

Rank-65665 over GF(64)

January 15, 2021

The equation

The equation of the surface is :

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

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

The point rank of the equation over GF(64) is -2113396603

General information

Number of lines	16
Number of points	4417
Number of singular points	2
Number of Eckardt points	0
Number of double points	38
Number of single points	954
Number of points off lines	3423
Number of Hesse planes	0
Number of axes	0
Type of points on lines	65^{16}
Type of lines on points	$5^2, 2^{38}, 1^{954}, 0^{3423}$

Singular Points

The surface has 2 singular points:

$$0 : P_{4227} = \mathbf{P}(1, 1, 0, 1) = \mathbf{P}(1, 1, 0, 1)$$

$$1 : P_{8259} = \mathbf{P}(1, 0, 1, 1) = \mathbf{P}(1, 0, 1, 1)$$

The 16 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 & 0 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{64} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{64} = \mathbf{Pl}(1, 0, 0, 0, 1, 0)_{4226} \\
\ell_2 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4097} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4097} = \mathbf{Pl}(0, 0, 1, 0, 1, 0)_{4352} \\
\ell_3 &= \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_4 &= \begin{bmatrix} 1 & 0 & \epsilon^{18} & \epsilon^9 \\ 0 & 1 & \epsilon^{54} & \epsilon^{36} \end{bmatrix}_{12564373} = \begin{bmatrix} 1 & 0 & 11 & 47 \\ 0 & 1 & 10 & 36 \end{bmatrix}_{12564373} = \mathbf{Pl}(1, 1, 47, 10, 11, 1)_{3355890} \\
\ell_5 &= \begin{bmatrix} 1 & 0 & \epsilon^{18} & \epsilon^9 \\ 0 & 1 & \epsilon^{18} & \epsilon^{27} \end{bmatrix}_{12565014} = \begin{bmatrix} 1 & 0 & 11 & 47 \\ 0 & 1 & 11 & 46 \end{bmatrix}_{12565014} = \mathbf{Pl}(1, 1, 47, 10, 47, 1)_{12790140} \\
\ell_6 &= \begin{bmatrix} 1 & 0 & \epsilon^{54} & \epsilon^{54} \\ 0 & 1 & \epsilon^{18} & \epsilon^{27} \end{bmatrix}_{2707605} = \begin{bmatrix} 1 & 0 & 10 & 10 \\ 0 & 1 & 11 & 46 \end{bmatrix}_{2707605} = \mathbf{Pl}(11, 37, 1, 1, 36, 1)_{9725893} \\
\ell_7 &= \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & \epsilon^{27} & \epsilon^{18} \end{bmatrix}_{271215} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 46 & 11 \end{bmatrix}_{271215} = \mathbf{Pl}(11, 37, 1, 1, 11, 1)_{3176224} \\
\ell_8 &= \begin{bmatrix} 1 & 0 & \epsilon^{45} & \epsilon^{45} \\ 0 & 1 & \epsilon^{36} & \epsilon^{54} \end{bmatrix}_{10007881} = \begin{bmatrix} 1 & 0 & 37 & 37 \\ 0 & 1 & 36 & 10 \end{bmatrix}_{10007881} = \mathbf{Pl}(36, 46, 1, 1, 47, 1)_{12610499} \\
\ell_9 &= \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & \epsilon^{54} & \epsilon^{36} \end{bmatrix}_{272779} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 10 & 36 \end{bmatrix}_{272779} = \mathbf{Pl}(36, 46, 1, 1, 36, 1)_{9725981} \\
\ell_{10} &= \begin{bmatrix} 1 & 0 & \epsilon^{36} & \epsilon^{18} \\ 0 & 1 & \epsilon^{36} & \epsilon^{54} \end{bmatrix}_{3079816} = \begin{bmatrix} 1 & 0 & 36 & 11 \\ 0 & 1 & 36 & 10 \end{bmatrix}_{3079816} = \mathbf{Pl}(1, 1, 11, 37, 11, 1)_{3215211} \\
\ell_{11} &= \begin{bmatrix} 1 & 0 & \epsilon^{36} & \epsilon^{18} \\ 0 & 1 & \epsilon^{45} & \epsilon^9 \end{bmatrix}_{3082185} = \begin{bmatrix} 1 & 0 & 36 & 11 \\ 0 & 1 & 37 & 47 \end{bmatrix}_{3082185} = \mathbf{Pl}(1, 1, 11, 37, 36, 1)_{9765006} \\
\ell_{12} &= \begin{bmatrix} 1 & 0 & \epsilon^9 & \epsilon^{36} \\ 0 & 1 & \epsilon^9 & \epsilon^{45} \end{bmatrix}_{9784926} = \begin{bmatrix} 1 & 0 & 47 & 36 \\ 0 & 1 & 47 & 37 \end{bmatrix}_{9784926} = \mathbf{Pl}(1, 1, 36, 46, 36, 1)_{9862593} \\
\ell_{13} &= \begin{bmatrix} 1 & 0 & \epsilon^9 & \epsilon^{36} \\ 0 & 1 & \epsilon^{27} & \epsilon^{18} \end{bmatrix}_{9783261} = \begin{bmatrix} 1 & 0 & 47 & 36 \\ 0 & 1 & 46 & 11 \end{bmatrix}_{9783261} = \mathbf{Pl}(1, 1, 36, 46, 47, 1)_{12747111} \\
\ell_{14} &= \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & \epsilon^{45} & \epsilon^9 \end{bmatrix}_{273510} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 37 & 47 \end{bmatrix}_{273510} = \mathbf{Pl}(47, 10, 1, 1, 47, 1)_{12610447} \\
\ell_{15} &= \begin{bmatrix} 1 & 0 & \epsilon^{27} & \epsilon^{27} \\ 0 & 1 & \epsilon^9 & \epsilon^{45} \end{bmatrix}_{12443805} = \begin{bmatrix} 1 & 0 & 46 & 46 \\ 0 & 1 & 47 & 37 \end{bmatrix}_{12443805} = \mathbf{Pl}(47, 10, 1, 1, 11, 1)_{3176197}
\end{aligned}$$

