (1, 16, 13, 1)$
422 : $P_{14903} = (22, 16, 13, 1)$
423 : $P_{14904} = (23, 16, 13, 1)$
424 : $P_{14982} = (5, 19, 13, 1)$
425 : $P_{15013} = (4, 20, 13, 1)$
426 : $P_{15017} = (8, 20, 13, 1)$
427 : $P_{15021} = (12, 20, 13, 1)$
428 : $P_{15052} = (11, 21, 13, 1)$
429 : $P_{15089} = (16, 22, 13, 1)$
430 : $P_{15119} = (14, 23, 13, 1)$
431 : $P_{15121} = (16, 23, 13, 1)$
432 : $P_{15135} = (30, 23, 13, 1)$
433 : $P_{15206} = (5, 26, 13, 1)$
434 : $P_{15295} = (30, 28, 13, 1)$
435 : $P_{15303} = (6, 29, 13, 1)$
436 : $P_{15340} = (11, 30, 13, 1)$
437 : $P_{15352} = (23, 30, 13, 1)$
438 : $P_{15357} = (28, 30, 13, 1)$
439 : $P_{15435} = (10, 1, 14, 1)$
440 : $P_{15513} = (24, 3, 14, 1)$
441 : $P_{15534} = (13, 4, 14, 1)$
442 : $P_{15633} = (16, 7, 14, 1)$
443 : $P_{15659} = (10, 8, 14, 1)$
444 : $P_{15671} = (22, 8, 14, 1)$
445 : $P_{15677} = (28, 8, 14, 1)$
446 : $P_{15691} = (10, 9, 14, 1)$
447 : $P_{15714} = (1, 10, 14, 1)$
448 : $P_{15721} = (8, 10, 14, 1)$
449 : $P_{15722} = (9, 10, 14, 1)$
450 : $P_{15765} = (20, 11, 14, 1)$
451 : $P_{15807} = (30, 12, 14, 1)$
452 : $P_{15813} = (4, 13, 14, 1)$
453 : $P_{15898} = (25, 15, 14, 1)$
454 : $P_{15912} = (7, 16, 14, 1)$
455 : $P_{15959} = (22, 17, 14, 1)$
456 : $P_{16044} = (11, 20, 14, 1)$
457 : $P_{16105} = (8, 22, 14, 1)$
458 : $P_{16114} = (17, 22, 14, 1)$
459 : $P_{16122} = (25, 22, 14, 1)$
460 : $P_{16164} = (3, 24, 14, 1)$
461 : $P_{16208} = (15, 25, 14, 1)$
462 : $P_{16215} = (22, 25, 14, 1)$
463 : $P_{16218} = (25, 25, 14, 1)$
464 : $P_{16297} = (8, 28, 14, 1)$
465 : $P_{16365} = (12, 30, 14, 1)$
466 : $P_{16460} = (11, 1, 15, 1)$
467 : $P_{16508} = (27, 2, 15, 1)$
468 : $P_{16551} = (6, 4, 15, 1)$
469 : $P_{16564} = (19, 4, 15, 1)$
470 : $P_{16566} = (21, 4, 15, 1)$
471 : $P_{16613} = (4, 6, 15, 1)$
472 : $P_{16667} = (26, 7, 15, 1)$
473 : $P_{16699} = (26, 8, 15, 1)$
474 : $P_{16717} = (12, 9, 15, 1)$
475 : $P_{16724} = (19, 9, 15, 1)$
476 : $P_{16736} = (31, 9, 15, 1)$
477 : $P_{16759} = (22, 10, 15, 1)$
478 : $P_{16770} = (1, 11, 15, 1)$
479 : $P_{16810} = (9, 12, 15, 1)$
480 : $P_{16852} = (19, 13, 15, 1)$
481 : $P_{16894} = (29, 14, 15, 1)$

$482: P_{16923} = (26, 15, 15, 1)$
$483: P_{16945} = (16, 16, 15, 1)$
$484: P_{17024} = (31, 18, 15, 1)$
$485: P_{17029} = (4, 19, 15, 1)$
$486: P_{17034} = (9, 19, 15, 1)$
$487: P_{17038} = (13, 19, 15, 1)$
$488: P_{17093} = (4, 21, 15, 1)$
$489: P_{17114} = (25, 21, 15, 1)$
