Rank-65744 over GF(32)

January 15, 2021

The equation

The equation of the surface is:

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

(1, 0, 1, 1, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0) The point rank of the equation over GF(32) is -2112813018

General information

Number of lines	3
Number of points	1089
Number of singular points	0
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 0 singular points:

The 3 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082369} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082369} = \mathbf{Pl}(0, 0, 0, 1, 0, 1)_{36865}$$

$$\ell_1 = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{2082} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{2082} = \mathbf{Pl}(0, 0, 1, 1, 1, 1)_{70562}$$

$$\ell_2 = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 \end{array} \right]_{34914} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 \end{array} \right]_{34914} = \mathbf{Pl}(1,0,1,1,1,1)_{70563}$$

Rank of lines: (1082369, 2082, 34914)

Rank of points on Klein quadric: (36865, 70562, 70563)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

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

$$P_{2082} = (0, 0, 1, 1) = \ell_0 \cap \ell_1$$

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

$P_5 = (1, 1, 0, 0) = \ell_1 \cap \ell_2$

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 28: $P_{2411} = (10, 10, 1, 1)$ lies on line ℓ_1 1: $P_4 = (1, 1, 1, 1)$ lies on line ℓ_1 29: $P_{2412} = (11, 10, 1, 1)$ lies on line ℓ_2 2: $P_{2083} = (1,0,1,1)$ lies on line ℓ_2 $30: P_{2433} = (0, 11, 1, 1)$ lies on line ℓ_0 31 : $P_{2443} = (10, 11, 1, 1)$ lies on line ℓ_2 $3: P_{2145} = (0, 2, 1, 1)$ lies on line ℓ_0 4: $P_{2147} = (2, 2, 1, 1)$ lies on line ℓ_1 $32: P_{2444} = (11, 11, 1, 1)$ lies on line ℓ_1 5: $P_{2148} = (3, 2, 1, 1)$ lies on line ℓ_2 33: $P_{2465} = (0, 12, 1, 1)$ lies on line ℓ_0 6: $P_{2177} = (0, 3, 1, 1)$ lies on line ℓ_0 $34: P_{2477} = (12, 12, 1, 1)$ lies on line ℓ_1 7: $P_{2179} = (2, 3, 1, 1)$ lies on line ℓ_2 $35: P_{2478} = (13, 12, 1, 1)$ lies on line ℓ_2 8: $P_{2180} = (3, 3, 1, 1)$ lies on line ℓ_1 36: $P_{2497} = (0, 13, 1, 1)$ lies on line ℓ_0 9: $P_{2209} = (0, 4, 1, 1)$ lies on line ℓ_0 $37: P_{2509} = (12, 13, 1, 1)$ lies on line ℓ_2 10: $P_{2213} = (4, 4, 1, 1)$ lies on line ℓ_1 38: $P_{2510} = (13, 13, 1, 1)$ lies on line ℓ_1 11: $P_{2214} = (5, 4, 1, 1)$ lies on line ℓ_2 $39: P_{2529} = (0, 14, 1, 1)$ lies on line ℓ_0 12: $P_{2241} = (0, 5, 1, 1)$ lies on line ℓ_0 40: $P_{2543} = (14, 14, 1, 1)$ lies on line ℓ_1 13: $P_{2245} = (4, 5, 1, 1)$ lies on line ℓ_2 41: $P_{2544} = (15, 14, 1, 1)$ lies on line ℓ_2 14: $P_{2246} = (5, 5, 1, 1)$ lies on line ℓ_1 42: $P_{2561} = (0, 15, 1, 1)$ lies on line ℓ_0 15: $P_{2273} = (0, 6, 1, 1)$ lies on line ℓ_0 43: $P_{2575} = (14, 15, 1, 1)$ lies on line ℓ_2 16: $P_{2279} = (6, 6, 1, 1)$ lies on line ℓ_1 44: $P_{2576} = (15, 15, 1, 1)$ lies on line ℓ_1 17: $P_{2280} = (7, 6, 1, 1)$ lies on line ℓ_2 45: $P_{2593} = (0, 16, 1, 1)$ lies on line ℓ_0 18: $P_{2305} = (0,7,1,1)$ lies on line ℓ_0 46: $P_{2609} = (16, 16, 1, 1)$ lies on line ℓ_1 19: $P_{2311} = (6,7,1,1)$ lies on line ℓ_2 47: $P_{2610} = (17, 16, 1, 1)$ lies on line ℓ_2 20: $P_{2312} = (7,7,1,1)$ lies on line ℓ_1 48: $P_{2625} = (0, 17, 1, 1)$ lies on line ℓ_0 21: $P_{2337} = (0, 8, 1, 1)$ lies on line ℓ_0 49: $P_{2641} = (16, 17, 1, 1)$ lies on line ℓ_2 22: $P_{2345} = (8, 8, 1, 1)$ lies on line ℓ_1 $50: P_{2642} = (17, 17, 1, 1)$ lies on line ℓ_1 23: $P_{2346} = (9, 8, 1, 1)$ lies on line ℓ_2 51: $P_{2657} = (0, 18, 1, 1)$ lies on line ℓ_0 24: $P_{2369} = (0, 9, 1, 1)$ lies on line ℓ_0 $52: P_{2675} = (18, 18, 1, 1)$ lies on line ℓ_1 25: $P_{2377} = (8, 9, 1, 1)$ lies on line ℓ_2 53: $P_{2676} = (19, 18, 1, 1)$ lies on line ℓ_2 26: $P_{2378} = (9, 9, 1, 1)$ lies on line ℓ_1 $54: P_{2689} = (0, 19, 1, 1)$ lies on line ℓ_0 27: $P_{2401} = (0, 10, 1, 1)$ lies on line ℓ_0 55: $P_{2707} = (18, 19, 1, 1)$ lies on line ℓ_2

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56: P_{2708} = (19, 19, 1, 1) lies on line \ell_1
                                                                      75: P_{2913} = (0, 26, 1, 1) lies on line \ell_0
57: P_{2721} = (0, 20, 1, 1) lies on line \ell_0
                                                                      76: P_{2939} = (26, 26, 1, 1) lies on line \ell_1
58: P_{2741} = (20, 20, 1, 1) lies on line \ell_1
                                                                      77: P_{2940} = (27, 26, 1, 1) lies on line \ell_2
                                                                      78: P_{2945} = (0, 27, 1, 1) lies on line \ell_0
59: P_{2742} = (21, 20, 1, 1) lies on line \ell_2
60: P_{2753} = (0, 21, 1, 1) lies on line \ell_0
                                                                      79: P_{2971} = (26, 27, 1, 1) lies on line \ell_2
                                                                      80: P_{2972} = (27, 27, 1, 1) lies on line \ell_1
61: P_{2773} = (20, 21, 1, 1) lies on line \ell_2
62: P_{2774} = (21, 21, 1, 1) lies on line \ell_1
                                                                      81: P_{2977} = (0, 28, 1, 1) lies on line \ell_0
63: P_{2785} = (0, 22, 1, 1) lies on line \ell_0
                                                                      82: P_{3005} = (28, 28, 1, 1) lies on line \ell_1
64: P_{2807} = (22, 22, 1, 1) lies on line \ell_1
                                                                      83: P_{3006} = (29, 28, 1, 1) lies on line \ell_2
65: P_{2808} = (23, 22, 1, 1) lies on line \ell_2
                                                                      84: P_{3009} = (0, 29, 1, 1) lies on line \ell_0
66: P_{2817} = (0, 23, 1, 1) lies on line \ell_0
                                                                      85: P_{3037} = (28, 29, 1, 1) lies on line \ell_2
                                                                      86: P_{3038} = (29, 29, 1, 1) lies on line \ell_1
67: P_{2839} = (22, 23, 1, 1) lies on line \ell_2
68: P_{2840} = (23, 23, 1, 1) lies on line \ell_1
                                                                      87: P_{3041} = (0, 30, 1, 1) lies on line \ell_0
                                                                      88: P_{3071} = (30, 30, 1, 1) lies on line \ell_1
69: P_{2849} = (0, 24, 1, 1) lies on line \ell_0
                                                                      89: P_{3072} = (31, 30, 1, 1) lies on line \ell_2
70: P_{2873} = (24, 24, 1, 1) lies on line \ell_1
71: P_{2874} = (25, 24, 1, 1) lies on line \ell_2
                                                                      90: P_{3073} = (0, 31, 1, 1) lies on line \ell_0
72: P_{2881} = (0, 25, 1, 1) lies on line \ell_0
                                                                      91: P_{3103} = (30, 31, 1, 1) lies on line \ell_2
73: P_{2905} = (24, 25, 1, 1) lies on line \ell_2
                                                                      92: P_{3104} = (31, 31, 1, 1) lies on line \ell_1
74: P_{2906} = (25, 25, 1, 1) lies on line \ell_1
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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:

