

Rank-65618 over GF(64)

January 15, 2021

The equation

The equation of the surface is :

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

(1, 1, 1, 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)

The point rank of the equation over GF(64) is 1091051654

General information

Number of lines	12
Number of points	4353
Number of singular points	3
Number of Eckardt points	0
Number of double points	18
Number of single points	732
Number of points off lines	3600
Number of Hesse planes	0
Number of axes	0
Type of points on lines	65^{12}
Type of lines on points	$4^3, 2^{18}, 1^{732}, 0^{3600}$

Singular Points

The surface has 3 singular points:

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

$$1 : P_{237186} = \mathbf{P}(1, \epsilon^{21}, \epsilon^{42}, 1) = \mathbf{P}(1, 57, 56, 1)$$

$$2 : P_{241218} = \mathbf{P}(1, \epsilon^{42}, \epsilon^{21}, 1) = \mathbf{P}(1, 56, 57, 1)$$

The 12 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 \end{array} \right]_{4162} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 \end{array} \right]_{4162} = \mathbf{Pl}(1, 0, 1, 0, 0, 1)_{270529}$$

$$\begin{aligned}
\ell_1 &= \begin{bmatrix} 1 & 0 & \epsilon^{42} & 0 \\ 0 & 1 & \epsilon^{21} & 0 \end{bmatrix}_{233073} = \begin{bmatrix} 1 & 0 & 56 & 0 \\ 0 & 1 & 57 & 0 \end{bmatrix}_{233073} = \mathbf{Pl}(57, 0, 56, 0, 0, 1)_{277570} \\
\ell_2 &= \begin{bmatrix} 1 & 0 & \epsilon^{21} & 0 \\ 0 & 1 & \epsilon^{42} & 0 \end{bmatrix}_{237233} = \begin{bmatrix} 1 & 0 & 57 & 0 \\ 0 & 1 & 56 & 0 \end{bmatrix}_{237233} = \mathbf{Pl}(56, 0, 57, 0, 0, 1)_{277696} \\
\ell_3 &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{8258} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{8258} = \mathbf{Pl}(0, 0, 1, 1, 1, 1)_{544578} \\
\ell_4 &= \begin{bmatrix} 1 & \epsilon^{21} & 0 & 0 \\ 0 & 0 & 1 & \epsilon^{21} \end{bmatrix}_{241330} = \begin{bmatrix} 1 & 57 & 0 & 0 \\ 0 & 0 & 1 & 57 \end{bmatrix}_{241330} = \mathbf{Pl}(0, 0, 56, 57, 1, 1)_{551563} \\
\ell_5 &= \begin{bmatrix} 1 & \epsilon^{42} & 0 & 0 \\ 0 & 0 & 1 & \epsilon^{42} \end{bmatrix}_{237168} = \begin{bmatrix} 1 & 56 & 0 & 0 \\ 0 & 0 & 1 & 56 \end{bmatrix}_{237168} = \mathbf{Pl}(0, 0, 57, 56, 1, 1)_{551690} \\
\ell_6 &= \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{4225} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{4225} = \mathbf{Pl}(1, 1, 0, 0, 1, 1)_{536577} \\
\ell_7 &= \begin{bmatrix} 1 & 0 & \epsilon^{21} & 0 \\ 0 & 1 & 0 & \epsilon^{21} \end{bmatrix}_{240825} = \begin{bmatrix} 1 & 0 & 57 & 0 \\ 0 & 1 & 0 & 57 \end{bmatrix}_{240825} = \mathbf{Pl}(56, 57, 0, 0, 1, 1)_{536632} \\
\ell_8 &= \begin{bmatrix} 1 & 0 & \epsilon^{42} & 0 \\ 0 & 1 & 0 & \epsilon^{42} \end{bmatrix}_{236600} = \begin{bmatrix} 1 & 0 & 56 & 0 \\ 0 & 1 & 0 & 56 \end{bmatrix}_{236600} = \mathbf{Pl}(57, 56, 0, 0, 1, 1)_{536633} \\
\ell_9 &= \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{270466} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{270466} = \mathbf{Pl}(1, 1, 1, 1, 0, 1)_{286530} \\
\ell_{10} &= \begin{bmatrix} 1 & 0 & \epsilon^{42} & 1 \\ 0 & 1 & \epsilon^{21} & 0 \end{bmatrix}_{499377} = \begin{bmatrix} 1 & 0 & 56 & 1 \\ 0 & 1 & 57 & 0 \end{bmatrix}_{499377} = \mathbf{Pl}(57, 56, 56, 57, 0, 1)_{512315} \\
\ell_{11} &= \begin{bmatrix} 1 & 0 & \epsilon^{21} & 1 \\ 0 & 1 & \epsilon^{42} & 0 \end{bmatrix}_{503537} = \begin{bmatrix} 1 & 0 & 57 & 1 \\ 0 & 1 & 56 & 0 \end{bmatrix}_{503537} = \mathbf{Pl}(56, 57, 57, 56, 0, 1)_{508408}
\end{aligned}$$

Rank of lines: (4162, 233073, 237233, 8258, 241330, 237168, 4225, 240825, 236600, 270466, 499377, 503537)

Rank of points on Klein quadric: (270529, 277570, 277696, 544578, 551563, 551690, 536577, 536632, 536633, 286530, 512315, 508408)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

The surface has 18 Double points:

The double points on the surface are:

$$\begin{aligned}
P_{3771} &= (56, 57, 1, 0) = \ell_0 \cap \ell_1 \\
P_{3708} &= (57, 56, 1, 0) = \ell_0 \cap \ell_2 \\
P_5 &= (1, 1, 0, 0) = \ell_0 \cap \ell_3 \\
P_{68} &= (1, 0, 1, 0) = \ell_0 \cap \ell_6 \\
P_{131} &= (0, 1, 1, 0) = \ell_0 \cap \ell_9 \\
P_{132} &= (1, 1, 1, 0) = \ell_1 \cap \ell_2 \\
P_{60} &= (56, 1, 0, 0) = \ell_1 \cap \ell_4 \\
P_{124} &= (57, 0, 1, 0) = \ell_1 \cap \ell_8 \\
P_{3651} &= (0, 56, 1, 0) = \ell_1 \cap \ell_{10} \\
P_{61} &= (57, 1, 0, 0) = \ell_2 \cap \ell_5
\end{aligned}$$

$$\begin{aligned}
P_{123} &= (56, 0, 1, 0) = \ell_2 \cap \ell_7 \\
P_{3715} &= (0, 57, 1, 0) = \ell_2 \cap \ell_{11} \\
P_{11897} &= (56, 56, 1, 1) = \ell_3 \cap \ell_7 \\
P_{11962} &= (57, 57, 1, 1) = \ell_3 \cap \ell_8 \\
P_{233657} &= (56, 1, 56, 1) = \ell_4 \cap \ell_6 \\
P_{237178} &= (57, 56, 56, 1) = \ell_4 \cap \ell_7 \\
P_{237754} &= (57, 1, 57, 1) = \ell_5 \cap \ell_6 \\
P_{241337} &= (56, 57, 57, 1) = \ell_5 \cap \ell_8
\end{aligned}$$

Single Points

The surface has 732 single points:
The single points on the surface are:

- | | |
|--|--|
| 0 : $P_{198} = (3, 2, 1, 0)$ lies on line ℓ_0 | 48 : $P_{1222} = (3, 18, 1, 0)$ lies on line ℓ_1 |
| 1 : $P_{235} = (40, 2, 1, 0)$ lies on line ℓ_1 | 49 : $P_{1235} = (16, 18, 1, 0)$ lies on line ℓ_2 |
| 2 : $P_{238} = (43, 2, 1, 0)$ lies on line ℓ_2 | 50 : $P_{1238} = (19, 18, 1, 0)$ lies on line ℓ_0 |
| 3 : $P_{261} = (2, 3, 1, 0)$ lies on line ℓ_0 | 51 : $P_{1301} = (18, 19, 1, 0)$ lies on line ℓ_0 |
| 4 : $P_{275} = (16, 3, 1, 0)$ lies on line ℓ_1 | 52 : $P_{1324} = (41, 19, 1, 0)$ lies on line ℓ_2 |
| 5 : $P_{277} = (18, 3, 1, 0)$ lies on line ℓ_2 | 53 : $P_{1342} = (59, 19, 1, 0)$ lies on line ℓ_1 |
| 6 : $P_{328} = (5, 4, 1, 0)$ lies on line ℓ_0 | 54 : $P_{1368} = (21, 20, 1, 0)$ lies on line ℓ_0 |
| 7 : $P_{350} = (27, 4, 1, 0)$ lies on line ℓ_1 | 55 : $P_{1384} = (37, 20, 1, 0)$ lies on line ℓ_2 |
| 8 : $P_{353} = (30, 4, 1, 0)$ lies on line ℓ_2 | 56 : $P_{1395} = (48, 20, 1, 0)$ lies on line ℓ_1 |
| 9 : $P_{391} = (4, 5, 1, 0)$ lies on line ℓ_0 | 57 : $P_{1419} = (8, 21, 1, 0)$ lies on line ℓ_1 |
| 10 : $P_{422} = (35, 5, 1, 0)$ lies on line ℓ_1 | 58 : $P_{1431} = (20, 21, 1, 0)$ lies on line ℓ_0 |
| 11 : $P_{426} = (39, 5, 1, 0)$ lies on line ℓ_2 | 59 : $P_{1439} = (28, 21, 1, 0)$ lies on line ℓ_2 |
| 12 : $P_{458} = (7, 6, 1, 0)$ lies on line ℓ_0 | 60 : $P_{1498} = (23, 22, 1, 0)$ lies on line ℓ_0 |
| 13 : $P_{461} = (10, 6, 1, 0)$ lies on line ℓ_1 | 61 : $P_{1508} = (33, 22, 1, 0)$ lies on line ℓ_1 |
| 14 : $P_{464} = (13, 6, 1, 0)$ lies on line ℓ_2 | 62 : $P_{1529} = (54, 22, 1, 0)$ lies on line ℓ_2 |
| 15 : $P_{521} = (6, 7, 1, 0)$ lies on line ℓ_0 | 63 : $P_{1554} = (15, 23, 1, 0)$ lies on line ℓ_2 |
| 16 : $P_{565} = (50, 7, 1, 0)$ lies on line ℓ_1 | 64 : $P_{1561} = (22, 23, 1, 0)$ lies on line ℓ_0 |
| 17 : $P_{567} = (52, 7, 1, 0)$ lies on line ℓ_2 | 65 : $P_{1564} = (25, 23, 1, 0)$ lies on line ℓ_1 |
| 18 : $P_{588} = (9, 8, 1, 0)$ lies on line ℓ_0 | 66 : $P_{1628} = (25, 24, 1, 0)$ lies on line ℓ_0 |
| 19 : $P_{600} = (21, 8, 1, 0)$ lies on line ℓ_2 | 67 : $P_{1649} = (46, 24, 1, 0)$ lies on line ℓ_2 |
| 20 : $P_{607} = (28, 8, 1, 0)$ lies on line ℓ_1 | 68 : $P_{1658} = (55, 24, 1, 0)$ lies on line ℓ_1 |
| 21 : $P_{651} = (8, 9, 1, 0)$ lies on line ℓ_0 | 69 : $P_{1682} = (15, 25, 1, 0)$ lies on line ℓ_1 |
| 22 : $P_{679} = (36, 9, 1, 0)$ lies on line ℓ_1 | 70 : $P_{1690} = (23, 25, 1, 0)$ lies on line ℓ_2 |
| 23 : $P_{687} = (44, 9, 1, 0)$ lies on line ℓ_2 | 71 : $P_{1691} = (24, 25, 1, 0)$ lies on line ℓ_0 |
| 24 : $P_{713} = (6, 10, 1, 0)$ lies on line ℓ_2 | 72 : $P_{1758} = (27, 26, 1, 0)$ lies on line ℓ_0 |
| 25 : $P_{718} = (11, 10, 1, 0)$ lies on line ℓ_0 | 73 : $P_{1769} = (38, 26, 1, 0)$ lies on line ℓ_1 |
| 26 : $P_{720} = (13, 10, 1, 0)$ lies on line ℓ_1 | 74 : $P_{1792} = (61, 26, 1, 0)$ lies on line ℓ_2 |
| 27 : $P_{781} = (10, 11, 1, 0)$ lies on line ℓ_0 | 75 : $P_{1799} = (4, 27, 1, 0)$ lies on line ℓ_2 |
| 28 : $P_{824} = (53, 11, 1, 0)$ lies on line ℓ_1 | 76 : $P_{1821} = (26, 27, 1, 0)$ lies on line ℓ_0 |
| 29 : $P_{834} = (63, 11, 1, 0)$ lies on line ℓ_2 | 77 : $P_{1825} = (30, 27, 1, 0)$ lies on line ℓ_1 |
| 30 : $P_{848} = (13, 12, 1, 0)$ lies on line ℓ_0 | 78 : $P_{1867} = (8, 28, 1, 0)$ lies on line ℓ_2 |
| 31 : $P_{886} = (51, 12, 1, 0)$ lies on line ℓ_2 | 79 : $P_{1880} = (21, 28, 1, 0)$ lies on line ℓ_1 |
| 32 : $P_{897} = (62, 12, 1, 0)$ lies on line ℓ_1 | 80 : $P_{1888} = (29, 28, 1, 0)$ lies on line ℓ_0 |
| 33 : $P_{905} = (6, 13, 1, 0)$ lies on line ℓ_1 | 81 : $P_{1951} = (28, 29, 1, 0)$ lies on line ℓ_0 |
| 34 : $P_{909} = (10, 13, 1, 0)$ lies on line ℓ_2 | 82 : $P_{1968} = (45, 29, 1, 0)$ lies on line ℓ_1 |
| 35 : $P_{911} = (12, 13, 1, 0)$ lies on line ℓ_0 | 83 : $P_{1972} = (49, 29, 1, 0)$ lies on line ℓ_2 |
| 36 : $P_{978} = (15, 14, 1, 0)$ lies on line ℓ_0 | 84 : $P_{1991} = (4, 30, 1, 0)$ lies on line ℓ_1 |
| 37 : $P_{995} = (32, 14, 1, 0)$ lies on line ℓ_2 | 85 : $P_{2014} = (27, 30, 1, 0)$ lies on line ℓ_2 |
| 38 : $P_{1010} = (47, 14, 1, 0)$ lies on line ℓ_1 | 86 : $P_{2018} = (31, 30, 1, 0)$ lies on line ℓ_0 |
| 39 : $P_{1041} = (14, 15, 1, 0)$ lies on line ℓ_0 | 87 : $P_{2081} = (30, 31, 1, 0)$ lies on line ℓ_0 |
| 40 : $P_{1050} = (23, 15, 1, 0)$ lies on line ℓ_1 | 88 : $P_{2085} = (34, 31, 1, 0)$ lies on line ℓ_2 |
| 41 : $P_{1052} = (25, 15, 1, 0)$ lies on line ℓ_2 | 89 : $P_{2111} = (60, 31, 1, 0)$ lies on line ℓ_1 |
| 42 : $P_{1094} = (3, 16, 1, 0)$ lies on line ℓ_2 | 90 : $P_{2129} = (14, 32, 1, 0)$ lies on line ℓ_1 |
| 43 : $P_{1108} = (17, 16, 1, 0)$ lies on line ℓ_0 | 91 : $P_{2148} = (33, 32, 1, 0)$ lies on line ℓ_0 |
| 44 : $P_{1109} = (18, 16, 1, 0)$ lies on line ℓ_1 | 92 : $P_{2162} = (47, 32, 1, 0)$ lies on line ℓ_2 |
| 45 : $P_{1171} = (16, 17, 1, 0)$ lies on line ℓ_0 | 93 : $P_{2201} = (22, 33, 1, 0)$ lies on line ℓ_2 |
| 46 : $P_{1197} = (42, 17, 1, 0)$ lies on line ℓ_1 | 94 : $P_{2211} = (32, 33, 1, 0)$ lies on line ℓ_0 |
| 47 : $P_{1213} = (58, 17, 1, 0)$ lies on line ℓ_2 | 95 : $P_{2233} = (54, 33, 1, 0)$ lies on line ℓ_1 |

96 : $P_{2274} = (31, 34, 1, 0)$ lies on line ℓ_1
 97 : $P_{2278} = (35, 34, 1, 0)$ lies on line ℓ_0
 98 : $P_{2303} = (60, 34, 1, 0)$ lies on line ℓ_2
 99 : $P_{2312} = (5, 35, 1, 0)$ lies on line ℓ_2
 100 : $P_{2341} = (34, 35, 1, 0)$ lies on line ℓ_0
 101 : $P_{2346} = (39, 35, 1, 0)$ lies on line ℓ_1
 102 : $P_{2380} = (9, 36, 1, 0)$ lies on line ℓ_2
 103 : $P_{2408} = (37, 36, 1, 0)$ lies on line ℓ_0
 104 : $P_{2415} = (44, 36, 1, 0)$ lies on line ℓ_1
 105 : $P_{2455} = (20, 37, 1, 0)$ lies on line ℓ_1
 106 : $P_{2471} = (36, 37, 1, 0)$ lies on line ℓ_0
 107 : $P_{2483} = (48, 37, 1, 0)$ lies on line ℓ_2
 108 : $P_{2525} = (26, 38, 1, 0)$ lies on line ℓ_2
 109 : $P_{2538} = (39, 38, 1, 0)$ lies on line ℓ_0
 110 : $P_{2560} = (61, 38, 1, 0)$ lies on line ℓ_1
 111 : $P_{2568} = (5, 39, 1, 0)$ lies on line ℓ_1
 112 : $P_{2598} = (35, 39, 1, 0)$ lies on line ℓ_2
 113 : $P_{2601} = (38, 39, 1, 0)$ lies on line ℓ_0
 114 : $P_{2629} = (2, 40, 1, 0)$ lies on line ℓ_2
 115 : $P_{2668} = (41, 40, 1, 0)$ lies on line ℓ_0
 116 : $P_{2670} = (43, 40, 1, 0)$ lies on line ℓ_1
 117 : $P_{2710} = (19, 41, 1, 0)$ lies on line ℓ_1
 118 : $P_{2731} = (40, 41, 1, 0)$ lies on line ℓ_0
 119 : $P_{2750} = (59, 41, 1, 0)$ lies on line ℓ_2
 120 : $P_{2772} = (17, 42, 1, 0)$ lies on line ℓ_2
 121 : $P_{2798} = (43, 42, 1, 0)$ lies on line ℓ_0
 122 : $P_{2813} = (58, 42, 1, 0)$ lies on line ℓ_1
 123 : $P_{2821} = (2, 43, 1, 0)$ lies on line ℓ_1
 124 : $P_{2859} = (40, 43, 1, 0)$ lies on line ℓ_2
 125 : $P_{2861} = (42, 43, 1, 0)$ lies on line ℓ_0
 126 : $P_{2892} = (9, 44, 1, 0)$ lies on line ℓ_1
 127 : $P_{2919} = (36, 44, 1, 0)$ lies on line ℓ_2
 128 : $P_{2928} = (45, 44, 1, 0)$ lies on line ℓ_0
 129 : $P_{2976} = (29, 45, 1, 0)$ lies on line ℓ_2
 130 : $P_{2991} = (44, 45, 1, 0)$ lies on line ℓ_0
 131 : $P_{2996} = (49, 45, 1, 0)$ lies on line ℓ_1
 132 : $P_{3035} = (24, 46, 1, 0)$ lies on line ℓ_1
 133 : $P_{3058} = (47, 46, 1, 0)$ lies on line ℓ_0
 134 : $P_{3066} = (55, 46, 1, 0)$ lies on line ℓ_2
 135 : $P_{3089} = (14, 47, 1, 0)$ lies on line ℓ_2
 136 : $P_{3107} = (32, 47, 1, 0)$ lies on line ℓ_1
 137 : $P_{3121} = (46, 47, 1, 0)$ lies on line ℓ_0
 138 : $P_{3159} = (20, 48, 1, 0)$ lies on line ℓ_2
 139 : $P_{3176} = (37, 48, 1, 0)$ lies on line ℓ_1
 140 : $P_{3188} = (49, 48, 1, 0)$ lies on line ℓ_0
 141 : $P_{3232} = (29, 49, 1, 0)$ lies on line ℓ_1
 142 : $P_{3248} = (45, 49, 1, 0)$ lies on line ℓ_2
 143 : $P_{3251} = (48, 49, 1, 0)$ lies on line ℓ_0
 144 : $P_{3274} = (7, 50, 1, 0)$ lies on line ℓ_2
 145 : $P_{3318} = (51, 50, 1, 0)$ lies on line ℓ_0
 146 : $P_{3319} = (52, 50, 1, 0)$ lies on line ℓ_1
 147 : $P_{3343} = (12, 51, 1, 0)$ lies on line ℓ_1
 148 : $P_{3381} = (50, 51, 1, 0)$ lies on line ℓ_0
 149 : $P_{3393} = (62, 51, 1, 0)$ lies on line ℓ_2