Rank of lines: (4162, 64, 4097, 270466, 12564373, 12565014, 2707605, 271215, 10007881, 272779, 3079816, 3082185, 9784926, 9783261, 273510, 12443805)

Rank of points on Klein quadric: (270529, 4226, 4352, 286530, 3355890, 12790140, 9725893, 3176224, 12610499, 9725981, 3215211, 9765006, 9862593, 12747111, 12610447, 3176197)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

The surface has 38 Double points:

The double points on the surface are:

$$\begin{aligned}
P_{131} &= (0, 1, 1, 0) = \ell_0 \cap \ell_3 \\
P_{718} &= (11, 10, 1, 0) = \ell_0 \cap \ell_4 \\
P_{781} &= (10, 11, 1, 0) = \ell_0 \cap \ell_6 \\
P_{2408} &= (37, 36, 1, 0) = \ell_0 \cap \ell_8 \\
P_{2471} &= (36, 37, 1, 0) = \ell_0 \cap \ell_{11} \\
P_{3058} &= (47, 46, 1, 0) = \ell_0 \cap \ell_{13} \\
P_{3121} &= (46, 47, 1, 0) = \ell_0 \cap \ell_{15} \\
P_0 &= (1, 0, 0, 0) = \ell_1 \cap \ell_2 \\
P_{4262} &= (36, 1, 0, 1) = \ell_1 \cap \ell_4 \\
P_{4273} &= (47, 1, 0, 1) = \ell_1 \cap \ell_{11} \\
P_{4237} &= (11, 1, 0, 1) = \ell_1 \cap \ell_{13} \\
P_{8305} &= (47, 0, 1, 1) = \ell_2 \cap \ell_6 \\
P_{8269} &= (11, 0, 1, 1) = \ell_2 \cap \ell_8 \\
P_{8294} &= (36, 0, 1, 1) = \ell_2 \cap \ell_{15} \\
P_{196683} &= (10, 0, 47, 1) = \ell_4 \cap \ell_5 \\
P_{47436} &= (11, 36, 10, 1) = \ell_4 \cap \ell_7 \\
P_{52161} &= (0, 46, 11, 1) = \ell_4 \cap \ell_9 \\
P_{158118} &= (37, 37, 37, 1) = \ell_4 \cap \ell_{15} \\
P_{47425} &= (0, 36, 10, 1) = \ell_5 \cap \ell_6 \\
P_{52208} &= (47, 46, 11, 1) = \ell_5 \cap \ell_8
\end{aligned}$$