$490: P_{17118} = (29, 21, 15, 1)$
$491: P_{17131} = (10, 22, 15, 1)$
$492: P_{17238} = (21, 25, 15, 1)$
$493: P_{17256} = (7, 26, 15, 1)$
$494: P_{17257} = (8, 26, 15, 1)$
$495: P_{17264} = (15, 26, 15, 1)$
$496: P_{17283} = (2, 27, 15, 1)$
$497: P_{17310} = (29, 27, 15, 1)$
$498: P_{17312} = (31, 27, 15, 1)$
$499: P_{17359} = (14, 29, 15, 1)$
$500: P_{17366} = (21, 29, 15, 1)$
$501: P_{17372} = (27, 29, 15, 1)$
$502: P_{17418} = (9, 31, 15, 1)$
$503: P_{17427} = (18, 31, 15, 1)$
$504: P_{17436} = (27, 31, 15, 1)$
$505: P_{17477} = (4, 1, 16, 1)$
$506: P_{17511} = (6, 2, 16, 1)$
$507: P_{17549} = (12, 3, 16, 1)$
$508: P_{17555} = (18, 3, 16, 1)$
$509: P_{17567} = (30, 3, 16, 1)$
$510: P_{17570} = (1, 4, 16, 1)$
$511: P_{17597} = (28, 4, 16, 1)$
$512: P_{17598} = (29, 4, 16, 1)$
$513: P_{17635} = (2, 6, 16, 1)$
$514: P_{17650} = (17, 6, 16, 1)$
$515: P_{17652} = (19, 6, 16, 1)$
$516: P_{17674} = (9, 7, 16, 1)$
$517: P_{17736} = (7, 9, 16, 1)$
$518: P_{17738} = (9, 9, 16, 1)$
$519: P_{17743} = (14, 9, 16, 1)$
$520: P_{17789} = (28, 10, 16, 1)$
$521: P_{17828} = (3, 12, 16, 1)$
$522: P_{17898} = (9, 14, 16, 1)$
$523: P_{17910} = (21, 14, 16, 1)$
$524: P_{17917} = (28, 14, 16, 1)$
$525: P_{17991} = (6, 17, 16, 1)$
$526: P_{18020} = (3, 18, 16, 1)$
$527: P_{18055} = (6, 19, 16, 1)$
$528: P_{18106} = (25, 20, 16, 1)$
$529: P_{18127} = (14, 21, 16, 1)$
$530: P_{18235} = (26, 24, 16, 1)$
$531: P_{18261} = (20, 25, 16, 1)$
$532: P_{18297} = (24, 26, 16, 1)$
$533: P_{18341} = (4, 28, 16, 1)$
$534: P_{18347} = (10, 28, 16, 1)$
$535: P_{18351} = (14, 28, 16, 1)$
$536: P_{18373} = (4, 29, 16, 1)$
$537: P_{18404} = (3, 30, 16, 1)$
$538: P_{18502} = (5, 1, 17, 1)$
$539: P_{18570} = (9, 3, 17, 1)$
$540: P_{18600} = (7, 4, 17, 1)$
$541: P_{18604} = (11, 4, 17, 1)$
$542: P_{18605} = (12, 4, 17, 1)$
$543: P_{18626} = (1, 5, 17, 1)$
$544: P_{18693} = (4, 7, 17, 1)$
$545: P_{18713} = (24, 7, 17, 1)$
$546: P_{18717} = (28, 7, 17, 1)$
$547: P_{18751} = (30, 8, 17, 1)$
$548: P_{18756} = (3, 9, 17, 1)$
$549: P_{18778} = (25, 9, 17, 1)$
$550: P_{18779} = (26, 9, 17, 1)$
$551: P_{18801} = (16, 10, 17, 1)$
$552: P_{18821} = (4, 11, 17, 1)$
$553: P_{18853} = (4, 12, 17, 1)$
$554: P_{18866} = (17, 12, 17, 1)$
$555: P_{18870} = (21, 12, 17, 1)$
$556: P_{18987} = (10, 16, 17, 1)$
$557: P_{19021} = (12, 17, 17, 1)$
$558: P_{19029} = (20, 17, 17, 1)$
$559: P_{19033} = (24, 17, 17, 1)$