150 : $P_{3402} = (7, 52, 1, 0)$ lies on line ℓ_1
 151 : $P_{3445} = (50, 52, 1, 0)$ lies on line ℓ_2
 152 : $P_{3448} = (53, 52, 1, 0)$ lies on line ℓ_0
 153 : $P_{3470} = (11, 53, 1, 0)$ lies on line ℓ_2
 154 : $P_{3511} = (52, 53, 1, 0)$ lies on line ℓ_0
 155 : $P_{3522} = (63, 53, 1, 0)$ lies on line ℓ_1
 156 : $P_{3545} = (22, 54, 1, 0)$ lies on line ℓ_1
 157 : $P_{3556} = (33, 54, 1, 0)$ lies on line ℓ_2
 158 : $P_{3578} = (55, 54, 1, 0)$ lies on line ℓ_0
 159 : $P_{3611} = (24, 55, 1, 0)$ lies on line ℓ_2
 160 : $P_{3633} = (46, 55, 1, 0)$ lies on line ℓ_1
 161 : $P_{3641} = (54, 55, 1, 0)$ lies on line ℓ_0
 162 : $P_{3796} = (17, 58, 1, 0)$ lies on line ℓ_1
 163 : $P_{3821} = (42, 58, 1, 0)$ lies on line ℓ_2
 164 : $P_{3838} = (59, 58, 1, 0)$ lies on line ℓ_0
 165 : $P_{3862} = (19, 59, 1, 0)$ lies on line ℓ_2
 166 : $P_{3884} = (41, 59, 1, 0)$ lies on line ℓ_1
 167 : $P_{3901} = (58, 59, 1, 0)$ lies on line ℓ_0
 168 : $P_{3938} = (31, 60, 1, 0)$ lies on line ℓ_2
 169 : $P_{3941} = (34, 60, 1, 0)$ lies on line ℓ_1
 170 : $P_{3968} = (61, 60, 1, 0)$ lies on line ℓ_0
 171 : $P_{3997} = (26, 61, 1, 0)$ lies on line ℓ_1
 172 : $P_{4009} = (38, 61, 1, 0)$ lies on line ℓ_2
 173 : $P_{4031} = (60, 61, 1, 0)$ lies on line ℓ_0
 174 : $P_{4047} = (12, 62, 1, 0)$ lies on line ℓ_2
 175 : $P_{4086} = (51, 62, 1, 0)$ lies on line ℓ_1
 176 : $P_{4098} = (63, 62, 1, 0)$ lies on line ℓ_0
 177 : $P_{4110} = (11, 63, 1, 0)$ lies on line ℓ_1
 178 : $P_{4152} = (53, 63, 1, 0)$ lies on line ℓ_2
 179 : $P_{4161} = (62, 63, 1, 0)$ lies on line ℓ_0
 180 : $P_{4226} = (0, 1, 0, 1)$ lies on line ℓ_6
 181 : $P_{4227} = (1, 1, 0, 1)$ lies on line ℓ_9
 182 : $P_{7746} = (0, 56, 0, 1)$ lies on line ℓ_7
 183 : $P_{7747} = (1, 56, 0, 1)$ lies on line ℓ_{11}
 184 : $P_{7810} = (0, 57, 0, 1)$ lies on line ℓ_8
 185 : $P_{7811} = (1, 57, 0, 1)$ lies on line ℓ_{10}
 186 : $P_{8258} = (0, 0, 1, 1)$ lies on line ℓ_3
 187 : $P_{8259} = (1, 0, 1, 1)$ lies on line ℓ_9
 188 : $P_{8387} = (2, 2, 1, 1)$ lies on line ℓ_3
 189 : $P_{8452} = (3, 3, 1, 1)$ lies on line ℓ_3
 190 : $P_{8517} = (4, 4, 1, 1)$ lies on line ℓ_3
 191 : $P_{8582} = (5, 5, 1, 1)$ lies on line ℓ_3
 192 : $P_{8647} = (6, 6, 1, 1)$ lies on line ℓ_3
 193 : $P_{8712} = (7, 7, 1, 1)$ lies on line ℓ_3
 194 : $P_{8777} = (8, 8, 1, 1)$ lies on line ℓ_3
 195 : $P_{8842} = (9, 9, 1, 1)$ lies on line ℓ_3
 196 : $P_{8907} = (10, 10, 1, 1)$ lies on line ℓ_3
 197 : $P_{8972} = (11, 11, 1, 1)$ lies on line ℓ_3
 198 : $P_{9037} = (12, 12, 1, 1)$ lies on line ℓ_3
 199 : $P_{9102} = (13, 13, 1, 1)$ lies on line ℓ_3
 200 : $P_{9167} = (14, 14, 1, 1)$ lies on line ℓ_3
 201 : $P_{9232} = (15, 15, 1, 1)$ lies on line ℓ_3
 202 : $P_{9297} = (16, 16, 1, 1)$ lies on line ℓ_3
 203 : $P_{9362} = (17, 17, 1, 1)$ lies on line ℓ_3