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0: P_{36} = (1,0,1,0)
                                                                  25: P_{591} = (12, 17, 1, 0)
1: P_{68} = (1, 1, 1, 0)
                                                                  26: P_{602} = (23, 17, 1, 0)
2: P_{104} = (5, 2, 1, 0)
                                                                  27: P_{606} = (27, 17, 1, 0)
3: P_{115} = (16, 2, 1, 0)
                                                                  28: P_{706} = (31, 20, 1, 0)
4: P_{120} = (21, 2, 1, 0)
                                                                  29: P_{738} = (31, 21, 1, 0)
5: P_{136} = (5, 3, 1, 0)
                                                                  30: P_{748} = (9, 22, 1, 0)
6: P_{147} = (16, 3, 1, 0)
                                                                  31: P_{780} = (9, 23, 1, 0)
7: P_{152} = (21, 3, 1, 0)
                                                                  32: P_{814} = (11, 24, 1, 0)
8: P_{176} = (13, 4, 1, 0)
                                                                  33: P_{846} = (11, 25, 1, 0)
9: P_{180} = (17, 4, 1, 0)
                                                                  34: P_{870} = (3, 26, 1, 0)
10: P_{191} = (28, 4, 1, 0)
                                                                  35: P_{871} = (4, 26, 1, 0)
11: P_{208} = (13, 5, 1, 0)
                                                                  36: P_{874} = (7, 26, 1, 0)
12: P_{212} = (17, 5, 1, 0)
                                                                  37: P_{902} = (3, 27, 1, 0)
13: P_{223} = (28, 5, 1, 0)
                                                                  38: P_{903} = (4, 27, 1, 0)
                                                                  39: P_{906} = (7, 27, 1, 0)
14: P_{242} = (15, 6, 1, 0)
15: P_{274} = (15, 7, 1, 0)
                                                                  40: P_{949} = (18, 28, 1, 0)
16: P_{421} = (2, 12, 1, 0)
                                                                  41: P_{981} = (18, 29, 1, 0)
17: P_{443} = (24, 12, 1, 0)
                                                                  42: P_{1091} = (1, 1, 0, 1)
18: P_{445} = (26, 12, 1, 0)
                                                                  43: P_{1171} = (17, 3, 0, 1)
19: P_{453} = (2, 13, 1, 0)
                                                                  44: P_{1230} = (12, 5, 0, 1)
                                                                  45: P_{1252} = (2, 6, 0, 1)
20: P_{475} = (24, 13, 1, 0)
21: P_{477} = (26, 13, 1, 0)
                                                                  46: P_{1258} = (8, 6, 0, 1)
22: P_{559} = (12, 16, 1, 0)
                                                                  47: P_{1261} = (11, 6, 0, 1)
23: P_{570} = (23, 16, 1, 0)
                                                                  48: P_{1307} = (25, 7, 0, 1)
24: P_{574} = (27, 16, 1, 0)
                                                                  49: P_{1337} = (23, 8, 0, 1)
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104: P_{4070} = (5, 30, 2, 1)
50: P_{1402} = (24, 10, 0, 1)
51: P_{1445} = (3, 12, 0, 1)
                                                                 105: P_{4098} = (1, 31, 2, 1)
                                                                 106: P_{4115} = (18, 31, 2, 1)
52: P_{1513} = (7, 14, 0, 1)
                                                                 107: P_{4134} = (5, 0, 3, 1)
53: P_{1628} = (26, 17, 0, 1)
54: P_{1694} = (28, 19, 0, 1)
                                                                 108: P_{4190} = (29, 1, 3, 1)
55: P_{1702} = (4, 20, 0, 1)
                                                                 109: P_{4222} = (29, 2, 3, 1)
56: P_{1708} = (10, 20, 0, 1)
                                                                 110: P_{4230} = (5, 3, 3, 1)
57: P_{1713} = (15, 20, 0, 1)
                                                                 111: P_{4272} = (15, 4, 3, 1)
58: P_{1736} = (6, 21, 0, 1)
                                                                 112: P_{4280} = (23, 4, 3, 1)
59: P_{1775} = (13, 22, 0, 1)
                                                                 113: P_{4282} = (25, 4, 3, 1)
60: P_{1780} = (18, 22, 0, 1)
                                                                 114: P_{4368} = (15, 7, 3, 1)
61: P_{1792} = (30, 22, 0, 1)
                                                                 115: P_{4376} = (23, 7, 3, 1)
62: P_{1823} = (29, 23, 0, 1)
                                                                 116: P_{4378} = (25, 7, 3, 1)
63: P_{1848} = (22, 24, 0, 1)
                                                                 117: P_{4412} = (27, 8, 3, 1)
                                                                 118: P_{4424} = (7, 9, 3, 1)
64: P_{1867} = (9, 25, 0, 1)
65: P_{1877} = (19, 25, 0, 1)
                                                                 119: P_{4433} = (16, 9, 3, 1)
66: P_{1885} = (27, 25, 0, 1)
                                                                 120: P_{4439} = (22, 9, 3, 1)
                                                                 121: P_{4456} = (7, 10, 3, 1)
67: P_{1895} = (5, 26, 0, 1)
                                                                 122: P_{4465} = (16, 10, 3, 1)
68: P_{1974} = (20, 28, 0, 1)
69: P_{2000} = (14, 29, 0, 1)
                                                                 123: P_{4471} = (22, 10, 3, 1)
70: P_{2002} = (16, 29, 0, 1)
                                                                 124: P_{4508} = (27, 11, 3, 1)
71: P_{2017} = (31, 29, 0, 1)
                                                                 125: P_{4514} = (1, 12, 3, 1)
                                                                 126: P_{4523} = (10, 12, 3, 1)
72: P_{2039} = (21, 30, 0, 1)
73: P_{3116} = (11, 0, 2, 1)
                                                                 127: P_{4551} = (6, 13, 3, 1)
74: P_{3143} = (6, 1, 2, 1)
                                                                 128: P_{4564} = (19, 13, 3, 1)
75: P_{3146} = (9, 1, 2, 1)
                                                                 129: P_{4565} = (20, 13, 3, 1)
                                                                 130: P_{4583} = (6, 14, 3, 1)
76: P_{3151} = (14, 1, 2, 1)
77: P_{3180} = (11, 2, 2, 1)
                                                                 131: P_{4596} = (19, 14, 3, 1)
78: P_{3207} = (6, 3, 2, 1)
                                                                 132: P_{4597} = (20, 14, 3, 1)
79: P_{3210} = (9, 3, 2, 1)
                                                                 133: P_{4610} = (1, 15, 3, 1)
80: P_{3215} = (14, 3, 2, 1)
                                                                 134: P_{4619} = (10, 15, 3, 1)
81: P_{3282} = (17, 5, 2, 1)
                                                                 135: P_{4649} = (8, 16, 3, 1)
82: P_{3346} = (17, 7, 2, 1)
                                                                 136: P_{4745} = (8, 19, 3, 1)
                                                                 137: P_{4814} = (13, 21, 3, 1)
83: P_{3376} = (15, 8, 2, 1)
                                                                 138: P_{4846} = (13, 22, 3, 1)
84: P_{3440} = (15, 10, 2, 1)
85: P_{3524} = (3, 13, 2, 1)
                                                                 139: P_{4921} = (24, 24, 3, 1)
86: P_{3588} = (3, 15, 2, 1)
                                                                 140: P_{5017} = (24, 27, 3, 1)
                                                                 141: P_{5168} = (15, 0, 4, 1)
87: P_{3647} = (30, 16, 2, 1)
88: P_{3659} = (10, 17, 2, 1)
                                                                 142: P_{5196} = (11, 1, 4, 1)
89: P_{3711} = (30, 18, 2, 1)
                                                                 143: P_{5205} = (20, 1, 4, 1)
90: P_{3723} = (10, 19, 2, 1)
                                                                 144: P_{5215} = (30, 1, 4, 1)
                                                                 145: P_{5238} = (21, 2, 4, 1)
91: P_{3747} = (2, 20, 2, 1)
92: P_{3773} = (28, 20, 2, 1)
                                                                 146: P_{5256} = (7, 3, 4, 1)
                                                                 147: P_{5296} = (15, 4, 4, 1)
93: P_{3776} = (31, 20, 2, 1)
94: P_{3811} = (2, 22, 2, 1)
                                                                 148: P_{5324} = (11, 5, 4, 1)
                                                                 149: P_{5333} = (20, 5, 4, 1)
95: P_{3837} = (28, 22, 2, 1)
96: P_{3840} = (31, 22, 2, 1)
                                                                 150: P_{5343} = (30, 5, 4, 1)
97: P_{3897} = (24, 24, 2, 1)
                                                                 151: P_{5366} = (21, 6, 4, 1)
                                                                 152: P_{5384} = (7, 7, 4, 1)