$560: P_{19122} = (17, 20, 17, 1)$
$561: P_{19149} = (12, 21, 17, 1)$
$562: P_{19193} = (24, 22, 17, 1)$
$563: P_{19224} = (23, 23, 17, 1)$
$564: P_{19240} = (7, 24, 17, 1)$
$565: P_{19250} = (17, 24, 17, 1)$
$566: P_{19255} = (22, 24, 17, 1)$
$567: P_{19274} = (9, 25, 17, 1)$
$568: P_{19306} = (9, 26, 17, 1)$
$569: P_{19368} = (7, 28, 17, 1)$
$570: P_{19433} = (8, 30, 17, 1)$
$571: P_{19552} = (31, 1, 18, 1)$
$572: P_{19563} = (10, 2, 18, 1)$
$573: P_{19600} = (15, 3, 18, 1)$
$574: P_{19626} = (9, 4, 18, 1)$
$575: P_{19633} = (16, 4, 18, 1)$
$576: P_{19642} = (25, 4, 18, 1)$
$577: P_{19663} = (14, 5, 18, 1)$
$578: P_{19667} = (18, 5, 18, 1)$
$579: P_{19677} = (28, 5, 18, 1)$
$580: P_{19711} = (30, 6, 18, 1)$
$581: P_{19781} = (4, 9, 18, 1)$
$582: P_{19788} = (11, 9, 18, 1)$
$583: P_{19792} = (15, 9, 18, 1)$
$584: P_{19811} = (2, 10, 18, 1)$
$585: P_{19822} = (13, 10, 18, 1)$
$586: P_{19824} = (15, 10, 18, 1)$
$587: P_{19850} = (9, 11, 18, 1)$
$588: P_{19915} = (10, 13, 18, 1)$
$589: P_{19928} = (23, 13, 18, 1)$

590 : $P_{19934} = (29, 13, 18, 1)$
591 : $P_{19942} = (5, 14, 18, 1)$
592 : $P_{19972} = (3, 15, 18, 1)$
593 : $P_{19978} = (9, 15, 18, 1)$
594 : $P_{19979} = (10, 15, 18, 1)$
595 : $P_{20005} = (4, 16, 18, 1)$
596 : $P_{20070} = (5, 18, 18, 1)$
597 : $P_{20122} = (25, 19, 18, 1)$
598 : $P_{20152} = (23, 20, 18, 1)$
599 : $P_{20238} = (13, 23, 18, 1)$
600 : $P_{20245} = (20, 23, 18, 1)$
601 : $P_{20250} = (25, 23, 18, 1)$
602 : $P_{20293} = (4, 25, 18, 1)$
603 : $P_{20308} = (19, 25, 18, 1)$
604 : $P_{20312} = (23, 25, 18, 1)$
605 : $P_{20380} = (27, 27, 18, 1)$
606 : $P_{20390} = (5, 28, 18, 1)$
607 : $P_{20430} = (13, 29, 18, 1)$
608 : $P_{20455} = (6, 30, 18, 1)$
609 : $P_{20482} = (1, 31, 18, 1)$
610 : $P_{20575} = (30, 1, 19, 1)$
611 : $P_{20590} = (13, 2, 19, 1)$
612 : $P_{20617} = (8, 3, 19, 1)$
613 : $P_{20719} = (14, 6, 19, 1)$
614 : $P_{20725} = (20, 6, 19, 1)$
615 : $P_{20731} = (26, 6, 19, 1)$
616 : $P_{20772} = (3, 8, 19, 1)$
617 : $P_{20931} = (2, 13, 19, 1)$
618 : $P_{20967} = (6, 14, 19, 1)$
619 : $P_{20985} = (24, 14, 19, 1)$
620 : $P_{20991} = (30, 14, 19, 1)$
621 : $P_{21023} = (30, 15, 19, 1)$
622 : $P_{21078} = (21, 17, 19, 1)$
623 : $P_{21109} = (20, 18, 19, 1)$
624 : $P_{21159} = (6, 20, 19, 1)$
625 : $P_{21171} = (18, 20, 19, 1)$
626 : $P_{21173} = (20, 20, 19, 1)$
627 : $P_{21202} = (17, 21, 19, 1)$
628 : $P_{21248} = (31, 22, 19, 1)$