204 : $P_{9427} = (18, 18, 1, 1)$ lies on line ℓ_3
 205 : $P_{9492} = (19, 19, 1, 1)$ lies on line ℓ_3
 206 : $P_{9557} = (20, 20, 1, 1)$ lies on line ℓ_3
 207 : $P_{9622} = (21, 21, 1, 1)$ lies on line ℓ_3
 208 : $P_{9687} = (22, 22, 1, 1)$ lies on line ℓ_3
 209 : $P_{9752} = (23, 23, 1, 1)$ lies on line ℓ_3
 210 : $P_{9817} = (24, 24, 1, 1)$ lies on line ℓ_3
 211 : $P_{9882} = (25, 25, 1, 1)$ lies on line ℓ_3
 212 : $P_{9947} = (26, 26, 1, 1)$ lies on line ℓ_3
 213 : $P_{10012} = (27, 27, 1, 1)$ lies on line ℓ_3
 214 : $P_{10077} = (28, 28, 1, 1)$ lies on line ℓ_3
 215 : $P_{10142} = (29, 29, 1, 1)$ lies on line ℓ_3
 216 : $P_{10207} = (30, 30, 1, 1)$ lies on line ℓ_3
 217 : $P_{10272} = (31, 31, 1, 1)$ lies on line ℓ_3
 218 : $P_{10337} = (32, 32, 1, 1)$ lies on line ℓ_3
 219 : $P_{10402} = (33, 33, 1, 1)$ lies on line ℓ_3
 220 : $P_{10467} = (34, 34, 1, 1)$ lies on line ℓ_3
 221 : $P_{10532} = (35, 35, 1, 1)$ lies on line ℓ_3
 222 : $P_{10597} = (36, 36, 1, 1)$ lies on line ℓ_3
 223 : $P_{10662} = (37, 37, 1, 1)$ lies on line ℓ_3
 224 : $P_{10727} = (38, 38, 1, 1)$ lies on line ℓ_3
 225 : $P_{10792} = (39, 39, 1, 1)$ lies on line ℓ_3
 226 : $P_{10857} = (40, 40, 1, 1)$ lies on line ℓ_3
 227 : $P_{10922} = (41, 41, 1, 1)$ lies on line ℓ_3
 228 : $P_{10987} = (42, 42, 1, 1)$ lies on line ℓ_3
 229 : $P_{11052} = (43, 43, 1, 1)$ lies on line ℓ_3
 230 : $P_{11117} = (44, 44, 1, 1)$ lies on line ℓ_3
 231 : $P_{11182} = (45, 45, 1, 1)$ lies on line ℓ_3
 232 : $P_{11247} = (46, 46, 1, 1)$ lies on line ℓ_3
 233 : $P_{11312} = (47, 47, 1, 1)$ lies on line ℓ_3
 234 : $P_{11377} = (48, 48, 1, 1)$ lies on line ℓ_3
 235 : $P_{11442} = (49, 49, 1, 1)$ lies on line ℓ_3
 236 : $P_{11507} = (50, 50, 1, 1)$ lies on line ℓ_3
 237 : $P_{11572} = (51, 51, 1, 1)$ lies on line ℓ_3
 238 : $P_{11637} = (52, 52, 1, 1)$ lies on line ℓ_3
 239 : $P_{11702} = (53, 53, 1, 1)$ lies on line ℓ_3
 240 : $P_{11767} = (54, 54, 1, 1)$ lies on line ℓ_3
 241 : $P_{11832} = (55, 55, 1, 1)$ lies on line ℓ_3
 242 : $P_{12027} = (58, 58, 1, 1)$ lies on line ℓ_3
 243 : $P_{12092} = (59, 59, 1, 1)$ lies on line ℓ_3
 244 : $P_{12157} = (60, 60, 1, 1)$ lies on line ℓ_3
 245 : $P_{12222} = (61, 61, 1, 1)$ lies on line ℓ_3
 246 : $P_{12287} = (62, 62, 1, 1)$ lies on line ℓ_3
 247 : $P_{12352} = (63, 63, 1, 1)$ lies on line ℓ_3
 248 : $P_{12419} = (2, 1, 2, 1)$ lies on line ℓ_6
 249 : $P_{12546} = (1, 3, 2, 1)$ lies on line ℓ_9
 250 : $P_{14914} = (1, 40, 2, 1)$ lies on line ℓ_{10}
 251 : $P_{15106} = (1, 43, 2, 1)$ lies on line ℓ_{11}
 252 : $P_{15954} = (17, 56, 2, 1)$ lies on line ℓ_7
 253 : $P_{16020} = (19, 57, 2, 1)$ lies on line ℓ_8
 254 : $P_{16516} = (3, 1, 3, 1)$ lies on line ℓ_6
 255 : $P_{16578} = (1, 2, 3, 1)$ lies on line ℓ_9
 256 : $P_{17474} = (1, 16, 3, 1)$ lies on line ℓ_{10}
 257 : $P_{17602} = (1, 18, 3, 1)$ lies on line ℓ_{11}
 258 : $P_{20074} = (41, 56, 3, 1)$ lies on line ℓ_7
 259 : $P_{20139} = (42, 57, 3, 1)$ lies on line ℓ_8
 260 : $P_{20613} = (4, 1, 4, 1)$ lies on line ℓ_6
 261 : $P_{20866} = (1, 5, 4, 1)$ lies on line ℓ_9
 262 : $P_{22274} = (1, 27, 4, 1)$ lies on line ℓ_{10}
 263 : $P_{22466} = (1, 30, 4, 1)$ lies on line ℓ_{11}
 264 : $P_{24163} = (34, 56, 4, 1)$ lies on line ℓ_7
 265 : $P_{24231} = (38, 57, 4, 1)$ lies on line ℓ_8
 266 : $P_{24710} = (5, 1, 5, 1)$ lies on line ℓ_6
 267 : $P_{24898} = (1, 4, 5, 1)$ lies on line ℓ_9
 268 : $P_{26882} = (1, 35, 5, 1)$ lies on line ℓ_{10}
 269 : $P_{27138} = (1, 39, 5, 1)$ lies on line ℓ_{11}
 270 : $P_{28251} = (26, 56, 5, 1)$ lies on line ℓ_7
 271 : $P_{28320} = (31, 57, 5, 1)$ lies on line ℓ_8
 272 : $P_{28807} = (6, 1, 6, 1)$ lies on line ℓ_6
 273 : $P_{29186} = (1, 7, 6, 1)$ lies on line ℓ_9
 274 : $P_{29378} = (1, 10, 6, 1)$ lies on line ℓ_{10}
 275 : $P_{29570} = (1, 13, 6, 1)$ lies on line ℓ_{11}
 276 : $P_{32372} = (51, 56, 6, 1)$ lies on line ℓ_7
 277 : $P_{32438} = (53, 57, 6, 1)$ lies on line ℓ_8
 278 : $P_{32904} = (7, 1, 7, 1)$ lies on line ℓ_6
 279 : $P_{33218} = (1, 6, 7, 1)$ lies on line ℓ_9
 280 : $P_{36034} = (1, 50, 7, 1)$ lies on line ℓ_{10}
 281 : $P_{36162} = (1, 52, 7, 1)$ lies on line ℓ_{11}
 282 : $P_{36428} = (11, 56, 7, 1)$ lies on line ℓ_7
 283 : $P_{36493} = (12, 57, 7, 1)$ lies on line ℓ_8
 284 : $P_{37001} = (8, 1, 8, 1)$ lies on line ℓ_6
 285 : $P_{37506} = (1, 9, 8, 1)$ lies on line ℓ_9
 286 : $P_{38274} = (1, 21, 8, 1)$ lies on line ℓ_{11}
 287 : $P_{38722} = (1, 28, 8, 1)$ lies on line ℓ_{10}
 288 : $P_{40550} = (37, 56, 8, 1)$ lies on line ℓ_7
 289 : $P_{40622} = (45, 57, 8, 1)$ lies on line ℓ_8
 290 : $P_{41098} = (9, 1, 9, 1)$ lies on line ℓ_6
 291 : $P_{41538} = (1, 8, 9, 1)$ lies on line ℓ_9
 292 : $P_{43330} = (1, 36, 9, 1)$ lies on line ℓ_{10}
 293 : $P_{43842} = (1, 44, 9, 1)$ lies on line ℓ_{11}
 294 : $P_{44638} = (29, 56, 9, 1)$ lies on line ℓ_7
 295 : $P_{44693} = (20, 57, 9, 1)$ lies on line ℓ_8
 296 : $P_{45195} = (10, 1, 10, 1)$ lies on line ℓ_6
 297 : $P_{45506} = (1, 6, 10, 1)$ lies on line ℓ_{11}
 298 : $P_{45826} = (1, 11, 10, 1)$ lies on line ℓ_9
 299 : $P_{45954} = (1, 13, 10, 1)$ lies on line ℓ_{10}
 300 : $P_{48757} = (52, 56, 10, 1)$ lies on line ℓ_7
 301 : $P_{48831} = (62, 57, 10, 1)$ lies on line ℓ_8
 302 : $P_{49292} = (11, 1, 11, 1)$ lies on line ℓ_6
 303 : $P_{49858} = (1, 10, 11, 1)$ lies on line ℓ_9
 304 : $P_{52610} = (1, 53, 11, 1)$ lies on line ℓ_{10}
 305 : $P_{52813} = (12, 56, 11, 1)$ lies on line ℓ_7
 306 : $P_{52872} = (7, 57, 11, 1)$ lies on line ℓ_8
 307 : $P_{53250} = (1, 63, 11, 1)$ lies on line ℓ_{11}
 308 : $P_{53389} = (12, 1, 12, 1)$ lies on line ℓ_6
 309 : $P_{54146} = (1, 13, 12, 1)$ lies on line ℓ_9
 310 : $P_{56578} = (1, 51, 12, 1)$ lies on line ℓ_{11}
 311 : $P_{56904} = (7, 56, 12, 1)$ lies on line ℓ_7