98: P_{3912} = (7, 25, 2, 1)
99: P_{3961} = (24, 26, 2, 1)
                                                                 153: P_{5423} = (14, 8, 4, 1)
100: P_{3976} = (7, 27, 2, 1)
                                                                 154: P_{5460} = (19, 9, 4, 1)
101: P_{4006} = (5, 28, 2, 1)
                                                                 155: P_{5504} = (31, 10, 4, 1)
102: P_{4034} = (1, 29, 2, 1)
                                                                 156: P_{5551} = (14, 12, 4, 1)
103: P_{4051} = (18, 29, 2, 1)
                                                                 157: P_{5588} = (19, 13, 4, 1)
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158: P_{5632} = (31, 14, 4, 1)
                                                                 212: P_{7524} = (3, 10, 6, 1)
159: P_{5709} = (12, 17, 4, 1)
                                                                 213: P_{7546} = (25, 10, 6, 1)
                                                                 214: P_{7548} = (27, 10, 6, 1)
160: P_{5730} = (1, 18, 4, 1)
161: P_{5738} = (9, 18, 4, 1)
                                                                 215: P_{7562} = (9, 11, 6, 1)
162: P_{5778} = (17, 19, 4, 1)
                                                                 216: P_{7588} = (3, 12, 6, 1)
163: P_{5837} = (12, 21, 4, 1)
                                                                 217: P_{7610} = (25, 12, 6, 1)
164: P_{5858} = (1, 22, 4, 1)
                                                                 218: P_{7612} = (27, 12, 6, 1)
165: P_{5866} = (9, 22, 4, 1)
                                                                 219: P_{7626} = (9, 13, 6, 1)
166: P_{5906} = (17, 23, 4, 1)
                                                                 220: P_{7675} = (26, 14, 6, 1)
167: P_{5957} = (4, 25, 4, 1)
                                                                 221: P_{7811} = (2, 19, 6, 1)
168: P_{5971} = (18, 25, 4, 1)
                                                                 222: P_{7875} = (2, 21, 6, 1)
169: P_{5976} = (23, 25, 4, 1)
                                                                 223: P_{7999} = (30, 24, 6, 1)
170: P_{6022} = (5, 27, 4, 1)
                                                                 224: P_{8014} = (13, 25, 6, 1)
171: P_{6085} = (4, 29, 4, 1)
                                                                 225: P_{8048} = (15, 26, 6, 1)
                                                                 226: P_{8083} = (18, 27, 6, 1)
172: P_{6099} = (18, 29, 4, 1)
173: P_{6104} = (23, 29, 4, 1)
                                                                 227: P_{8112} = (15, 28, 6, 1)
                                                                 228: P_{8147} = (18, 29, 6, 1)
174: P_{6150} = (5, 31, 4, 1)
                                                                 229: P_{8191} = (30, 30, 6, 1)
175: P_{6194} = (17, 0, 5, 1)
                                                                 230: P_{8206} = (13, 31, 6, 1)
176: P_{6231} = (22, 1, 5, 1)
177: P_{6248} = (7, 2, 5, 1)
                                                                 231: P_{8238} = (13, 0, 7, 1)
178: P_{6327} = (22, 4, 5, 1)
                                                                 232: P_{8245} = (20, 0, 7, 1)
179: P_{6354} = (17, 5, 5, 1)
                                                                 233: P_{8249} = (24, 0, 7, 1)
180: P_{6408} = (7, 7, 5, 1)
                                                                 234: P_{8265} = (8, 1, 7, 1)
181: P_{6443} = (10, 8, 5, 1)
                                                                 235: P_{8306} = (17, 2, 7, 1)
182: P_{6499} = (2, 10, 5, 1)
                                                                 236: P_{8336} = (15, 3, 7, 1)
183: P_{6542} = (13, 11, 5, 1)
                                                                 237: P_{8368} = (15, 4, 7, 1)
                                                                 238: P_{8402} = (17, 5, 7, 1)
184: P_{6550} = (21, 11, 5, 1)
185: P_{6554} = (25, 11, 5, 1)
                                                                 239: P_{8425} = (8, 6, 7, 1)
186: P_{6603} = (10, 13, 5, 1)
                                                                 240: P_{8462} = (13, 7, 7, 1)
                                                                 241: P_{8469} = (20, 7, 7, 1)
187: P_{6638} = (13, 14, 5, 1)
188: P_{6646} = (21, 14, 5, 1)
                                                                 242: P_{8473} = (24, 7, 7, 1)
                                                                 243: P_{8531} = (18, 9, 7, 1)
189: P_{6650} = (25, 14, 5, 1)
190: P_{6659} = (2, 15, 5, 1)
                                                                 244: P_{8564} = (19, 10, 7, 1)
                                                                 245: P_{8660} = (19, 13, 7, 1)
191: P_{6695} = (6, 16, 5, 1)
192: P_{6713} = (24, 16, 5, 1)
                                                                 246: P_{8691} = (18, 14, 7, 1)
                                                                 247: P_{8763} = (26, 16, 7, 1)
193: P_{6720} = (31, 16, 5, 1)
194: P_{6855} = (6, 21, 5, 1)
                                                                 248: P_{8790} = (21, 17, 7, 1)
                                                                 249: P_{8826} = (25, 18, 7, 1)
195: P_{6873} = (24, 21, 5, 1)
196: P_{6880} = (31, 21, 5, 1)
                                                                 250: P_{8844} = (11, 19, 7, 1)
197: P_{7004} = (27, 25, 5, 1)
                                                                 251: P_{8856} = (23, 19, 7, 1)
198: P_{7010} = (1, 26, 5, 1)
                                                                 252: P_{8862} = (29, 19, 7, 1)
199: P_{7023} = (14, 26, 5, 1)
                                                                 253: P_{8876} = (11, 20, 7, 1)
200: P_{7049} = (8, 27, 5, 1)
                                                                 254: P_{8888} = (23, 20, 7, 1)
201: P_{7061} = (20, 27, 5, 1)
                                                                 255: P_{8894} = (29, 20, 7, 1)
202: P_{7070} = (29, 27, 5, 1)
                                                                 256: P_{8922} = (25, 21, 7, 1)
203: P_{7100} = (27, 28, 5, 1)
                                                                 257: P_{8950} = (21, 22, 7, 1)
204: P_{7145} = (8, 30, 5, 1)
                                                                 258: P_{8987} = (26, 23, 7, 1)
205: P_{7157} = (20, 30, 5, 1)
                                                                 259: P_{8994} = (1, 24, 7, 1)
206: P_{7166} = (29, 30, 5, 1)
                                                                 260: P_{8996} = (3, 24, 7, 1)
207: P_{7170} = (1, 31, 5, 1)
                                                                 261: P_{9055} = (30, 25, 7, 1)
208: P_{7183} = (14, 31, 5, 1)
                                                                 262: P_{9215} = (30, 30, 7, 1)
209: P_{7271} = (6, 2, 6, 1)
                                                                 263: P_{9218} = (1, 31, 7, 1)
210: P_{7335} = (6, 4, 6, 1)
                                                                 264: P_{9220} = (3, 31, 7, 1)
211: P_{7483} = (26, 8, 6, 1)
                                                                 265: P_{9263} = (14, 0, 8, 1)
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320: P_{11224} = (23, 29, 9, 1)
266: P_{9285} = (4, 1, 8, 1)
267: P_{9300} = (19, 1, 8, 1)
                                                                321: P_{11261} = (28, 30, 9, 1)
268: P_{9303} = (22, 1, 8, 1)
                                                                322: P_{11268} = (3, 31, 9, 1)
269: P_{9357} = (12, 3, 8, 1)
                                                                323: P_{11281} = (16, 31, 9, 1)
270: P_{9387} = (10, 4, 8, 1)
                                                                324: P_{11283} = (18, 31, 9, 1)
271: P_{9450} = (9, 6, 8, 1)
                                                                325: P_{11327} = (30, 0, 10, 1)
272: P_{9484} = (11, 7, 8, 1)
                                                                326: P_{11337} = (8, 1, 10, 1)
273: P_{9491} = (18, 7, 8, 1)
                                                                327: P_{11345} = (16, 1, 10, 1)
274: P_{9497} = (24, 7, 8, 1)
                                                                328: P_{11354} = (25, 1, 10, 1)
275: P_{9519} = (14, 8, 8, 1)
                                                                329: P_{11381} = (20, 2, 10, 1)
276: P_{9541} = (4, 9, 8, 1)
                                                                330: P_{11396} = (3, 3, 10, 1)
277: P_{9556} = (19, 9, 8, 1)
                                                                331: P_{11483} = (26, 5, 10, 1)
278: P_{9559} = (22, 9, 8, 1)
                                                                332: P_{11517} = (28, 6, 10, 1)