629 : $P_{21295} = (14, 24, 19, 1)$
630 : $P_{21351} = (6, 26, 19, 1)$
631 : $P_{21405} = (28, 27, 19, 1)$
632 : $P_{21436} = (27, 28, 19, 1)$
633 : $P_{21474} = (1, 30, 19, 1)$
634 : $P_{21487} = (14, 30, 19, 1)$
635 : $P_{21488} = (15, 30, 19, 1)$
636 : $P_{21527} = (22, 31, 19, 1)$
637 : $P_{21575} = (6, 1, 20, 1)$
638 : $P_{21615} = (14, 2, 20, 1)$
639 : $P_{21688} = (23, 4, 20, 1)$
640 : $P_{21717} = (20, 5, 20, 1)$
641 : $P_{21730} = (1, 6, 20, 1)$
642 : $P_{21741} = (12, 6, 20, 1)$
643 : $P_{21742} = (13, 6, 20, 1)$
644 : $P_{21776} = (15, 7, 20, 1)$
645 : $P_{21779} = (18, 7, 20, 1)$
646 : $P_{21790} = (29, 7, 20, 1)$
647 : $P_{21805} = (12, 8, 20, 1)$
648 : $P_{21855} = (30, 9, 20, 1)$
649 : $P_{21927} = (6, 12, 20, 1)$
650 : $P_{21929} = (8, 12, 20, 1)$
651 : $P_{21935} = (14, 12, 20, 1)$
652 : $P_{21959} = (6, 13, 20, 1)$
653 : $P_{21987} = (2, 14, 20, 1)$
654 : $P_{21997} = (12, 14, 20, 1)$
655 : $P_{21999} = (14, 14, 20, 1)$
656 : $P_{22024} = (7, 15, 20, 1)$
657 : $P_{22120} = (7, 18, 20, 1)$
658 : $P_{22167} = (22, 19, 20, 1)$
659 : $P_{22182} = (5, 20, 20, 1)$
660 : $P_{22260} = (19, 22, 20, 1)$
661 : $P_{22277} = (4, 23, 20, 1)$
662 : $P_{22472} = (7, 29, 20, 1)$
663 : $P_{22506} = (9, 30, 20, 1)$
664 : $P_{22600} = (7, 1, 21, 1)$
665 : $P_{22630} = (5, 2, 21, 1)$
666 : $P_{22651} = (26, 2, 21, 1)$
667 : $P_{22656} = (31, 2, 21, 1)$
668 : $P_{22723} = (2, 5, 21, 1)$
669 : $P_{22786} = (1, 7, 21, 1)$
670 : $P_{22936} = (23, 11, 21, 1)$
671 : $P_{22957} = (12, 12, 21, 1)$
672 : $P_{22995} = (18, 13, 21, 1)$
673 : $P_{23062} = (21, 15, 21, 1)$
674 : $P_{23091} = (18, 16, 21, 1)$
675 : $P_{23150} = (13, 18, 21, 1)$
676 : $P_{23153} = (16, 18, 21, 1)$
677 : $P_{23166} = (29, 18, 21, 1)$
678 : $P_{23196} = (27, 19, 21, 1)$
679 : $P_{23248} = (15, 21, 21, 1)$
680 : $P_{23308} = (11, 23, 21, 1)$
681 : $P_{23395} = (2, 26, 21, 1)$
682 : $P_{23444} = (19, 27, 21, 1)$
683 : $P_{23507} = (18, 29, 21, 1)$
684 : $P_{23555} = (2, 31, 21, 1)$
685 : $P_{23646} = (29, 1, 22, 1)$
686 : $P_{23678} = (29, 2, 22, 1)$
687 : $P_{23695} = (14, 3, 22, 1)$
688 : $P_{23700} = (19, 3, 22, 1)$
689 : $P_{23710} = (29, 3, 22, 1)$
690 : $P_{23787} = (10, 6, 22, 1)$
691 : $P_{23822} = (13, 7, 22, 1)$
692 : $P_{23856} = (15, 8, 22, 1)$
693 : $P_{23911} = (6, 10, 22, 1)$
694 : $P_{23965} = (28, 11, 22, 1)$
695 : $P_{23991} = (22, 12, 22, 1)$
696 : $P_{24008} = (7, 13, 22, 1)$