312 : $P_{56972} = (11, 57, 12, 1)$ lies on line ℓ_8
 313 : $P_{57282} = (1, 62, 12, 1)$ lies on line ℓ_{10}
 314 : $P_{57486} = (13, 1, 13, 1)$ lies on line ℓ_6
 315 : $P_{57794} = (1, 6, 13, 1)$ lies on line ℓ_{10}
 316 : $P_{58050} = (1, 10, 13, 1)$ lies on line ℓ_{11}
 317 : $P_{58178} = (1, 12, 13, 1)$ lies on line ℓ_9
 318 : $P_{61056} = (63, 56, 13, 1)$ lies on line ℓ_7
 319 : $P_{61107} = (50, 57, 13, 1)$ lies on line ℓ_8
 320 : $P_{61583} = (14, 1, 14, 1)$ lies on line ℓ_6
 321 : $P_{62466} = (1, 15, 14, 1)$ lies on line ℓ_9
 322 : $P_{63554} = (1, 32, 14, 1)$ lies on line ℓ_{11}
 323 : $P_{64514} = (1, 47, 14, 1)$ lies on line ℓ_{10}
 324 : $P_{65111} = (22, 56, 14, 1)$ lies on line ℓ_7
 325 : $P_{65177} = (24, 57, 14, 1)$ lies on line ℓ_8
 326 : $P_{65680} = (15, 1, 15, 1)$ lies on line ℓ_6
 327 : $P_{66498} = (1, 14, 15, 1)$ lies on line ℓ_9
 328 : $P_{67074} = (1, 23, 15, 1)$ lies on line ℓ_{10}
 329 : $P_{67202} = (1, 25, 15, 1)$ lies on line ℓ_{11}
 330 : $P_{69231} = (46, 56, 15, 1)$ lies on line ℓ_7
 331 : $P_{69282} = (33, 57, 15, 1)$ lies on line ℓ_8
 332 : $P_{69777} = (16, 1, 16, 1)$ lies on line ℓ_6
 333 : $P_{69890} = (1, 3, 16, 1)$ lies on line ℓ_{11}
 334 : $P_{70786} = (1, 17, 16, 1)$ lies on line ℓ_9
 335 : $P_{70850} = (1, 18, 16, 1)$ lies on line ℓ_{10}
 336 : $P_{73324} = (43, 56, 16, 1)$ lies on line ℓ_7
 337 : $P_{73404} = (59, 57, 16, 1)$ lies on line ℓ_8
 338 : $P_{73874} = (17, 1, 17, 1)$ lies on line ℓ_6
 339 : $P_{74818} = (1, 16, 17, 1)$ lies on line ℓ_9
 340 : $P_{76482} = (1, 42, 17, 1)$ lies on line ℓ_{10}
 341 : $P_{77396} = (19, 56, 17, 1)$ lies on line ℓ_7
 342 : $P_{77443} = (2, 57, 17, 1)$ lies on line ℓ_8
 343 : $P_{77506} = (1, 58, 17, 1)$ lies on line ℓ_{11}
 344 : $P_{77971} = (18, 1, 18, 1)$ lies on line ℓ_6
 345 : $P_{78082} = (1, 3, 18, 1)$ lies on line ℓ_{10}
 346 : $P_{78914} = (1, 16, 18, 1)$ lies on line ℓ_{11}
 347 : $P_{79106} = (1, 19, 18, 1)$ lies on line ℓ_9
 348 : $P_{81531} = (58, 56, 18, 1)$ lies on line ℓ_7
 349 : $P_{81577} = (40, 57, 18, 1)$ lies on line ℓ_8
 350 : $P_{82068} = (19, 1, 19, 1)$ lies on line ℓ_6
 351 : $P_{83138} = (1, 18, 19, 1)$ lies on line ℓ_9
 352 : $P_{84610} = (1, 41, 19, 1)$ lies on line ℓ_{11}
 353 : $P_{85571} = (2, 56, 19, 1)$ lies on line ℓ_7
 354 : $P_{85650} = (17, 57, 19, 1)$ lies on line ℓ_8
 355 : $P_{85762} = (1, 59, 19, 1)$ lies on line ℓ_{10}
 356 : $P_{86165} = (20, 1, 20, 1)$ lies on line ℓ_6
 357 : $P_{87426} = (1, 21, 20, 1)$ lies on line ℓ_9
 358 : $P_{88450} = (1, 37, 20, 1)$ lies on line ℓ_{11}
 359 : $P_{89154} = (1, 48, 20, 1)$ lies on line ℓ_{10}
 360 : $P_{89674} = (9, 56, 20, 1)$ lies on line ℓ_7
 361 : $P_{89758} = (29, 57, 20, 1)$ lies on line ℓ_8
 362 : $P_{90262} = (21, 1, 21, 1)$ lies on line ℓ_6
 363 : $P_{90690} = (1, 8, 21, 1)$ lies on line ℓ_{10}
 364 : $P_{91458} = (1, 20, 21, 1)$ lies on line ℓ_9
 365 : $P_{91970} = (1, 28, 21, 1)$ lies on line ℓ_{11}
 366 : $P_{93810} = (49, 56, 21, 1)$ lies on line ℓ_7
 367 : $P_{93861} = (36, 57, 21, 1)$ lies on line ℓ_8
 368 : $P_{94359} = (22, 1, 22, 1)$ lies on line ℓ_6
 369 : $P_{95746} = (1, 23, 22, 1)$ lies on line ℓ_9
 370 : $P_{96386} = (1, 33, 22, 1)$ lies on line ℓ_{10}
 371 : $P_{97730} = (1, 54, 22, 1)$ lies on line ℓ_{11}
 372 : $P_{97881} = (24, 56, 22, 1)$ lies on line ℓ_7
 373 : $P_{97935} = (14, 57, 22, 1)$ lies on line ℓ_8
 374 : $P_{98456} = (23, 1, 23, 1)$ lies on line ℓ_6
 375 : $P_{99330} = (1, 15, 23, 1)$ lies on line ℓ_{11}
 376 : $P_{99778} = (1, 22, 23, 1)$ lies on line ℓ_9
 377 : $P_{99970} = (1, 25, 23, 1)$ lies on line ℓ_{10}
 378 : $P_{101985} = (32, 56, 23, 1)$ lies on line ℓ_7
 379 : $P_{102072} = (55, 57, 23, 1)$ lies on line ℓ_8
 380 : $P_{102553} = (24, 1, 24, 1)$ lies on line ℓ_6
 381 : $P_{104066} = (1, 25, 24, 1)$ lies on line ℓ_9
 382 : $P_{105410} = (1, 46, 24, 1)$ lies on line ℓ_{11}
 383 : $P_{105986} = (1, 55, 24, 1)$ lies on line ℓ_{10}
 384 : $P_{106063} = (14, 56, 24, 1)$ lies on line ℓ_7
 385 : $P_{106135} = (22, 57, 24, 1)$ lies on line ℓ_8
 386 : $P_{106650} = (25, 1, 25, 1)$ lies on line ℓ_6
 387 : $P_{107522} = (1, 15, 25, 1)$ lies on line ℓ_{10}
 388 : $P_{108034} = (1, 23, 25, 1)$ lies on line ℓ_{11}
 389 : $P_{108098} = (1, 24, 25, 1)$ lies on line ℓ_9
 390 : $P_{110199} = (54, 56, 25, 1)$ lies on line ℓ_7
 391 : $P_{110256} = (47, 57, 25, 1)$ lies on line ℓ_8
 392 : $P_{110747} = (26, 1, 26, 1)$ lies on line ℓ_6
 393 : $P_{112386} = (1, 27, 26, 1)$ lies on line ℓ_9
 394 : $P_{113090} = (1, 38, 26, 1)$ lies on line ℓ_{10}
 395 : $P_{114272} = (31, 56, 26, 1)$ lies on line ℓ_7
 396 : $P_{114310} = (5, 57, 26, 1)$ lies on line ℓ_8
 397 : $P_{114562} = (1, 61, 26, 1)$ lies on line ℓ_{11}
 398 : $P_{114844} = (27, 1, 27, 1)$ lies on line ℓ_6
 399 : $P_{115010} = (1, 4, 27, 1)$ lies on line ℓ_{11}
 400 : $P_{116418} = (1, 26, 27, 1)$ lies on line ℓ_9
 401 : $P_{116674} = (1, 30, 27, 1)$ lies on line ℓ_{10}
 402 : $P_{118376} = (39, 56, 27, 1)$ lies on line ℓ_7
 403 : $P_{118461} = (60, 57, 27, 1)$ lies on line ℓ_8
 404 : $P_{118941} = (28, 1, 28, 1)$ lies on line ℓ_6
 405 : $P_{119362} = (1, 8, 28, 1)$ lies on line ℓ_{11}
 406 : $P_{120194} = (1, 21, 28, 1)$ lies on line ℓ_{10}
 407 : $P_{120706} = (1, 29, 28, 1)$ lies on line ℓ_9
 408 : $P_{122477} = (44, 56, 28, 1)$ lies on line ℓ_7
 409 : $P_{122545} = (48, 57, 28, 1)$ lies on line ℓ_8
 410 : $P_{123038} = (29, 1, 29, 1)$ lies on line ℓ_6
 411 : $P_{124738} = (1, 28, 29, 1)$ lies on line ℓ_9
 412 : $P_{125826} = (1, 45, 29, 1)$ lies on line ℓ_{10}
 413 : $P_{126082} = (1, 49, 29, 1)$ lies on line ℓ_{11}
 414 : $P_{126549} = (20, 56, 29, 1)$ lies on line ℓ_7
 415 : $P_{126602} = (9, 57, 29, 1)$ lies on line ℓ_8
 416 : $P_{127135} = (30, 1, 30, 1)$ lies on line ℓ_6
 417 : $P_{127298} = (1, 4, 30, 1)$ lies on line ℓ_{10}
 418 : $P_{128770} = (1, 27, 30, 1)$ lies on line ℓ_{11}
 419 : $P_{129026} = (1, 31, 30, 1)$ lies on line ℓ_9

420 : $P_{130686} = (61, 56, 30, 1)$ lies on line ℓ_7
 421 : $P_{130724} = (35, 57, 30, 1)$ lies on line ℓ_8
 422 : $P_{131232} = (31, 1, 31, 1)$ lies on line ℓ_6
 423 : $P_{133058} = (1, 30, 31, 1)$ lies on line ℓ_9
 424 : $P_{133314} = (1, 34, 31, 1)$ lies on line ℓ_{11}
 425 : $P_{134726} = (5, 56, 31, 1)$ lies on line ℓ_7
 426 : $P_{134811} = (26, 57, 31, 1)$ lies on line ℓ_8
 427 : $P_{134978} = (1, 60, 31, 1)$ lies on line ℓ_{10}
 428 : $P_{135329} = (32, 1, 32, 1)$ lies on line ℓ_6
 429 : $P_{136130} = (1, 14, 32, 1)$ lies on line ℓ_{10}
 430 : $P_{137346} = (1, 33, 32, 1)$ lies on line ℓ_9
 431 : $P_{138242} = (1, 47, 32, 1)$ lies on line ℓ_{11}
 432 : $P_{138872} = (55, 56, 32, 1)$ lies on line ℓ_7
 433 : $P_{138904} = (23, 57, 32, 1)$ lies on line ℓ_8
 434 : $P_{139426} = (33, 1, 33, 1)$ lies on line ℓ_6
 435 : $P_{140738} = (1, 22, 33, 1)$ lies on line ℓ_{11}
 436 : $P_{141378} = (1, 32, 33, 1)$ lies on line ℓ_9
 437 : $P_{142786} = (1, 54, 33, 1)$ lies on line ℓ_{10}
 438 : $P_{142928} = (15, 56, 33, 1)$ lies on line ℓ_7
 439 : $P_{143023} = (46, 57, 33, 1)$ lies on line ℓ_8
 440 : $P_{143523} = (34, 1, 34, 1)$ lies on line ℓ_6
 441 : $P_{145410} = (1, 31, 34, 1)$ lies on line ℓ_{10}
 442 : $P_{145666} = (1, 35, 34, 1)$ lies on line ℓ_9
 443 : $P_{147047} = (38, 56, 34, 1)$ lies on line ℓ_7
 444 : $P_{147077} = (4, 57, 34, 1)$ lies on line ℓ_8
 445 : $P_{147266} = (1, 60, 34, 1)$ lies on line ℓ_{11}
 446 : $P_{147620} = (35, 1, 35, 1)$ lies on line ℓ_6
 447 : $P_{147842} = (1, 5, 35, 1)$ lies on line ℓ_{11}
 448 : $P_{149698} = (1, 34, 35, 1)$ lies on line ℓ_9
 449 : $P_{150018} = (1, 39, 35, 1)$ lies on line ℓ_{10}
 450 : $P_{151135} = (30, 56, 35, 1)$ lies on line ℓ_7
 451 : $P_{151230} = (61, 57, 35, 1)$ lies on line ℓ_8
 452 : $P_{151717} = (36, 1, 36, 1)$ lies on line ℓ_6
 453 : $P_{152194} = (1, 9, 36, 1)$ lies on line ℓ_{11}
 454 : $P_{153986} = (1, 37, 36, 1)$ lies on line ℓ_9
 455 : $P_{154434} = (1, 44, 36, 1)$ lies on line ℓ_{10}
 456 : $P_{155222} = (21, 56, 36, 1)$ lies on line ℓ_7
 457 : $P_{155314} = (49, 57, 36, 1)$ lies on line ℓ_8
 458 : $P_{155814} = (37, 1, 37, 1)$ lies on line ℓ_6
 459 : $P_{156994} = (1, 20, 37, 1)$ lies on line ℓ_{10}
 460 : $P_{158018} = (1, 36, 37, 1)$ lies on line ℓ_9
 461 : $P_{158786} = (1, 48, 37, 1)$ lies on line ℓ_{11}
 462 : $P_{159342} = (45, 56, 37, 1)$ lies on line ℓ_7
 463 : $P_{159369} = (8, 57, 37, 1)$ lies on line ℓ_8
 464 : $P_{159911} = (38, 1, 38, 1)$ lies on line ℓ_6
 465 : $P_{161474} = (1, 26, 38, 1)$ lies on line ℓ_{11}
 466 : $P_{162306} = (1, 39, 38, 1)$ lies on line ℓ_9
 467 : $P_{163397} = (4, 56, 38, 1)$ lies on line ℓ_7
 468 : $P_{163491} = (34, 57, 38, 1)$ lies on line ℓ_8
 469 : $P_{163714} = (1, 61, 38, 1)$ lies on line ℓ_{10}
 470 : $P_{164008} = (39, 1, 39, 1)$ lies on line ℓ_6
 471 : $P_{164226} = (1, 5, 39, 1)$ lies on line ℓ_{10}
 472 : $P_{166146} = (1, 35, 39, 1)$ lies on line ℓ_{11}
 473 : $P_{166338} = (1, 38, 39, 1)$ lies on line ℓ_9