                                                                333: P_{11525} = (4, 7, 10, 1)
279: P_{9613} = (12, 11, 8, 1)
280: P_{9643} = (10, 12, 8, 1)
                                                                334: P_{11573} = (20, 8, 10, 1)
281: P_{9706} = (9, 14, 8, 1)
                                                                335: P_{11588} = (3, 9, 10, 1)
282: P_{9740} = (11, 15, 8, 1)
                                                                336: P_{11647} = (30, 10, 10, 1)
283: P_{9747} = (18, 15, 8, 1)
                                                                337: P_{11657} = (8, 11, 10, 1)
284: P_{9753} = (24, 15, 8, 1)
                                                                338: P_{11665} = (16, 11, 10, 1)
285: P_{9763} = (2, 16, 8, 1)
                                                                339: P_{11674} = (25, 11, 10, 1)
286: P_{9814} = (21, 17, 8, 1)
                                                                340: P_{11709} = (28, 12, 10, 1)
287: P_{9851} = (26, 18, 8, 1)
                                                                341: P_{11717} = (4, 13, 10, 1)
288: P_{9863} = (6, 19, 8, 1)
                                                                342: P_{11803} = (26, 15, 10, 1)
289: P_{9980} = (27, 22, 8, 1)
                                                                343: P_{11823} = (14, 16, 10, 1)
290: P_{10019} = (2, 24, 8, 1)
                                                                344: P_{11907} = (2, 19, 10, 1)
291: P_{10070} = (21, 25, 8, 1)
                                                                345: P_{11948} = (11, 20, 10, 1)
292: P_{10107} = (26, 26, 8, 1)
                                                                346: P_{11976} = (7, 21, 10, 1)
293: P_{10119} = (6, 27, 8, 1)
                                                                347: P_{11978} = (9, 21, 10, 1)
294: P_{10236} = (27, 30, 8, 1)
                                                                348: P_{11984} = (15, 21, 10, 1)
295: P_{10343} = (6, 2, 9, 1)
                                                                349: P_{12099} = (2, 25, 10, 1)
296: P_{10393} = (24, 3, 9, 1)
                                                                350: P_{12143} = (14, 26, 10, 1)
297: P_{10423} = (22, 4, 9, 1)
                                                                351: P_{12268} = (11, 30, 10, 1)
298: P_{10448} = (15, 5, 9, 1)
                                                                352: P_{12296} = (7, 31, 10, 1)
299: P_{10496} = (31, 6, 9, 1)
                                                                353: P_{12298} = (9, 31, 10, 1)
                                                                354: P_{12304} = (15, 31, 10, 1)
300: P_{10502} = (5, 7, 9, 1)
301: P_{10617} = (24, 10, 9, 1)
                                                                355: P_{12407} = (22, 2, 11, 1)
302: P_{10631} = (6, 11, 9, 1)
                                                                356: P_{12420} = (3, 3, 11, 1)
303: P_{10672} = (15, 12, 9, 1)
                                                                357: P_{12469} = (20, 4, 11, 1)
304: P_{10711} = (22, 13, 9, 1)
                                                                358: P_{12488} = (7, 5, 11, 1)
305: P_{10726} = (5, 14, 9, 1)
                                                                359: P_{12555} = (10, 7, 11, 1)
306: P_{10784} = (31, 15, 9, 1)
                                                                360: P_{12580} = (3, 8, 11, 1)
307: P_{10825} = (8, 17, 9, 1)
                                                                361: P_{12631} = (22, 9, 11, 1)
308: P_{10878} = (29, 18, 9, 1)
                                                                362: P_{12715} = (10, 12, 11, 1)
309: P_{10907} = (26, 19, 9, 1)
                                                                363: P_{12776} = (7, 14, 11, 1)
310: P_{10914} = (1, 20, 9, 1)
                                                                364: P_{12821} = (20, 15, 11, 1)
311: P_{10936} = (23, 20, 9, 1)
                                                                365: P_{12858} = (25, 16, 11, 1)
312: P_{10980} = (3, 22, 9, 1)
                                                                366: P_{12896} = (31, 17, 11, 1)
313: P_{10993} = (16, 22, 9, 1)
                                                                367: P_{12902} = (5, 18, 11, 1)
314: P_{10995} = (18, 22, 9, 1)
                                                                368: P_{12906} = (9, 18, 11, 1)
315: P_{11037} = (28, 23, 9, 1)
                                                                369: P_{12910} = (13, 18, 11, 1)
316: P_{11049} = (8, 24, 9, 1)
                                                                370: P_{12952} = (23, 19, 11, 1)
317: P_{11131} = (26, 26, 9, 1)
                                                                371: P_{12979} = (18, 20, 11, 1)
318: P_{11166} = (29, 27, 9, 1)
                                                                372: P_{13010} = (17, 21, 11, 1)
319: P_{11202} = (1, 29, 9, 1)
                                                                373: P_{13026} = (1, 22, 11, 1)
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374: P_{13049} = (24, 22, 11, 1)
                                                                428: P_{14619} = (26, 7, 13, 1)
375: P_{13112} = (23, 24, 11, 1)
                                                                429: P_{14669} = (12, 9, 13, 1)
376: P_{13126} = (5, 25, 11, 1)
                                                                430: P_{14715} = (26, 10, 13, 1)
377: P_{13130} = (9, 25, 11, 1)
                                                                431: P_{14722} = (1, 11, 13, 1)
378: P_{13134} = (13, 25, 11, 1)
                                                                432: P_{14736} = (15, 11, 13, 1)
379: P_{13184} = (31, 26, 11, 1)
                                                                433: P_{14761} = (8, 12, 13, 1)
380: P_{13210} = (25, 27, 11, 1)
                                                                434: P_{14775} = (22, 12, 13, 1)
381: P_{13250} = (1, 29, 11, 1)
                                                                435: P_{14784} = (31, 12, 13, 1)
382: P_{13273} = (24, 29, 11, 1)
                                                                436: P_{14803} = (18, 13, 13, 1)
383: P_{13298} = (17, 30, 11, 1)
                                                                437: P_{14836} = (19, 14, 13, 1)
384: P_{13331} = (18, 31, 11, 1)
                                                                438: P_{14859} = (10, 15, 13, 1)
385: P_{13371} = (26, 0, 12, 1)
                                                                439: P_{14904} = (23, 16, 13, 1)
386: P_{13383} = (6, 1, 12, 1)
                                                                440: P_{14941} = (28, 17, 13, 1)
387: P_{13439} = (30, 2, 12, 1)
                                                                441: P_{14986} = (9, 19, 13, 1)
388: P_{13487} = (14, 4, 12, 1)
                                                                442: P_{15016} = (7, 20, 13, 1)
389: P_{13495} = (22, 4, 12, 1)
                                                                443: P_{15020} = (11, 20, 13, 1)
                                                                444: P_{15022} = (13, 20, 13, 1)
390: P_{13498} = (25, 4, 12, 1)
391: P_{13506} = (1, 5, 12, 1)
                                                                445: P_{15108} = (3, 23, 13, 1)
392: P_{13524} = (19, 5, 12, 1)
                                                                446: P_{15176} = (7, 25, 13, 1)
393: P_{13615} = (14, 8, 12, 1)
                                                                447: P_{15180} = (11, 25, 13, 1)
394: P_{13623} = (22, 8, 12, 1)
                                                                448: P_{15182} = (13, 25, 13, 1)
395: P_{13626} = (25, 8, 12, 1)
                                                                449: P_{15204} = (3, 26, 13, 1)
396: P_{13634} = (1, 9, 12, 1)
                                                                450: P_{15293} = (28, 28, 13, 1)
397: P_{13652} = (19, 9, 12, 1)
                                                                451: P_{15320} = (23, 29, 13, 1)
398: P_{13755} = (26, 12, 12, 1)
                                                                452: P_{15338} = (9, 30, 13, 1)
399: P_{13767} = (6, 13, 12, 1)
                                                                453: P_{15412} = (19, 0, 14, 1)
400: P_{13823} = (30, 14, 12, 1)
                                                                454: P_{15431} = (6, 1, 14, 1)
401: P_{13885} = (28, 16, 12, 1)
                                                                455: P_{15435} = (10, 1, 14, 1)
402: P_{13937} = (16, 18, 12, 1)
                                                                456: P_{15438} = (13, 1, 14, 1)
                                                                457: P_{15519} = (30, 3, 14, 1)
403: P_{13955} = (2, 19, 12, 1)