697 : $P_{24036} = (3, 14, 22, 1)$

698 : $P_{24073} = (8, 15, 22, 1)$
699 : $P_{24116} = (19, 16, 22, 1)$
700 : $P_{24189} = (28, 18, 22, 1)$
701 : $P_{24196} = (3, 19, 22, 1)$
702 : $P_{24209} = (16, 19, 22, 1)$
703 : $P_{24212} = (19, 19, 22, 1)$
704 : $P_{24301} = (12, 22, 22, 1)$
705 : $P_{24413} = (28, 25, 22, 1)$
706 : $P_{24492} = (11, 28, 22, 1)$
707 : $P_{24499} = (18, 28, 22, 1)$
708 : $P_{24506} = (25, 28, 22, 1)$
709 : $P_{24514} = (1, 29, 22, 1)$
710 : $P_{24515} = (2, 29, 22, 1)$
711 : $P_{24516} = (3, 29, 22, 1)$
712 : $P_{24669} = (28, 1, 23, 1)$
713 : $P_{24684} = (11, 2, 23, 1)$
714 : $P_{24708} = (3, 3, 23, 1)$
715 : $P_{24747} = (10, 4, 23, 1)$
716 : $P_{24785} = (16, 5, 23, 1)$
717 : $P_{24864} = (31, 7, 23, 1)$
718 : $P_{24913} = (16, 9, 23, 1)$
719 : $P_{24933} = (4, 10, 23, 1)$
720 : $P_{24963} = (2, 11, 23, 1)$
721 : $P_{24986} = (25, 11, 23, 1)$
722 : $P_{24988} = (27, 11, 23, 1)$
723 : $P_{25009} = (16, 12, 23, 1)$
724 : $P_{25126} = (5, 16, 23, 1)$
725 : $P_{25130} = (9, 16, 23, 1)$
726 : $P_{25133} = (12, 16, 23, 1)$
727 : $P_{25208} = (23, 18, 23, 1)$
728 : $P_{25363} = (18, 23, 23, 1)$
729 : $P_{25420} = (11, 25, 23, 1)$
730 : $P_{25484} = (11, 27, 23, 1)$
731 : $P_{25506} = (1, 28, 23, 1)$
732 : $P_{25608} = (7, 31, 23, 1)$
733 : $P_{25688} = (23, 1, 24, 1)$
734 : $P_{25712} = (15, 2, 24, 1)$
735 : $P_{25776} = (15, 4, 24, 1)$
736 : $P_{25798} = (5, 5, 24, 1)$
737 : $P_{25840} = (15, 6, 24, 1)$
738 : $P_{25945} = (24, 9, 24, 1)$
739 : $P_{25998} = (13, 11, 24, 1)$
740 : $P_{26060} = (11, 13, 24, 1)$
741 : $P_{26066} = (17, 13, 24, 1)$
742 : $P_{26075} = (26, 13, 24, 1)$
743 : $P_{26097} = (16, 14, 24, 1)$
744 : $P_{26115} = (2, 15, 24, 1)$
745 : $P_{26117} = (4, 15, 24, 1)$
746 : $P_{26119} = (6, 15, 24, 1)$
747 : $P_{26159} = (14, 16, 24, 1)$
748 : $P_{26190} = (13, 17, 24, 1)$
749 : $P_{26230} = (21, 18, 24, 1)$
750 : $P_{26323} = (18, 21, 24, 1)$
751 : $P_{26370} = (1, 23, 24, 1)$
752 : $P_{26410} = (9, 24, 24, 1)$
753 : $P_{26478} = (13, 26, 24, 1)$
754 : $P_{26711} = (22, 1, 25, 1)$
755 : $P_{26807} = (22, 4, 25, 1)$
756 : $P_{26825} = (8, 5, 25, 1)$
757 : $P_{26839} = (22, 5, 25, 1)$
758 : $P_{26847} = (30, 5, 25, 1)$
759 : $P_{26872} = (23, 6, 25, 1)$
760 : $P_{26918} = (5, 8, 25, 1)$
761 : $P_{26921} = (8, 8, 25, 1)$
762 : $P_{26926} = (13, 8, 25, 1)$
763 : $P_{26968} = (23, 9, 25, 1)$
764 : $P_{27008} = (31, 10, 25, 1)$