474 : $P_{167549} = (60, 56, 39, 1)$ lies on line ℓ_7
 475 : $P_{167580} = (27, 57, 39, 1)$ lies on line ℓ_8
 476 : $P_{168105} = (40, 1, 40, 1)$ lies on line ℓ_6
 477 : $P_{168130} = (1, 2, 40, 1)$ lies on line ℓ_{11}
 478 : $P_{170626} = (1, 41, 40, 1)$ lies on line ℓ_9
 479 : $P_{170754} = (1, 43, 40, 1)$ lies on line ℓ_{10}
 480 : $P_{171603} = (18, 56, 40, 1)$ lies on line ℓ_7
 481 : $P_{171707} = (58, 57, 40, 1)$ lies on line ℓ_8
 482 : $P_{172202} = (41, 1, 41, 1)$ lies on line ℓ_6
 483 : $P_{173314} = (1, 19, 41, 1)$ lies on line ℓ_{10}
 484 : $P_{174658} = (1, 40, 41, 1)$ lies on line ℓ_9
 485 : $P_{175723} = (42, 56, 41, 1)$ lies on line ℓ_7
 486 : $P_{175748} = (3, 57, 41, 1)$ lies on line ℓ_8
 487 : $P_{175874} = (1, 59, 41, 1)$ lies on line ℓ_{11}
 488 : $P_{176299} = (42, 1, 42, 1)$ lies on line ℓ_6
 489 : $P_{177282} = (1, 17, 42, 1)$ lies on line ℓ_{11}
 490 : $P_{178946} = (1, 43, 42, 1)$ lies on line ℓ_9
 491 : $P_{179780} = (3, 56, 42, 1)$ lies on line ℓ_7
 492 : $P_{179882} = (41, 57, 42, 1)$ lies on line ℓ_8
 493 : $P_{179906} = (1, 58, 42, 1)$ lies on line ℓ_{10}
 494 : $P_{180396} = (43, 1, 43, 1)$ lies on line ℓ_6
 495 : $P_{180418} = (1, 2, 43, 1)$ lies on line ℓ_{10}
 496 : $P_{182850} = (1, 40, 43, 1)$ lies on line ℓ_{11}
 497 : $P_{182978} = (1, 42, 43, 1)$ lies on line ℓ_9
 498 : $P_{183932} = (59, 56, 43, 1)$ lies on line ℓ_7
 499 : $P_{183953} = (16, 57, 43, 1)$ lies on line ℓ_8
 500 : $P_{184493} = (44, 1, 44, 1)$ lies on line ℓ_6
 501 : $P_{184962} = (1, 9, 44, 1)$ lies on line ℓ_{10}
 502 : $P_{186690} = (1, 36, 44, 1)$ lies on line ℓ_{11}
 503 : $P_{187266} = (1, 45, 44, 1)$ lies on line ℓ_9
 504 : $P_{188017} = (48, 56, 44, 1)$ lies on line ℓ_7
 505 : $P_{188061} = (28, 57, 44, 1)$ lies on line ℓ_8
 506 : $P_{188590} = (45, 1, 45, 1)$ lies on line ℓ_6
 507 : $P_{190338} = (1, 29, 45, 1)$ lies on line ℓ_{11}
 508 : $P_{191298} = (1, 44, 45, 1)$ lies on line ℓ_9
 509 : $P_{191618} = (1, 49, 45, 1)$ lies on line ℓ_{10}
 510 : $P_{192073} = (8, 56, 45, 1)$ lies on line ℓ_7
 511 : $P_{192166} = (37, 57, 45, 1)$ lies on line ℓ_8
 512 : $P_{192687} = (46, 1, 46, 1)$ lies on line ℓ_6
 513 : $P_{194114} = (1, 24, 46, 1)$ lies on line ℓ_{10}
 514 : $P_{195586} = (1, 47, 46, 1)$ lies on line ℓ_9
 515 : $P_{196098} = (1, 55, 46, 1)$ lies on line ℓ_{11}
 516 : $P_{196194} = (33, 56, 46, 1)$ lies on line ℓ_7
 517 : $P_{196240} = (15, 57, 46, 1)$ lies on line ℓ_8
 518 : $P_{196784} = (47, 1, 47, 1)$ lies on line ℓ_6
 519 : $P_{197570} = (1, 14, 47, 1)$ lies on line ℓ_{11}
 520 : $P_{198722} = (1, 32, 47, 1)$ lies on line ℓ_{10}
 521 : $P_{199618} = (1, 46, 47, 1)$ lies on line ℓ_9
 522 : $P_{200282} = (25, 56, 47, 1)$ lies on line ℓ_7
 523 : $P_{200375} = (54, 57, 47, 1)$ lies on line ℓ_8
 524 : $P_{200881} = (48, 1, 48, 1)$ lies on line ℓ_6
 525 : $P_{202050} = (1, 20, 48, 1)$ lies on line ℓ_{11}
 526 : $P_{203138} = (1, 37, 48, 1)$ lies on line ℓ_{10}
 527 : $P_{203906} = (1, 49, 48, 1)$ lies on line ℓ_9