404: P_{13973} = (20, 19, 12, 1)
                                                                458: P_{15550} = (29, 4, 14, 1)
405: P_{13976} = (23, 19, 12, 1)
                                                                459: P_{15558} = (5, 5, 14, 1)
406: P_{13989} = (4, 20, 12, 1)
                                                                460: P_{15589} = (4, 6, 14, 1)
407: P_{14090} = (9, 23, 12, 1)
                                                                461: P_{15653} = (4, 8, 14, 1)
408: P_{14102} = (21, 23, 12, 1)
                                                                462: P_{15742} = (29, 10, 14, 1)
409: P_{14110} = (29, 23, 12, 1)
                                                                463: P_{15750} = (5, 11, 14, 1)
410: P_{14117} = (4, 24, 12, 1)
                                                                464: P_{15839} = (30, 13, 14, 1)
411: P_{14218} = (9, 27, 12, 1)
                                                                465: P_{15860} = (19, 14, 14, 1)
412: P_{14230} = (21, 27, 12, 1)
                                                                466: P_{15879} = (6, 15, 14, 1)
413: P_{14238} = (29, 27, 12, 1)
                                                                467: P_{15883} = (10, 15, 14, 1)
414: P_{14269} = (28, 28, 12, 1)
                                                                468: P_{15886} = (13, 15, 14, 1)
415: P_{14321} = (16, 30, 12, 1)
                                                                469: P_{15940} = (3, 17, 14, 1)
416: P_{14339} = (2, 31, 12, 1)
                                                                470: P_{15980} = (11, 18, 14, 1)
417: P_{14357} = (20, 31, 12, 1)
                                                                471: P_{15990} = (21, 18, 14, 1)
418: P_{14360} = (23, 31, 12, 1)
                                                                472: P_{16000} = (31, 18, 14, 1)
419: P_{14387} = (18, 0, 13, 1)
                                                                473: P_{16016} = (15, 19, 14, 1)
420: P_{14409} = (8, 1, 13, 1)
                                                                474: P_{16056} = (23, 20, 14, 1)
421: P_{14423} = (22, 1, 13, 1)
                                                                475: P_{16081} = (16, 21, 14, 1)
422: P_{14432} = (31, 1, 13, 1)
                                                                476: P_{16248} = (23, 26, 14, 1)
423: P_{14443} = (10, 2, 13, 1)
                                                                477: P_{16273} = (16, 27, 14, 1)
424: P_{14484} = (19, 3, 13, 1)
                                                                478: P_{16300} = (11, 28, 14, 1)
425: P_{14509} = (12, 4, 13, 1)
                                                                479: P_{16310} = (21, 28, 14, 1)
426: P_{14562} = (1, 6, 13, 1)
                                                                480: P_{16320} = (31, 28, 14, 1)
427: P_{14576} = (15, 6, 13, 1)
                                                                481: P_{16336} = (15, 29, 14, 1)
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482: P_{16388} = (3, 31, 14, 1)
                                                                536: P_{18134} = (21, 21, 16, 1)
483: P_{16487} = (6, 2, 15, 1)
                                                                537: P_{18154} = (9, 22, 16, 1)
484: P_{16531} = (18, 3, 15, 1)
                                                                538: P_{18161} = (16, 22, 16, 1)
485: P_{16570} = (25, 4, 15, 1)
                                                                539: P_{18169} = (24, 22, 16, 1)
486: P_{16582} = (5, 5, 15, 1)
                                                                540: P_{18221} = (12, 24, 16, 1)
487: P_{16620} = (11, 6, 15, 1)
                                                                541: P_{18242} = (1, 25, 16, 1)
488: P_{16626} = (17, 6, 15, 1)
                                                                542: P_{18252} = (11, 25, 16, 1)
489: P_{16636} = (27, 6, 15, 1)
                                                                543: P_{18303} = (30, 26, 16, 1)
490: P_{16665} = (24, 7, 15, 1)
                                                                544: P_{18313} = (8, 27, 16, 1)
491: P_{16697} = (24, 8, 15, 1)
                                                                545: P_{18363} = (26, 28, 16, 1)
492: P_{16716} = (11, 9, 15, 1)
                                                                546: P_{18419} = (18, 30, 16, 1)
493: P_{16722} = (17, 9, 15, 1)
                                                                547: P_{18477} = (12, 0, 17, 1)
494: P_{16732} = (27, 9, 15, 1)
                                                                548: P_{18522} = (25, 1, 17, 1)
495: P_{16742} = (5, 10, 15, 1)
                                                                549: P_{18539} = (10, 2, 17, 1)
496: P_{16794} = (25, 11, 15, 1)
                                                                550: P_{18551} = (22, 2, 17, 1)
497: P_{16819} = (18, 12, 15, 1)
                                                                551: P_{18558} = (29, 2, 17, 1)
498: P_{16839} = (6, 13, 15, 1)
                                                                552: P_{18562} = (1, 3, 17, 1)
499: P_{16958} = (29, 16, 15, 1)
                                                                553: P_{18591} = (30, 3, 17, 1)
500: P_{16982} = (21, 17, 15, 1)
                                                                554: P_{18614} = (21, 4, 17, 1)
501: P_{17002} = (9, 18, 15, 1)
                                                                555: P_{18659} = (2, 6, 17, 1)
502: P_{17037} = (12, 19, 15, 1)
                                                                556: P_{18799} = (14, 10, 17, 1)
503: P_{17103} = (14, 21, 15, 1)
                                                                557: P_{18888} = (7, 13, 17, 1)
504: P_{17122} = (1, 22, 15, 1)
                                                                558: P_{18899} = (18, 13, 17, 1)
505: P_{17128} = (7, 22, 15, 1)
                                                                559: P_{18901} = (20, 13, 17, 1)
506: P_{17218} = (1, 25, 15, 1)
                                                                560: P_{18917} = (4, 14, 17, 1)
507: P_{17224} = (7, 25, 15, 1)
                                                                561: P_{18951} = (6, 15, 17, 1)
508: P_{17263} = (14, 26, 15, 1)
                                                                562: P_{18972} = (27, 15, 17, 1)
509: P_{17325} = (12, 28, 15, 1)
                                                                563: P_{18973} = (28, 15, 17, 1)
510: P_{17354} = (9, 29, 15, 1)
                                                                564: P_{19002} = (25, 16, 17, 1)
511: P_{17398} = (21, 30, 15, 1)
                                                                565: P_{19021} = (12, 17, 17, 1)
512: P_{17438} = (29, 31, 15, 1)
                                                                566: P_{19042} = (1, 18, 17, 1)
513: P_{17472} = (31, 0, 16, 1)
                                                                567: P_{19071} = (30, 18, 17, 1)
514: P_{17488} = (15, 1, 16, 1)
                                                                568: P_{19083} = (10, 19, 17, 1)
515: P_{17492} = (19, 1, 16, 1)
                                                                569: P_{19095} = (22, 19, 17, 1)
516: P_{17502} = (29, 1, 16, 1)
                                                                570: P_{19102} = (29, 19, 17, 1)
517: P_{17522} = (17, 2, 16, 1)
                                                                571: P_{19158} = (21, 21, 17, 1)
518: P_{17597} = (28, 4, 16, 1)
                                                                572: P_{19203} = (2, 23, 17, 1)
519: P_{17622} = (21, 5, 16, 1)
                                                                573: P_{19343} = (14, 27, 17, 1)
520: P_{17642} = (9, 6, 16, 1)
                                                                574: P_{19368} = (7, 28, 17, 1)
521: P_{17649} = (16, 6, 16, 1)
                                                                575: P_{19379} = (18, 28, 17, 1)
522: P_{17657} = (24, 6, 16, 1)
                                                                576: P_{19381} = (20, 28, 17, 1)
523: P_{17709} = (12, 8, 16, 1)
                                                                577: P_{19431} = (6, 30, 17, 1)
524: P_{17730} = (1, 9, 16, 1)
                                                                578: P_{19452} = (27, 30, 17, 1)
525: P_{17740} = (11, 9, 16, 1)
                                                                579: P_{19453} = (28, 30, 17, 1)
526: P_{17791} = (30, 10, 16, 1)
                                                                580: P_{19461} = (4, 31, 17, 1)
527: P_{17801} = (8, 11, 16, 1)
                                                                581: P_{19582} = (29, 2, 18, 1)
528: P_{17851} = (26, 12, 16, 1)
                                                                582: P_{19596} = (11, 3, 18, 1)