$$\begin{aligned}
P_{158092} &= (11, 37, 37, 1) = \ell_5 \cap \ell_{14} \\
P_{4903} &= (37, 11, 0, 1) = \ell_6 \cap \ell_7 \\
P_{195567} &= (46, 46, 46, 1) = \ell_6 \cap \ell_{11} \\
P_{199077} &= (36, 37, 47, 1) = \ell_6 \cap \ell_{12} \\
P_{195557} &= (36, 46, 46, 1) = \ell_7 \cap \ell_{10} \\
P_{199041} &= (0, 37, 47, 1) = \ell_7 \cap \ell_{13} \\
P_{6512} &= (46, 36, 0, 1) = \ell_8 \cap \ell_9 \\
P_{158721} &= (0, 47, 37, 1) = \ell_8 \cap \ell_{10} \\
P_{45771} &= (10, 10, 10, 1) = \ell_8 \cap \ell_{13} \\
P_{158757} &= (36, 47, 37, 1) = \ell_9 \cap \ell_{11} \\
P_{45808} &= (47, 10, 10, 1) = \ell_9 \cap \ell_{12} \\
P_{49254} &= (37, 0, 11, 1) = \ell_{10} \cap \ell_{11} \\
P_{152268} &= (11, 10, 36, 1) = \ell_{10} \cap \ell_{15} \\
P_{152257} &= (0, 10, 36, 1) = \ell_{11} \cap \ell_{14} \\
P_{151663} &= (46, 0, 36, 1) = \ell_{12} \cap \ell_{13} \\
P_{193281} &= (0, 11, 46, 1) = \ell_{12} \cap \ell_{15} \\
P_{193328} &= (47, 11, 46, 1) = \ell_{13} \cap \ell_{14} \\
P_{7180} &= (10, 47, 0, 1) = \ell_{14} \cap \ell_{15}
\end{aligned}$$

Single Points

The surface has 954 single points:
The single points on the surface are:

$$\begin{aligned}
0 : P_5 &= (1, 1, 0, 0) \text{ lies on line } \ell_0 \\
1 : P_{68} &= (1, 0, 1, 0) \text{ lies on line } \ell_0 \\
2 : P_{198} &= (3, 2, 1, 0) \text{ lies on line } \ell_0 \\
3 : P_{261} &= (2, 3, 1, 0) \text{ lies on line } \ell_0 \\
4 : P_{328} &= (5, 4, 1, 0) \text{ lies on line } \ell_0 \\
5 : P_{391} &= (4, 5, 1, 0) \text{ lies on line } \ell_0 \\
6 : P_{458} &= (7, 6, 1, 0) \text{ lies on line } \ell_0 \\
7 : P_{521} &= (6, 7, 1, 0) \text{ lies on line } \ell_0 \\
8 : P_{588} &= (9, 8, 1, 0) \text{ lies on line } \ell_0 \\
9 : P_{651} &= (8, 9, 1, 0) \text{ lies on line } \ell_0 \\
10 : P_{754} &= (47, 10, 1, 0) \text{ lies on line } \ell_5 \\
11 : P_{807} &= (36, 11, 1, 0) \text{ lies on line } \ell_7 \\
12 : P_{848} &= (13, 12, 1, 0) \text{ lies on line } \ell_0 \\
13 : P_{911} &= (12, 13, 1, 0) \text{ lies on line } \ell_0 \\
14 : P_{978} &= (15, 14, 1, 0) \text{ lies on line } \ell_0 \\
15 : P_{1041} &= (14, 15, 1, 0) \text{ lies on line } \ell_0 \\
16 : P_{1108} &= (17, 16, 1, 0) \text{ lies on line } \ell_0 \\
17 : P_{1171} &= (16, 17, 1, 0) \text{ lies on line } \ell_0 \\
18 : P_{1238} &= (19, 18, 1, 0) \text{ lies on line } \ell_0 \\
19 : P_{1301} &= (18, 19, 1, 0) \text{ lies on line } \ell_0 \\
20 : P_{1368} &= (21, 20, 1, 0) \text{ lies on line } \ell_0 \\
21 : P_{1431} &= (20, 21, 1, 0) \text{ lies on line } \ell_0 \\
22 : P_{1498} &= (23, 22, 1, 0) \text{ lies on line } \ell_0 \\
23 : P_{1561} &= (22, 23, 1, 0) \text{ lies on line } \ell_0 \\
24 : P_{1628} &= (25, 24, 1, 0) \text{ lies on line } \ell_0 \\
25 : P_{1691} &= (24, 25, 1, 0) \text{ lies on line } \ell_0 \\
26 : P_{1758} &= (27, 26, 1, 0) \text{ lies on line } \ell_0
\end{aligned}$$