528 : $P_{204381} = (28, 56, 48, 1)$ lies on line ℓ_7
529 : $P_{204461} = (44, 57, 48, 1)$ lies on line ℓ_8
530 : $P_{204978} = (49, 1, 49, 1)$ lies on line ℓ_6
531 : $P_{206722} = (1, 29, 49, 1)$ lies on line ℓ_{10}
532 : $P_{207746} = (1, 45, 49, 1)$ lies on line ℓ_{11}
533 : $P_{207938} = (1, 48, 49, 1)$ lies on line ℓ_9
534 : $P_{208485} = (36, 56, 49, 1)$ lies on line ℓ_7
535 : $P_{208534} = (21, 57, 49, 1)$ lies on line ℓ_8
536 : $P_{209075} = (50, 1, 50, 1)$ lies on line ℓ_6
537 : $P_{209410} = (1, 7, 50, 1)$ lies on line ℓ_{11}
538 : $P_{212226} = (1, 51, 50, 1)$ lies on line ℓ_9
539 : $P_{212290} = (1, 52, 50, 1)$ lies on line ℓ_{10}
540 : $P_{212558} = (13, 56, 50, 1)$ lies on line ℓ_7
541 : $P_{212672} = (63, 57, 50, 1)$ lies on line ℓ_8
542 : $P_{213172} = (51, 1, 51, 1)$ lies on line ℓ_6
543 : $P_{213826} = (1, 12, 51, 1)$ lies on line ℓ_{10}
544 : $P_{216258} = (1, 50, 51, 1)$ lies on line ℓ_9
545 : $P_{216694} = (53, 56, 51, 1)$ lies on line ℓ_7
546 : $P_{216711} = (6, 57, 51, 1)$ lies on line ℓ_8
547 : $P_{217026} = (1, 62, 51, 1)$ lies on line ℓ_{11}
548 : $P_{217269} = (52, 1, 52, 1)$ lies on line ℓ_6
549 : $P_{217602} = (1, 7, 52, 1)$ lies on line ℓ_{10}
550 : $P_{220354} = (1, 50, 52, 1)$ lies on line ℓ_{11}
551 : $P_{220546} = (1, 53, 52, 1)$ lies on line ℓ_9
552 : $P_{220799} = (62, 56, 52, 1)$ lies on line ℓ_7
553 : $P_{220811} = (10, 57, 52, 1)$ lies on line ℓ_8
554 : $P_{221366} = (53, 1, 53, 1)$ lies on line ℓ_6
555 : $P_{221954} = (1, 11, 53, 1)$ lies on line ℓ_{11}
556 : $P_{224578} = (1, 52, 53, 1)$ lies on line ℓ_9
557 : $P_{224839} = (6, 56, 53, 1)$ lies on line ℓ_7
558 : $P_{224948} = (51, 57, 53, 1)$ lies on line ℓ_8
559 : $P_{225282} = (1, 63, 53, 1)$ lies on line ℓ_{10}
560 : $P_{225463} = (54, 1, 54, 1)$ lies on line ℓ_6
561 : $P_{226754} = (1, 22, 54, 1)$ lies on line ℓ_{10}
562 : $P_{227458} = (1, 33, 54, 1)$ lies on line ℓ_{11}
563 : $P_{228866} = (1, 55, 54, 1)$ lies on line ℓ_9
564 : $P_{228976} = (47, 56, 54, 1)$ lies on line ℓ_7
565 : $P_{229018} = (25, 57, 54, 1)$ lies on line ℓ_8
566 : $P_{229560} = (55, 1, 55, 1)$ lies on line ℓ_6
567 : $P_{230978} = (1, 24, 55, 1)$ lies on line ℓ_{11}
568 : $P_{232386} = (1, 46, 55, 1)$ lies on line ℓ_{10}
569 : $P_{232898} = (1, 54, 55, 1)$ lies on line ℓ_9
570 : $P_{233048} = (23, 56, 55, 1)$ lies on line ℓ_7
571 : $P_{233121} = (32, 57, 55, 1)$ lies on line ℓ_8
572 : $P_{233537} = (0, 0, 56, 1)$ lies on line ℓ_4
573 : $P_{233538} = (1, 0, 56, 1)$ lies on line ℓ_{10}
574 : $P_{233682} = (17, 2, 56, 1)$ lies on line ℓ_4
575 : $P_{233770} = (41, 3, 56, 1)$ lies on line ℓ_4
576 : $P_{233827} = (34, 4, 56, 1)$ lies on line ℓ_4
577 : $P_{233883} = (26, 5, 56, 1)$ lies on line ℓ_4
578 : $P_{233972} = (51, 6, 56, 1)$ lies on line ℓ_4
579 : $P_{233996} = (11, 7, 56, 1)$ lies on line ℓ_4
580 : $P_{234086} = (37, 8, 56, 1)$ lies on line ℓ_4
581 : $P_{234142} = (29, 9, 56, 1)$ lies on line ℓ_4
582 : $P_{234229} = (52, 10, 56, 1)$ lies on line ℓ_4
583 : $P_{234253} = (12, 11, 56, 1)$ lies on line ℓ_4
584 : $P_{234312} = (7, 12, 56, 1)$ lies on line ℓ_4
585 : $P_{234432} = (63, 13, 56, 1)$ lies on line ℓ_4
586 : $P_{234455} = (22, 14, 56, 1)$ lies on line ℓ_4
587 : $P_{234543} = (46, 15, 56, 1)$ lies on line ℓ_4
588 : $P_{234604} = (43, 16, 56, 1)$ lies on line ℓ_4
589 : $P_{234644} = (19, 17, 56, 1)$ lies on line ℓ_4
590 : $P_{234747} = (58, 18, 56, 1)$ lies on line ℓ_4
591 : $P_{234755} = (2, 19, 56, 1)$ lies on line ℓ_4
592 : $P_{234826} = (9, 20, 56, 1)$ lies on line ℓ_4
593 : $P_{234930} = (49, 21, 56, 1)$ lies on line ℓ_4
594 : $P_{234969} = (24, 22, 56, 1)$ lies on line ℓ_4
595 : $P_{235041} = (32, 23, 56, 1)$ lies on line ℓ_4
596 : $P_{235087} = (14, 24, 56, 1)$ lies on line ℓ_4
597 : $P_{235191} = (54, 25, 56, 1)$ lies on line ℓ_4
598 : $P_{235232} = (31, 26, 56, 1)$ lies on line ℓ_4
599 : $P_{235304} = (39, 27, 56, 1)$ lies on line ℓ_4
600 : $P_{235373} = (44, 28, 56, 1)$ lies on line ℓ_4
601 : $P_{235413} = (20, 29, 56, 1)$ lies on line ℓ_4
602 : $P_{235518} = (61, 30, 56, 1)$ lies on line ℓ_4
603 : $P_{235526} = (5, 31, 56, 1)$ lies on line ℓ_4
604 : $P_{235640} = (55, 32, 56, 1)$ lies on line ℓ_4
605 : $P_{235664} = (15, 33, 56, 1)$ lies on line ℓ_4
606 : $P_{235751} = (38, 34, 56, 1)$ lies on line ℓ_4
607 : $P_{235807} = (30, 35, 56, 1)$ lies on line ℓ_4
608 : $P_{235862} = (21, 36, 56, 1)$ lies on line ℓ_4
609 : $P_{235950} = (45, 37, 56, 1)$ lies on line ℓ_4
610 : $P_{235973} = (4, 38, 56, 1)$ lies on line ℓ_4
611 : $P_{236093} = (60, 39, 56, 1)$ lies on line ℓ_4
612 : $P_{236115} = (18, 40, 56, 1)$ lies on line ℓ_4
613 : $P_{236203} = (42, 41, 56, 1)$ lies on line ℓ_4
614 : $P_{236228} = (3, 42, 56, 1)$ lies on line ℓ_4
615 : $P_{236348} = (59, 43, 56, 1)$ lies on line ℓ_4
616 : $P_{236401} = (48, 44, 56, 1)$ lies on line ℓ_4
617 : $P_{236425} = (8, 45, 56, 1)$ lies on line ℓ_4
618 : $P_{236514} = (33, 46, 56, 1)$ lies on line ℓ_4
619 : $P_{236570} = (25, 47, 56, 1)$ lies on line ℓ_4
620 : $P_{236637} = (28, 48, 56, 1)$ lies on line ℓ_4
621 : $P_{236709} = (36, 49, 56, 1)$ lies on line ℓ_4
622 : $P_{236750} = (13, 50, 56, 1)$ lies on line ℓ_4
623 : $P_{236854} = (53, 51, 56, 1)$ lies on line ℓ_4
624 : $P_{236927} = (62, 52, 56, 1)$ lies on line ℓ_4
625 : $P_{236935} = (6, 53, 56, 1)$ lies on line ℓ_4
626 : $P_{237040} = (47, 54, 56, 1)$ lies on line ℓ_4
627 : $P_{237080} = (23, 55, 56, 1)$ lies on line ℓ_4
628 : $P_{237289} = (40, 58, 56, 1)$ lies on line ℓ_4
629 : $P_{237329} = (16, 59, 56, 1)$ lies on line ℓ_4
630 : $P_{237404} = (27, 60, 56, 1)$ lies on line ℓ_4
631 : $P_{237476} = (35, 61, 56, 1)$ lies on line ℓ_4
632 : $P_{237515} = (10, 62, 56, 1)$ lies on line ℓ_4
633 : $P_{237619} = (50, 63, 56, 1)$ lies on line ℓ_4
634 : $P_{237633} = (0, 0, 57, 1)$ lies on line ℓ_5
635 : $P_{237634} = (1, 0, 57, 1)$ lies on line ℓ_{11}