529: P_{17907} = (18, 14, 16, 1)
                                                                583: P_{19668} = (19, 5, 18, 1)
530: P_{17984} = (31, 16, 16, 1)
                                                                584: P_{19682} = (1, 6, 18, 1)
531: P_{18000} = (15, 17, 16, 1)
                                                                585: P_{19709} = (28, 6, 18, 1)
532: P_{18004} = (19, 17, 16, 1)
                                                                586: P_{19768} = (23, 8, 18, 1)
533: P_{18014} = (29, 17, 16, 1)
                                                                587: P_{19802} = (25, 9, 18, 1)
534: P_{18034} = (17, 18, 16, 1)
                                                                588: P_{19812} = (3, 10, 18, 1)
535: P_{18109} = (28, 20, 16, 1)
                                                                589: P_{19856} = (15, 11, 18, 1)
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590: P_{19885} = (12, 12, 18, 1)
                                                                644: P_{21756} = (27, 6, 20, 1)
591: P_{19925} = (20, 13, 18, 1)
                                                                645: P_{21780} = (19, 7, 20, 1)
592: P_{19958} = (21, 14, 18, 1)
                                                                646: P_{21797} = (4, 8, 20, 1)
593: P_{19973} = (4, 15, 18, 1)
                                                                647: P_{21860} = (3, 10, 20, 1)
594: P_{19995} = (26, 15, 18, 1)
                                                                648: P_{21987} = (2, 14, 20, 1)
595: P_{20000} = (31, 15, 18, 1)
                                                                649: P_{21990} = (5, 14, 20, 1)
596: P_{20030} = (29, 16, 18, 1)
                                                                650: P_{21991} = (6, 14, 20, 1)
597: P_{20044} = (11, 17, 18, 1)
                                                                651: P_{22028} = (11, 15, 20, 1)
598: P_{20130} = (1, 20, 18, 1)
                                                                652: P_{22069} = (20, 16, 20, 1)
599: P_{20157} = (28, 20, 18, 1)
                                                                653: P_{22140} = (27, 18, 20, 1)
600: P_{20244} = (19, 23, 18, 1)
                                                                654: P_{22164} = (19, 19, 20, 1)
601: P_{20260} = (3, 24, 18, 1)
                                                                655: P_{22250} = (9, 22, 20, 1)
602: P_{20304} = (15, 25, 18, 1)
                                                                656: P_{22304} = (31, 23, 20, 1)
603: P_{20344} = (23, 26, 18, 1)
                                                                657: P_{22371} = (2, 26, 20, 1)
604: P_{20378} = (25, 27, 18, 1)
                                                                658: P_{22374} = (5, 26, 20, 1)
605: P_{20406} = (21, 28, 18, 1)
                                                                659: P_{22375} = (6, 26, 20, 1)
606: P_{20421} = (4, 29, 18, 1)
                                                                660: P_{22412} = (11, 27, 20, 1)
607: P_{20443} = (26, 29, 18, 1)
                                                                661: P_{22437} = (4, 28, 20, 1)
608: P_{20448} = (31, 29, 18, 1)
                                                                662: P_{22500} = (3, 30, 20, 1)
609: P_{20461} = (12, 30, 18, 1)
                                                                663: P_{22568} = (7, 0, 21, 1)
610: P_{20501} = (20, 31, 18, 1)
                                                                664: P_{22588} = (27, 0, 21, 1)
611: P_{20523} = (10, 0, 19, 1)
                                                                665: P_{22590} = (29, 0, 21, 1)
612: P_{20547} = (2, 1, 19, 1)
                                                                666: P_{22603} = (10, 1, 21, 1)
613: P_{20574} = (29, 1, 19, 1)
                                                                667: P_{22701} = (12, 4, 21, 1)
614: P_{20575} = (30, 1, 19, 1)
                                                                668: P_{22752} = (31, 5, 21, 1)
615: P_{20585} = (8, 2, 19, 1)
                                                                669: P_{22772} = (19, 6, 21, 1)
616: P_{20668} = (27, 4, 19, 1)
                                                                670: P_{22786} = (1, 7, 21, 1)
617: P_{20680} = (7, 5, 19, 1)
                                                                671: P_{22790} = (5, 7, 21, 1)
618: P_{20818} = (17, 9, 19, 1)
                                                                672: P_{22832} = (15, 8, 21, 1)
                                                                673: P_{22839} = (22, 8, 21, 1)
619: P_{20851} = (18, 10, 19, 1)
620: P_{20874} = (9, 11, 19, 1)
                                                                674: P_{22841} = (24, 8, 21, 1)
621: P_{20888} = (23, 11, 19, 1)
                                                                675: P_{22855} = (6, 9, 21, 1)
622: P_{20896} = (31, 11, 19, 1)
                                                                676: P_{22922} = (9, 11, 21, 1)
623: P_{20909} = (12, 12, 19, 1)
                                                                677: P_{22973} = (28, 12, 21, 1)
                                                                678: P_{22980} = (3, 13, 21, 1)
624: P_{20954} = (25, 13, 19, 1)
625: P_{20974} = (13, 14, 19, 1)
                                                                679: P_{23017} = (8, 14, 21, 1)
626: P_{21065} = (8, 17, 19, 1)
                                                                680: P_{23104} = (31, 16, 21, 1)
627: P_{21091} = (2, 18, 19, 1)
                                                                681: P_{23117} = (12, 17, 21, 1)
628: P_{21118} = (29, 18, 19, 1)
                                                                682: P_{23138} = (1, 18, 21, 1)
629: P_{21119} = (30, 18, 19, 1)
                                                                683: P_{23142} = (5, 18, 21, 1)
630: P_{21131} = (10, 19, 19, 1)
                                                                684: P_{23188} = (19, 19, 21, 1)
631: P_{21224} = (7, 22, 19, 1)
                                                                685: P_{23211} = (10, 20, 21, 1)
632: P_{21276} = (27, 23, 19, 1)
                                                                686: P_{23240} = (7, 21, 21, 1)
633: P_{21290} = (9, 24, 19, 1)
                                                                687: P_{23260} = (27, 21, 21, 1)
634: P_{21304} = (23, 24, 19, 1)
                                                                688: P_{23262} = (29, 21, 21, 1)
635: P_{21312} = (31, 24, 19, 1)
                                                                689: P_{23332} = (3, 24, 21, 1)
636: P_{21331} = (18, 25, 19, 1)
                                                                690: P_{23389} = (28, 25, 21, 1)
637: P_{21362} = (17, 26, 19, 1)
                                                                691: P_{23433} = (8, 27, 21, 1)
638: P_{21454} = (13, 29, 19, 1)
                                                                692: P_{23463} = (6, 28, 21, 1)
639: P_{21498} = (25, 30, 19, 1)
                                                                693: P_{23504} = (15, 29, 21, 1)
640: P_{21517} = (12, 31, 19, 1)
                                                                694: P_{23511} = (22, 29, 21, 1)
641: P_{21610} = (9, 2, 20, 1)
                                                                695: P_{23513} = (24, 29, 21, 1)
642: P_{21664} = (31, 3, 20, 1)
                                                                696: P_{23530} = (9, 30, 21, 1)
643: P_{21685} = (20, 4, 20, 1)
                                                                697: P_{23744} = (31, 4, 22, 1)
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698: P_{23757} = (12, 5, 22, 1)
                                                                752: P_{25616} = (15, 31, 23, 1)
699: P_{23761} = (16, 5, 22, 1)
                                                                753: P_{25639} = (6, 0, 24, 1)
700: P_{23774} = (29, 5, 22, 1)
                                                                754: P_{25649} = (16, 0, 24, 1)
701: P_{23792} = (15, 6, 22, 1)
                                                                755: P_{25656} = (23, 0, 24, 1)
702: P_{23818} = (9, 7, 22, 1)
                                                                756: P_{25684} = (19, 1, 24, 1)
703: P_{23858} = (17, 8, 22, 1)
                                                                757: P_{25708} = (11, 2, 24, 1)
704: P_{23915} = (10, 10, 22, 1)
                                                                758: P_{25734} = (5, 3, 24, 1)
705: P_{23941} = (4, 11, 22, 1)
                                                                759: P_{25773} = (12, 4, 24, 1)
706: P_{24023} = (22, 13, 22, 1)
                                                                760: P_{25800} = (7, 5, 24, 1)