$$\begin{aligned}
27 : P_{1821} &= (26, 27, 1, 0) \text{ lies on line } \ell_0 \\
28 : P_{1888} &= (29, 28, 1, 0) \text{ lies on line } \ell_0 \\
29 : P_{1951} &= (28, 29, 1, 0) \text{ lies on line } \ell_0 \\
30 : P_{2018} &= (31, 30, 1, 0) \text{ lies on line } \ell_0 \\
31 : P_{2081} &= (30, 31, 1, 0) \text{ lies on line } \ell_0 \\
32 : P_{2148} &= (33, 32, 1, 0) \text{ lies on line } \ell_0 \\
33 : P_{2211} &= (32, 33, 1, 0) \text{ lies on line } \ell_0 \\
34 : P_{2278} &= (35, 34, 1, 0) \text{ lies on line } \ell_0 \\
35 : P_{2341} &= (34, 35, 1, 0) \text{ lies on line } \ell_0 \\
36 : P_{2418} &= (47, 36, 1, 0) \text{ lies on line } \ell_9 \\
37 : P_{2446} &= (11, 37, 1, 0) \text{ lies on line } \ell_{10} \\
38 : P_{2538} &= (39, 38, 1, 0) \text{ lies on line } \ell_0 \\
39 : P_{2601} &= (38, 39, 1, 0) \text{ lies on line } \ell_0 \\
40 : P_{2668} &= (41, 40, 1, 0) \text{ lies on line } \ell_0 \\
41 : P_{2731} &= (40, 41, 1, 0) \text{ lies on line } \ell_0 \\
42 : P_{2798} &= (43, 42, 1, 0) \text{ lies on line } \ell_0 \\
43 : P_{2861} &= (42, 43, 1, 0) \text{ lies on line } \ell_0 \\
44 : P_{2928} &= (45, 44, 1, 0) \text{ lies on line } \ell_0 \\
45 : P_{2991} &= (44, 45, 1, 0) \text{ lies on line } \ell_0 \\
46 : P_{3047} &= (36, 46, 1, 0) \text{ lies on line } \ell_{12} \\
47 : P_{3086} &= (11, 47, 1, 0) \text{ lies on line } \ell_{14} \\
48 : P_{3188} &= (49, 48, 1, 0) \text{ lies on line } \ell_0 \\
49 : P_{3251} &= (48, 49, 1, 0) \text{ lies on line } \ell_0 \\
50 : P_{3318} &= (51, 50, 1, 0) \text{ lies on line } \ell_0 \\
51 : P_{3381} &= (50, 51, 1, 0) \text{ lies on line } \ell_0 \\
52 : P_{3448} &= (53, 52, 1, 0) \text{ lies on line } \ell_0 \\
53 : P_{3511} &= (52, 53, 1, 0) \text{ lies on line } \ell_0
\end{aligned}$$