636 : $P_{237780} = (19, 2, 57, 1)$ lies on line ℓ_5
637 : $P_{237867} = (42, 3, 57, 1)$ lies on line ℓ_5
638 : $P_{237927} = (38, 4, 57, 1)$ lies on line ℓ_5
639 : $P_{237984} = (31, 5, 57, 1)$ lies on line ℓ_5
640 : $P_{238070} = (53, 6, 57, 1)$ lies on line ℓ_5
641 : $P_{238093} = (12, 7, 57, 1)$ lies on line ℓ_5
642 : $P_{238190} = (45, 8, 57, 1)$ lies on line ℓ_5
643 : $P_{238229} = (20, 9, 57, 1)$ lies on line ℓ_5
644 : $P_{238335} = (62, 10, 57, 1)$ lies on line ℓ_5
645 : $P_{238344} = (7, 11, 57, 1)$ lies on line ℓ_5
646 : $P_{238412} = (11, 12, 57, 1)$ lies on line ℓ_5
647 : $P_{238515} = (50, 13, 57, 1)$ lies on line ℓ_5
648 : $P_{238553} = (24, 14, 57, 1)$ lies on line ℓ_5
649 : $P_{238626} = (33, 15, 57, 1)$ lies on line ℓ_5
650 : $P_{238716} = (59, 16, 57, 1)$ lies on line ℓ_5
651 : $P_{238723} = (2, 17, 57, 1)$ lies on line ℓ_5
652 : $P_{238825} = (40, 18, 57, 1)$ lies on line ℓ_5
653 : $P_{238866} = (17, 19, 57, 1)$ lies on line ℓ_5
654 : $P_{238942} = (29, 20, 57, 1)$ lies on line ℓ_5
655 : $P_{239013} = (36, 21, 57, 1)$ lies on line ℓ_5
656 : $P_{239055} = (14, 22, 57, 1)$ lies on line ℓ_5
657 : $P_{239160} = (55, 23, 57, 1)$ lies on line ℓ_5
658 : $P_{239191} = (22, 24, 57, 1)$ lies on line ℓ_5
659 : $P_{239280} = (47, 25, 57, 1)$ lies on line ℓ_5
660 : $P_{239302} = (5, 26, 57, 1)$ lies on line ℓ_5
661 : $P_{239421} = (60, 27, 57, 1)$ lies on line ℓ_5
662 : $P_{239473} = (48, 28, 57, 1)$ lies on line ℓ_5
663 : $P_{239498} = (9, 29, 57, 1)$ lies on line ℓ_5
664 : $P_{239588} = (35, 30, 57, 1)$ lies on line ℓ_5
665 : $P_{239643} = (26, 31, 57, 1)$ lies on line ℓ_5
666 : $P_{239704} = (23, 32, 57, 1)$ lies on line ℓ_5
667 : $P_{239791} = (46, 33, 57, 1)$ lies on line ℓ_5
668 : $P_{239813} = (4, 34, 57, 1)$ lies on line ℓ_5
669 : $P_{239934} = (61, 35, 57, 1)$ lies on line ℓ_5
670 : $P_{239986} = (49, 36, 57, 1)$ lies on line ℓ_5
671 : $P_{240009} = (8, 37, 57, 1)$ lies on line ℓ_5
672 : $P_{240099} = (34, 38, 57, 1)$ lies on line ℓ_5
673 : $P_{240156} = (27, 39, 57, 1)$ lies on line ℓ_5
674 : $P_{240251} = (58, 40, 57, 1)$ lies on line ℓ_5
675 : $P_{240260} = (3, 41, 57, 1)$ lies on line ℓ_5
676 : $P_{240362} = (41, 42, 57, 1)$ lies on line ℓ_5
677 : $P_{240401} = (16, 43, 57, 1)$ lies on line ℓ_5
678 : $P_{240477} = (28, 44, 57, 1)$ lies on line ℓ_5
679 : $P_{240550} = (37, 45, 57, 1)$ lies on line ℓ_5
680 : $P_{240592} = (15, 46, 57, 1)$ lies on line ℓ_5
681 : $P_{240695} = (54, 47, 57, 1)$ lies on line ℓ_5
682 : $P_{240749} = (44, 48, 57, 1)$ lies on line ℓ_5
683 : $P_{240790} = (21, 49, 57, 1)$ lies on line ℓ_5
684 : $P_{240896} = (63, 50, 57, 1)$ lies on line ℓ_5
685 : $P_{240903} = (6, 51, 57, 1)$ lies on line ℓ_5
686 : $P_{240971} = (10, 52, 57, 1)$ lies on line ℓ_5
687 : $P_{241076} = (51, 53, 57, 1)$ lies on line ℓ_5
688 : $P_{241114} = (25, 54, 57, 1)$ lies on line ℓ_5
689 : $P_{241185} = (32, 55, 57, 1)$ lies on line ℓ_5
690 : $P_{241363} = (18, 58, 57, 1)$ lies on line ℓ_5
691 : $P_{241452} = (43, 59, 57, 1)$ lies on line ℓ_5
692 : $P_{241512} = (39, 60, 57, 1)$ lies on line ℓ_5
693 : $P_{241567} = (30, 61, 57, 1)$ lies on line ℓ_5
694 : $P_{241653} = (52, 62, 57, 1)$ lies on line ℓ_5
695 : $P_{241678} = (13, 63, 57, 1)$ lies on line ℓ_5
696 : $P_{241851} = (58, 1, 58, 1)$ lies on line ℓ_6
697 : $P_{242818} = (1, 17, 58, 1)$ lies on line ℓ_{10}
698 : $P_{244418} = (1, 42, 58, 1)$ lies on line ℓ_{11}
699 : $P_{245353} = (40, 56, 58, 1)$ lies on line ℓ_7
700 : $P_{245395} = (18, 57, 58, 1)$ lies on line ℓ_8
701 : $P_{245506} = (1, 59, 58, 1)$ lies on line ℓ_9
702 : $P_{245948} = (59, 1, 59, 1)$ lies on line ℓ_6
703 : $P_{247042} = (1, 19, 59, 1)$ lies on line ℓ_{11}
704 : $P_{248450} = (1, 41, 59, 1)$ lies on line ℓ_{10}
705 : $P_{249425} = (16, 56, 59, 1)$ lies on line ℓ_7
706 : $P_{249516} = (43, 57, 59, 1)$ lies on line ℓ_8
707 : $P_{249538} = (1, 58, 59, 1)$ lies on line ℓ_9
708 : $P_{250045} = (60, 1, 60, 1)$ lies on line ℓ_6
709 : $P_{251906} = (1, 31, 60, 1)$ lies on line ℓ_{11}
710 : $P_{252098} = (1, 34, 60, 1)$ lies on line ℓ_{10}
711 : $P_{253532} = (27, 56, 60, 1)$ lies on line ℓ_7
712 : $P_{253608} = (39, 57, 60, 1)$ lies on line ℓ_8
713 : $P_{253826} = (1, 61, 60, 1)$ lies on line ℓ_9
714 : $P_{254142} = (61, 1, 61, 1)$ lies on line ℓ_6
715 : $P_{255682} = (1, 26, 61, 1)$ lies on line ℓ_{10}
716 : $P_{256450} = (1, 38, 61, 1)$ lies on line ℓ_{11}
717 : $P_{257636} = (35, 56, 61, 1)$ lies on line ℓ_7
718 : $P_{257695} = (30, 57, 61, 1)$ lies on line ℓ_8
719 : $P_{257858} = (1, 60, 61, 1)$ lies on line ℓ_9
720 : $P_{258239} = (62, 1, 62, 1)$ lies on line ℓ_6
721 : $P_{258882} = (1, 12, 62, 1)$ lies on line ℓ_{11}
722 : $P_{261378} = (1, 51, 62, 1)$ lies on line ℓ_{10}
723 : $P_{261707} = (10, 56, 62, 1)$ lies on line ℓ_7
724 : $P_{261813} = (52, 57, 62, 1)$ lies on line ℓ_8
725 : $P_{262146} = (1, 63, 62, 1)$ lies on line ℓ_9
726 : $P_{262336} = (63, 1, 63, 1)$ lies on line ℓ_6
727 : $P_{262914} = (1, 11, 63, 1)$ lies on line ℓ_{10}
728 : $P_{265602} = (1, 53, 63, 1)$ lies on line ℓ_{11}
729 : $P_{265843} = (50, 56, 63, 1)$ lies on line ℓ_7
730 : $P_{265870} = (13, 57, 63, 1)$ lies on line ℓ_8
731 : $P_{266178} = (1, 62, 63, 1)$ lies on line ℓ_9

The single points on the surface are:

Points on surface but on no line

The surface has 3600 points not on any line:
Too many to print.

Line Intersection Graph

	0	1	2	3	4	5	6	7	8	9	10	11
0	0	1	1	1	0	0	1	0	0	1	0	0
1	1	0	1	0	1	0	0	0	1	0	1	0
2	1	1	0	0	0	1	0	1	0	0	0	1
3	1	0	0	0	0	0	1	1	1	0	1	1
4	0	1	0	0	0	0	1	1	1	1	0	1
5	0	0	1	0	0	0	1	1	1	1	1	0
6	1	0	0	1	1	1	0	0	0	0	1	1
7	0	0	1	1	1	1	0	0	0	1	1	0
8	0	1	0	1	1	1	0	0	0	1	0	1
9	1	0	0	0	1	1	0	1	1	0	1	1
10	0	1	0	1	0	1	1	1	0	1	0	1
11	0	0	1	1	1	0	1	0	1	1	1	0

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_6	ℓ_9
in point	P_{3771}	P_{3708}	P_5	P_{68}	P_{131}

Line 1 intersects

Line	ℓ_0	ℓ_2	ℓ_4	ℓ_8	ℓ_{10}
in point	P_{3771}	P_{132}	P_{60}	P_{124}	P_{3651}

Line 2 intersects

Line	ℓ_0	ℓ_1	ℓ_5	ℓ_7	ℓ_{11}
in point	P_{3708}	P_{132}	P_{61}	P_{123}	P_{3715}

Line 3 intersects

Line	ℓ_0	ℓ_6	ℓ_7	ℓ_8	ℓ_{10}	ℓ_{11}
in point	P_5	P_4	P_{11897}	P_{11962}	P_4	P_4

Line 4 intersects

Line	ℓ_1	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{11}
in point	P_{60}	P_{233657}	P_{237178}	P_{237186}	P_{237186}	P_{237186}

Line 5 intersects

Line	ℓ_2	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{10}
in point	P_{61}	P_{237754}	P_{241218}	P_{241337}	P_{241218}	P_{241218}

Line 6 intersects

Line	ℓ_0	ℓ_3	ℓ_4	ℓ_5	ℓ_{10}	ℓ_{11}
in point	P_{68}	P_4	P_{233657}	P_{237754}	P_4	P_4

Line 7 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_9	ℓ_{10}
in point	P_{123}	P_{11897}	P_{237178}	P_{241218}	P_{241218}	P_{241218}

Line 8 intersects

Line	ℓ_1	ℓ_3	ℓ_4	ℓ_5	ℓ_9	ℓ_{11}
in point	P_{124}	P_{11962}	P_{237186}	P_{241337}	P_{237186}	P_{237186}

Line 9 intersects

Line	ℓ_0	ℓ_4	ℓ_5	ℓ_7	ℓ_8	ℓ_{10}	ℓ_{11}
in point	P_{131}	P_{237186}	P_{241218}	P_{241218}	P_{237186}	P_{241218}	P_{237186}

Line 10 intersects

Line	ℓ_1	ℓ_3	ℓ_5	ℓ_6	ℓ_7	ℓ_9	ℓ_{11}
in point	P_{3651}	P_4	P_{241218}	P_4	P_{241218}	P_{241218}	P_4

Line 11 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_6	ℓ_8	ℓ_9	ℓ_{10}
in point	P_{3715}	P_4	P_{237186}	P_4	P_{237186}	P_{237186}	P_4

The surface has 4353 points:

Too many to print.