765 : $P_{27081} = (8, 13, 25, 1)$
766 : $P_{27125} = (20, 14, 25, 1)$
767 : $P_{27160} = (23, 15, 25, 1)$
768 : $P_{27311} = (14, 20, 25, 1)$
769 : $P_{27356} = (27, 21, 25, 1)$
770 : $P_{27362} = (1, 22, 25, 1)$
771 : $P_{27365} = (4, 22, 25, 1)$
772 : $P_{27366} = (5, 22, 25, 1)$
773 : $P_{27399} = (6, 23, 25, 1)$
774 : $P_{27402} = (9, 23, 25, 1)$
775 : $P_{27408} = (15, 23, 25, 1)$
776 : $P_{27483} = (26, 25, 25, 1)$
777 : $P_{27514} = (25, 26, 25, 1)$
778 : $P_{27542} = (21, 27, 25, 1)$
779 : $P_{27622} = (5, 30, 25, 1)$
780 : $P_{27659} = (10, 31, 25, 1)$
781 : $P_{27725} = (12, 1, 26, 1)$
782 : $P_{27790} = (13, 3, 26, 1)$
783 : $P_{27800} = (23, 3, 26, 1)$
784 : $P_{27803} = (26, 3, 26, 1)$
785 : $P_{27856} = (15, 5, 26, 1)$
786 : $P_{27894} = (21, 6, 26, 1)$
787 : $P_{27912} = (7, 7, 26, 1)$
788 : $P_{27951} = (14, 8, 26, 1)$
789 : $P_{28066} = (1, 12, 26, 1)$
790 : $P_{28100} = (3, 13, 26, 1)$
791 : $P_{28125} = (28, 13, 26, 1)$
792 : $P_{28128} = (31, 13, 26, 1)$
793 : $P_{28137} = (8, 14, 26, 1)$
794 : $P_{28166} = (5, 15, 26, 1)$
795 : $P_{28178} = (17, 15, 26, 1)$
796 : $P_{28181} = (20, 15, 26, 1)$
797 : $P_{28240} = (15, 17, 26, 1)$
798 : $P_{28336} = (15, 20, 26, 1)$
799 : $P_{28359} = (6, 21, 26, 1)$
800 : $P_{28379} = (26, 21, 26, 1)$
801 : $P_{28381} = (28, 21, 26, 1)$
802 : $P_{28411} = (26, 22, 26, 1)$
803 : $P_{28420} = (3, 23, 26, 1)$
804 : $P_{28477} = (28, 24, 26, 1)$
805 : $P_{28516} = (3, 26, 26, 1)$

806 : $P_{28534} = (21, 26, 26, 1)$
807 : $P_{28535} = (22, 26, 26, 1)$
808 : $P_{28575} = (30, 27, 26, 1)$
809 : $P_{28590} = (13, 28, 26, 1)$
810 : $P_{28598} = (21, 28, 26, 1)$
811 : $P_{28601} = (24, 28, 26, 1)$
812 : $P_{28668} = (27, 30, 26, 1)$
813 : $P_{28686} = (13, 31, 26, 1)$
814 : $P_{28750} = (13, 1, 27, 1)$
815 : $P_{28818} = (17, 3, 27, 1)$
816 : $P_{28886} = (21, 5, 27, 1)$
817 : $P_{28978} = (17, 8, 27, 1)$
818 : $P_{29054} = (29, 10, 27, 1)$
819 : $P_{29074} = (17, 11, 27, 1)$
820 : $P_{29122} = (1, 13, 27, 1)$
821 : $P_{29145} = (24, 13, 27, 1)$
822 : $P_{29146} = (25, 13, 27, 1)$
823 : $P_{29200} = (15, 15, 27, 1)$
824 : $P_{29204} = (19, 15, 27, 1)$
825 : $P_{29213} = (28, 15, 27, 1)$
826 : $P_{29246} = (29, 16, 27, 1)$
827 : $P_{29252} = (3, 17, 27, 1)$
828 : $P_{29257} = (8, 17, 27, 1)$
829 : $P_{29260} = (11, 17, 27, 1)$
830 : $P_{29328} = (15, 19, 27, 1)$
831 : $P_{29336} = (23, 19, 27, 1)$