707: P_{24046} = (13, 14, 22, 1)
                                                                761: P_{25834} = (9, 6, 24, 1)
708: P_{24112} = (15, 16, 22, 1)
                                                                762: P_{25845} = (20, 6, 24, 1)
709: P_{24138} = (9, 17, 22, 1)
                                                                763: P_{25853} = (28, 6, 24, 1)
710: P_{24192} = (31, 18, 22, 1)
                                                                764: P_{25879} = (22, 7, 24, 1)
711: P_{24205} = (12, 19, 22, 1)
                                                                765: P_{25919} = (30, 8, 24, 1)
712: P_{24209} = (16, 19, 22, 1)
                                                                766: P_{25984} = (31, 10, 24, 1)
713: P_{24222} = (29, 19, 22, 1)
                                                                767: P_{26095} = (14, 14, 24, 1)
714: P_{24366} = (13, 24, 22, 1)
                                                                768: P_{26114} = (1, 15, 24, 1)
715: P_{24471} = (22, 27, 22, 1)
                                                                769: P_{26139} = (26, 15, 24, 1)
716: P_{24491} = (10, 28, 22, 1)
                                                                770: P_{26175} = (30, 16, 24, 1)
717: P_{24517} = (4, 29, 22, 1)
                                                                771: P_{26240} = (31, 18, 24, 1)
718: P_{24562} = (17, 30, 22, 1)
                                                                772: P_{26351} = (14, 22, 24, 1)
719: P_{24613} = (4, 0, 23, 1)
                                                                773: P_{26370} = (1, 23, 24, 1)
720: P_{24634} = (25, 0, 23, 1)
                                                                774: P_{26395} = (26, 23, 24, 1)
721: P_{24637} = (28, 0, 23, 1)
                                                                775: P_{26407} = (6, 24, 24, 1)
722: P_{24671} = (30, 1, 23, 1)
                                                                776: P_{26417} = (16, 24, 24, 1)
723: P_{24690} = (17, 2, 23, 1)
                                                                777: P_{26424} = (23, 24, 24, 1)
724: P_{24729} = (24, 3, 23, 1)
                                                                778: P_{26452} = (19, 25, 24, 1)
725: P_{24751} = (14, 4, 23, 1)
                                                                779: P_{26476} = (11, 26, 24, 1)
726: P_{24880} = (15, 8, 23, 1)
                                                                780: P_{26502} = (5, 27, 24, 1)
727: P_{24939} = (10, 10, 23, 1)
                                                                781: P_{26541} = (12, 28, 24, 1)
728: P_{24962} = (1, 11, 23, 1)
                                                                782: P_{26568} = (7, 29, 24, 1)
729: P_{24973} = (12, 11, 23, 1)
                                                                783: P_{26602} = (9, 30, 24, 1)
730: P_{25002} = (9, 12, 23, 1)
                                                                784: P_{26613} = (20, 30, 24, 1)
731: P_{25028} = (3, 13, 23, 1)
                                                                785: P_{26621} = (28, 30, 24, 1)
732: P_{25063} = (6, 14, 23, 1)
                                                                786: P_{26647} = (22, 31, 24, 1)
733: P_{25075} = (18, 14, 23, 1)
                                                                787: P_{26746} = (25, 2, 25, 1)
734: P_{25078} = (21, 14, 23, 1)
                                                                788: P_{26908} = (27, 7, 25, 1)
735: P_{25118} = (29, 15, 23, 1)
                                                                789: P_{26926} = (13, 8, 25, 1)
                                                                790: P_{26935} = (22, 8, 25, 1)
736: P_{25231} = (14, 19, 23, 1)
737: P_{25273} = (24, 20, 23, 1)
                                                                791: P_{26939} = (26, 8, 25, 1)
738: P_{25298} = (17, 21, 23, 1)
                                                                792: P_{26963} = (18, 9, 25, 1)
739: P_{25343} = (30, 22, 23, 1)
                                                                793: P_{26989} = (12, 10, 25, 1)
740: P_{25349} = (4, 23, 23, 1)
                                                                794: P_{27052} = (11, 12, 25, 1)
741: P_{25370} = (25, 23, 23, 1)
                                                                795: P_{27104} = (31, 13, 25, 1)
742: P_{25373} = (28, 23, 23, 1)
                                                                796: P_{27119} = (14, 14, 25, 1)
743: P_{25406} = (29, 24, 23, 1)
                                                                797: P_{27153} = (16, 15, 25, 1)
744: P_{25415} = (6, 25, 23, 1)
                                                                798: P_{27187} = (18, 16, 25, 1)
745: P_{25427} = (18, 25, 23, 1)
                                                                799: P_{27214} = (13, 17, 25, 1)
746: P_{25430} = (21, 25, 23, 1)
                                                                800: P_{27223} = (22, 17, 25, 1)
747: P_{25444} = (3, 26, 23, 1)
                                                                801: P_{27227} = (26, 17, 25, 1)
748: P_{25482} = (9, 27, 23, 1)
                                                                802: P_{27277} = (12, 19, 25, 1)
749: P_{25506} = (1, 28, 23, 1)
                                                                803: P_{27328} = (31, 20, 25, 1)
750: P_{25517} = (12, 28, 23, 1)
                                                                804: P_{27340} = (11, 21, 25, 1)
751: P_{25547} = (10, 29, 23, 1)
                                                                805: P_{27377} = (16, 22, 25, 1)
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806: P_{27407} = (14, 23, 25, 1)
                                                                860: P_{29243} = (26, 16, 27, 1)
807: P_{27546} = (25, 27, 25, 1)
                                                                861: P_{29324} = (11, 19, 27, 1)
808: P_{27644} = (27, 30, 25, 1)
                                                                862: P_{29346} = (1, 20, 27, 1)
809: P_{27684} = (3, 0, 26, 1)
                                                                863: P_{29376} = (31, 20, 27, 1)
810: P_{27733} = (20, 1, 26, 1)
                                                                864: P_{29380} = (3, 21, 27, 1)
811: P_{27756} = (11, 2, 26, 1)
                                                                865: P_{29433} = (24, 22, 27, 1)
812: P_{27767} = (22, 2, 26, 1)
                                                                866: P_{29464} = (23, 23, 27, 1)
813: P_{27773} = (28, 2, 26, 1)
                                                                867: P_{29478} = (5, 24, 27, 1)
814: P_{27828} = (19, 4, 26, 1)
                                                                868: P_{29547} = (10, 26, 27, 1)
815: P_{27921} = (16, 7, 26, 1)
                                                                869: P_{29555} = (18, 26, 27, 1)
816: P_{27941} = (4, 8, 26, 1)
                                                                870: P_{29562} = (25, 26, 27, 1)
817: P_{27961} = (24, 8, 26, 1)
                                                                871: P_{29578} = (9, 27, 27, 1)
818: P_{27966} = (29, 8, 26, 1)
                                                                872: P_{29648} = (15, 29, 27, 1)
819: P_{27982} = (13, 9, 26, 1)
                                                                873: P_{29654} = (21, 29, 27, 1)
820: P_{28007} = (6, 10, 26, 1)
                                                                874: P_{29660} = (27, 29, 27, 1)
821: P_{28026} = (25, 10, 26, 1)
                                                                875: P_{29673} = (8, 30, 27, 1)
822: P_{28031} = (30, 10, 26, 1)
                                                                876: P_{29711} = (14, 31, 27, 1)
823: P_{28034} = (1, 11, 26, 1)
                                                                877: P_{29731} = (2, 0, 28, 1)
                                                                878: P_{29750} = (21, 0, 28, 1)
824: P_{28041} = (8, 11, 26, 1)
825: P_{28120} = (23, 13, 26, 1)
                                                                879: P_{29751} = (22, 0, 28, 1)
826: P_{28199} = (6, 16, 26, 1)
                                                                880: P_{29775} = (14, 1, 28, 1)
827: P_{28218} = (25, 16, 26, 1)
                                                                881: P_{29803} = (10, 2, 28, 1)
828: P_{28223} = (30, 16, 26, 1)
                                                                882: P_{29944} = (23, 6, 28, 1)
829: P_{28226} = (1, 17, 26, 1)
                                                                883: P_{29958} = (5, 7, 28, 1)
830: P_{28233} = (8, 17, 26, 1)
                                                                884: P_{29993} = (8, 8, 28, 1)
831: P_{28261} = (4, 18, 26, 1)