832 : $P_{29337} = (24, 19, 27, 1)$
833 : $P_{29367} = (22, 20, 27, 1)$
834 : $P_{29382} = (5, 21, 27, 1)$
835 : $P_{29429} = (20, 22, 27, 1)$
836 : $P_{29460} = (19, 23, 27, 1)$
837 : $P_{29486} = (13, 24, 27, 1)$
838 : $P_{29492} = (19, 24, 27, 1)$
839 : $P_{29503} = (30, 24, 27, 1)$
840 : $P_{29518} = (13, 25, 27, 1)$
841 : $P_{29566} = (29, 26, 27, 1)$
842 : $P_{29616} = (15, 28, 27, 1)$
843 : $P_{29643} = (10, 29, 27, 1)$
844 : $P_{29649} = (16, 29, 27, 1)$
845 : $P_{29659} = (26, 29, 27, 1)$
846 : $P_{29689} = (24, 30, 27, 1)$
847 : $P_{29782} = (21, 1, 28, 1)$
848 : $P_{29801} = (8, 2, 28, 1)$
849 : $P_{29829} = (4, 3, 28, 1)$
850 : $P_{29860} = (3, 4, 28, 1)$
851 : $P_{29874} = (17, 4, 28, 1)$
852 : $P_{29875} = (18, 4, 28, 1)$
853 : $P_{29987} = (2, 8, 28, 1)$
854 : $P_{30030} = (13, 9, 28, 1)$
855 : $P_{30039} = (22, 9, 28, 1)$
856 : $P_{30044} = (27, 9, 28, 1)$
857 : $P_{30154} = (9, 13, 28, 1)$
858 : $P_{30233} = (24, 15, 28, 1)$
859 : $P_{30277} = (4, 17, 28, 1)$
860 : $P_{30309} = (4, 18, 28, 1)$
861 : $P_{30402} = (1, 21, 28, 1)$
862 : $P_{30442} = (9, 22, 28, 1)$
863 : $P_{30512} = (15, 24, 28, 1)$
864 : $P_{30587} = (26, 26, 28, 1)$
865 : $P_{30602} = (9, 27, 28, 1)$
866 : $P_{30656} = (31, 28, 28, 1)$
867 : $P_{30749} = (28, 31, 28, 1)$
868 : $P_{30805} = (20, 1, 29, 1)$
869 : $P_{30911} = (30, 4, 29, 1)$
870 : $P_{31034} = (25, 8, 29, 1)$
871 : $P_{31062} = (21, 9, 29, 1)$
872 : $P_{31099} = (26, 10, 29, 1)$
873 : $P_{31124} = (19, 11, 29, 1)$
874 : $P_{31289} = (24, 16, 29, 1)$
875 : $P_{31326} = (29, 17, 29, 1)$
876 : $P_{31372} = (11, 19, 29, 1)$
877 : $P_{31394} = (1, 20, 29, 1)$
878 : $P_{31419} = (26, 20, 29, 1)$
879 : $P_{31420} = (27, 20, 29, 1)$
880 : $P_{31434} = (9, 21, 29, 1)$
881 : $P_{31447} = (22, 21, 29, 1)$
882 : $P_{31456} = (31, 21, 29, 1)$
883 : $P_{31478} = (21, 22, 29, 1)$
884 : $P_{31537} = (16, 24, 29, 1)$
885 : $P_{31561} = (8, 25, 29, 1)$
886 : $P_{31595} = (10, 26, 29, 1)$
887 : $P_{31605} = (20, 26, 29, 1)$
888 : $P_{31615} = (30, 26, 29, 1)$
889 : $P_{31637} = (20, 27, 29, 1)$
890 : $P_{31698} = (17, 29, 29, 1)$
891 : $P_{31717} = (4, 30, 29, 1)$
892 : $P_{31739} = (26, 30, 29, 1)$
893 : $P_{31743} = (30, 30, 29, 1)$
894 : $P_{31766} = (21, 31, 29, 1)$
895 : $P_{31823} = (14, 1, 30, 1)$
896 : $P_{31944} = (7, 5, 30, 1)$
897 : $P_{31975} = (6, 6, 30, 1)$
898 : $P_{31994} = (25, 6, 30, 1)$
899 : $P_{32000} = (31, 6, 30, 1)$
900 : $P_{32006} = (5, 7, 30, 1)$
901 : $P_{32111} = (14, 10, 30, 1)$
902 : $P_{32120} = (23, 10, 30, 1)$
903 : $P_{32122} = (25, 10, 30, 1)$
904 : $P_{32143} = (14, 11, 30, 1)$
905 : $P_{32186} = (25, 12, 30, 1)$
906 : $P_{32214} = (21, 13, 30, 1)$
907 : $P_{32226} = (1, 14, 30, 1)$
908 : $P_{32235} = (10, 14, 30, 1)$
909 : $P_{32236} = (11, 14, 30, 1)$
910 : $P_{32286} = (29, 15, 30, 1)$
911 : $P_{32316} = (27, 16, 30, 1)$
912 : $P_{32411} = (26, 19, 30, 1)$
913 : $P_{32462} = (13, 21, 30, 1)$

914 : $P_{32523} = (10, 23, 30, 1)$
915 : $P_{32583} = (6, 25, 30, 1)$
916 : $P_{32587} = (10, 25, 30, 1)$
917 : $P_{32589} = (12, 25, 30, 1)$
918 : $P_{32628} = (19, 26, 30, 1)$
919 : $P_{32657} = (16, 27, 30, 1)$
920 : $P_{32720} = (15, 29, 30, 1)$
921 : $P_{32775} = (6, 31, 30, 1)$
922 : $P_{32848} = (15, 1, 31, 1)$
923 : $P_{32869} = (4, 2, 31, 1)$
924 : $P_{32883} = (18, 2, 31, 1)$
925 : $P_{32887} = (22, 2, 31, 1)$
926 : $P_{32907} = (10, 3, 31, 1)$
927 : $P_{32918} = (21, 3, 31, 1)$
928 : $P_{32928} = (31, 3, 31, 1)$
929 : $P_{32931} = (2, 4, 31, 1)$
930 : $P_{33021} = (28, 6, 31, 1)$
931 : $P_{33068} = (11, 8, 31, 1)$
932 : $P_{33073} = (16, 8, 31, 1)$
933 : $P_{33084} = (27, 8, 31, 1)$
934 : $P_{33107} = (18, 9, 31, 1)$
935 : $P_{33124} = (3, 10, 31, 1)$
936 : $P_{33161} = (8, 11, 31, 1)$
937 : $P_{33171} = (18, 11, 31, 1)$
938 : $P_{33179} = (26, 11, 31, 1)$
939 : $P_{33230} = (13, 13, 31, 1)$
940 : $P_{33274} = (25, 14, 31, 1)$
941 : $P_{33282} = (1, 15, 31, 1)$
942 : $P_{33321} = (8, 16, 31, 1)$
943 : $P_{33333} = (20, 16, 31, 1)$
944 : $P_{33341} = (28, 16, 31, 1)$
945 : $P_{33379} = (2, 18, 31, 1)$
946 : $P_{33386} = (9, 18, 31, 1)$
947 : $P_{33388} = (11, 18, 31, 1)$
948 : $P_{33457} = (16, 20, 31, 1)$
949 : $P_{33476} = (3, 21, 31, 1)$
950 : $P_{33507} = (2, 22, 31, 1)$
951 : $P_{33533} = (28, 22, 31, 1)$
952 : $P_{33535} = (30, 22, 31, 1)$
953 : $P_{33615} = (14, 25, 31, 1)$
954 : $P_{33644} = (11, 26, 31, 1)$
955 : $P_{33673} = (8, 27, 31, 1)$
956 : $P_{33703} = (6, 28, 31, 1)$
957 : $P_{33713} = (16, 28, 31, 1)$
958 : $P_{33719} = (22, 28, 31, 1)$
959 : $P_{33783} = (22, 30, 31, 1)$
960 : $P_{33796} = (3, 31, 31, 1)$

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_2	P_{2083}

Line 1 intersects

Line	ℓ_0	ℓ_2
in point	P_2	P_{2114}

Line 2 intersects

Line	ℓ_0	ℓ_1
in point	P_{2083}	P_{2114}

The surface has 1057 points:
Too many to print.