                                                                885: P_{30018} = (1, 9, 28, 1)
832: P_{28281} = (24, 18, 26, 1)
                                                                886: P_{30034} = (17, 9, 28, 1)
833: P_{28286} = (29, 18, 26, 1)
                                                                887: P_{30056} = (7, 10, 28, 1)
834: P_{28302} = (13, 19, 26, 1)
                                                                888: P_{30074} = (25, 10, 28, 1)
835: P_{28440} = (23, 23, 26, 1)
                                                                889: P_{30080} = (31, 10, 28, 1)
836: P_{28460} = (11, 24, 26, 1)
                                                                890: P_{30101} = (20, 11, 28, 1)
837: P_{28471} = (22, 24, 26, 1)
                                                                891: P_{30139} = (26, 12, 28, 1)
838: P_{28477} = (28, 24, 26, 1)
                                                                892: P_{30163} = (18, 13, 28, 1)
839: P_{28516} = (3, 26, 26, 1)
                                                                893: P_{30220} = (11, 15, 28, 1)
840: P_{28565} = (20, 27, 26, 1)
                                                                894: P_{30267} = (26, 16, 28, 1)
841: P_{28625} = (16, 29, 26, 1)
                                                                895: P_{30291} = (18, 17, 28, 1)
842: P_{28660} = (19, 30, 26, 1)
                                                                896: P_{30348} = (11, 19, 28, 1)
843: P_{28714} = (9, 0, 27, 1)
                                                                897: P_{30377} = (8, 20, 28, 1)
844: P_{28747} = (10, 1, 27, 1)
                                                                898: P_{30402} = (1, 21, 28, 1)
845: P_{28755} = (18, 1, 27, 1)
                                                                899: P_{30418} = (17, 21, 28, 1)
846: P_{28762} = (25, 1, 27, 1)
                                                                900: P_{30440} = (7, 22, 28, 1)
                                                                901: P_{30458} = (25, 22, 28, 1)
847: P_{28806} = (5, 3, 27, 1)
848: P_{28847} = (14, 4, 27, 1)
                                                                902: P_{30464} = (31, 22, 28, 1)
849: P_{28873} = (8, 5, 27, 1)
                                                                903: P_{30485} = (20, 23, 28, 1)
850: P_{28912} = (15, 6, 27, 1)
                                                                904: P_{30584} = (23, 26, 28, 1)
851: P_{28918} = (21, 6, 27, 1)
                                                                905: P_{30598} = (5, 27, 28, 1)
852: P_{28924} = (27, 6, 27, 1)
                                                                906: P_{30627} = (2, 28, 28, 1)
853: P_{28972} = (11, 8, 27, 1)
                                                                907: P_{30646} = (21, 28, 28, 1)
854: P_{29083} = (26, 11, 27, 1)
                                                                908: P_{30647} = (22, 28, 28, 1)
855: P_{29112} = (23, 12, 27, 1)
                                                                909: P_{30671} = (14, 29, 28, 1)
856: P_{29145} = (24, 13, 27, 1)
                                                                910: P_{30699} = (10, 30, 28, 1)
857: P_{29156} = (3, 14, 27, 1)
                                                                911: P_{30832} = (15, 2, 29, 1)
858: P_{29186} = (1, 15, 27, 1)
                                                                912: P_{30853} = (4, 3, 29, 1)
859: P_{29216} = (31, 15, 27, 1)
                                                                913: P_{30866} = (17, 3, 29, 1)
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914: P_{30869} = (20, 3, 29, 1)
                                                                954: P_{32531} = (18, 23, 30, 1)
915: P_{30892} = (11, 4, 29, 1)
                                                                955: P_{32541} = (28, 23, 30, 1)
916: P_{30931} = (18, 5, 29, 1)
                                                                956: P_{32660} = (19, 27, 30, 1)
917: P_{31017} = (8, 8, 29, 1)
                                                                957: P_{32686} = (13, 28, 30, 1)
918: P_{31043} = (2, 9, 29, 1)
                                                                958: P_{32729} = (24, 29, 30, 1)
919: P_{31089} = (16, 10, 29, 1)
                                                                959: P_{32745} = (8, 30, 30, 1)
920: P_{31198} = (29, 13, 29, 1)
                                                                960: P_{32783} = (14, 31, 30, 1)
921: P_{31206} = (5, 14, 29, 1)
                                                                961: P_{32789} = (20, 31, 30, 1)
922: P_{31294} = (29, 16, 29, 1)
                                                                962: P_{32796} = (27, 31, 30, 1)
923: P_{31366} = (5, 19, 29, 1)
                                                                963: P_{32927} = (30, 3, 31, 1)
924: P_{31395} = (2, 20, 29, 1)
                                                                964: P_{32949} = (20, 4, 31, 1)
925: P_{31433} = (8, 21, 29, 1)
                                                                965: P_{32970} = (9, 5, 31, 1)
926: P_{31505} = (16, 23, 29, 1)
                                                                966: P_{32994} = (1, 6, 31, 1)
927: P_{31539} = (18, 24, 29, 1)
                                                                967: P_{33014} = (21, 6, 31, 1)
                                                                968: P_{33083} = (26, 8, 31, 1)
928: P_{31564} = (11, 25, 29, 1)
929: P_{31717} = (4, 30, 29, 1)
                                                                969: P_{33100} = (11, 9, 31, 1)
930: P_{31730} = (17, 30, 29, 1)
                                                                970: P_{33128} = (7, 10, 31, 1)
931: P_{31733} = (20, 30, 29, 1)
                                                                971: P_{33155} = (2, 11, 31, 1)
                                                                972: P_{33165} = (12, 11, 31, 1)
932: P_{31760} = (15, 31, 29, 1)
933: P_{31785} = (8, 0, 30, 1)
                                                                973: P_{33168} = (15, 11, 31, 1)
934: P_{31823} = (14, 1, 30, 1)
                                                                974: P_{33213} = (28, 12, 31, 1)
935: P_{31829} = (20, 1, 30, 1)
                                                                975: P_{33239} = (22, 13, 31, 1)
936: P_{31836} = (27, 1, 30, 1)
                                                                976: P_{33266} = (17, 14, 31, 1)
937: P_{31854} = (13, 2, 30, 1)
                                                                977: P_{33287} = (6, 15, 31, 1)
938: P_{31897} = (24, 3, 30, 1)
                                                                978: P_{33319} = (6, 16, 31, 1)
939: P_{31956} = (19, 5, 30, 1)
                                                                979: P_{33362} = (17, 17, 31, 1)
940: P_{32064} = (31, 8, 30, 1)
                                                                980: P_{33399} = (22, 18, 31, 1)
941: P_{32080} = (15, 9, 30, 1)
                                                                981: P_{33437} = (28, 19, 31, 1)
942: P_{32083} = (18, 9, 30, 1)
                                                                982: P_{33443} = (2, 20, 31, 1)
943: P_{32093} = (28, 9, 30, 1)
                                                                983: P_{33453} = (12, 20, 31, 1)
944: P_{32113} = (16, 10, 30, 1)
                                                                984: P_{33456} = (15, 20, 31, 1)
945: P_{32166} = (5, 12, 30, 1)
                                                                985: P_{33480} = (7, 21, 31, 1)
946: P_{32247} = (22, 14, 30, 1)
                                                                986: P_{33516} = (11, 22, 31, 1)
947: P_{32274} = (17, 15, 30, 1)
                                                                987: P_{33563} = (26, 23, 31, 1)
948: P_{32311} = (22, 16, 30, 1)
                                                                988: P_{33602} = (1, 25, 31, 1)
                                                                989: P_{33622} = (21, 25, 31, 1)
949: P_{32338} = (17, 17, 30, 1)
950: P_{32358} = (5, 18, 30, 1)
                                                                990: P_{33642} = (9, 26, 31, 1)
                                                                991: P_{33685} = (20, 27, 31, 1)
951: P_{32433} = (16, 20, 30, 1)
                                                                992: P_{33727} = (30, 28, 31, 1)
952: P_{32512} = (31, 22, 30, 1)
953: P_{32528} = (15, 23, 30, 1)
```

Line Intersection Graph

 $\begin{array}{c|c}
0 & 1 & 2 \\
\hline
0 & 0 & 1 & 1 \\
1 & 1 & 0 & 1 \\
2 & 1 & 1 & 0
\end{array}$

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	ℓ_1	ℓ_2
in point	P_{2082}	P_{2114}

Line 1 intersects

Line	ℓ_0	ℓ_2
in point	P_{2082}	P_5

Line 2 intersects

	Line	ℓ_0	ℓ_1
ir	point	P_{2114}	P_5

The surface has 1089 points: Too many to print.