162 : $P_{8299} = (41, 0, 1, 1)$ lies on line ℓ_2
 163 : $P_{8300} = (42, 0, 1, 1)$ lies on line ℓ_2
 164 : $P_{8301} = (43, 0, 1, 1)$ lies on line ℓ_2
 165 : $P_{8302} = (44, 0, 1, 1)$ lies on line ℓ_2
 166 : $P_{8303} = (45, 0, 1, 1)$ lies on line ℓ_2
 167 : $P_{8304} = (46, 0, 1, 1)$ lies on line ℓ_2
 168 : $P_{8306} = (48, 0, 1, 1)$ lies on line ℓ_2
 169 : $P_{8307} = (49, 0, 1, 1)$ lies on line ℓ_2
 170 : $P_{8308} = (50, 0, 1, 1)$ lies on line ℓ_2
 171 : $P_{8309} = (51, 0, 1, 1)$ lies on line ℓ_2
 172 : $P_{8310} = (52, 0, 1, 1)$ lies on line ℓ_2
 173 : $P_{8311} = (53, 0, 1, 1)$ lies on line ℓ_2
 174 : $P_{8312} = (54, 0, 1, 1)$ lies on line ℓ_2
 175 : $P_{8313} = (55, 0, 1, 1)$ lies on line ℓ_2
 176 : $P_{8314} = (56, 0, 1, 1)$ lies on line ℓ_2
 177 : $P_{8315} = (57, 0, 1, 1)$ lies on line ℓ_2
 178 : $P_{8316} = (58, 0, 1, 1)$ lies on line ℓ_2
 179 : $P_{8317} = (59, 0, 1, 1)$ lies on line ℓ_2
 180 : $P_{8318} = (60, 0, 1, 1)$ lies on line ℓ_2
 181 : $P_{8319} = (61, 0, 1, 1)$ lies on line ℓ_2
 182 : $P_{8320} = (62, 0, 1, 1)$ lies on line ℓ_2
 183 : $P_{8321} = (63, 0, 1, 1)$ lies on line ℓ_2
 184 : $P_{9007} = (46, 11, 1, 1)$ lies on line ℓ_5
 185 : $P_{9008} = (47, 11, 1, 1)$ lies on line ℓ_4
 186 : $P_{10571} = (10, 36, 1, 1)$ lies on line ℓ_{10}
 187 : $P_{10572} = (11, 36, 1, 1)$ lies on line ℓ_{11}
 188 : $P_{11301} = (36, 47, 1, 1)$ lies on line ℓ_{13}
 189 : $P_{11302} = (37, 47, 1, 1)$ lies on line ℓ_{12}
 190 : $P_{12546} = (1, 3, 2, 1)$ lies on line ℓ_3
 191 : $P_{13190} = (5, 13, 2, 1)$ lies on line ℓ_8
 192 : $P_{13202} = (17, 13, 2, 1)$ lies on line ℓ_9
 193 : $P_{13405} = (28, 16, 2, 1)$ lies on line ℓ_{14}
 194 : $P_{13432} = (55, 16, 2, 1)$ lies on line ℓ_{15}
 195 : $P_{13747} = (50, 21, 2, 1)$ lies on line ℓ_4
 196 : $P_{13759} = (62, 21, 2, 1)$ lies on line ℓ_5
 197 : $P_{14221} = (12, 29, 2, 1)$ lies on line ℓ_7
 198 : $P_{14258} = (49, 29, 2, 1)$ lies on line ℓ_6
 199 : $P_{15047} = (6, 42, 2, 1)$ lies on line ℓ_{11}
 200 : $P_{15064} = (23, 42, 2, 1)$ lies on line ℓ_{10}
 201 : $P_{16233} = (40, 60, 2, 1)$ lies on line ℓ_{12}
 202 : $P_{16245} = (52, 60, 2, 1)$ lies on line ℓ_{13}
 203 : $P_{16578} = (1, 2, 3, 1)$ lies on line ℓ_3
 204 : $P_{17437} = (28, 15, 3, 1)$ lies on line ℓ_{10}
 205 : $P_{17443} = (34, 15, 3, 1)$ lies on line ℓ_{11}
 206 : $P_{17613} = (12, 18, 3, 1)$ lies on line ℓ_{12}
 207 : $P_{17628} = (27, 18, 3, 1)$ lies on line ℓ_{13}
 208 : $P_{17897} = (40, 22, 3, 1)$ lies on line ℓ_7
 209 : $P_{17916} = (59, 22, 3, 1)$ lies on line ℓ_6
 210 : $P_{18450} = (17, 31, 3, 1)$ lies on line ℓ_5
 211 : $P_{18490} = (57, 31, 3, 1)$ lies on line ℓ_4
 212 : $P_{19105} = (32, 41, 3, 1)$ lies on line ℓ_8
 213 : $P_{19135} = (62, 41, 3, 1)$ lies on line ℓ_9
 214 : $P_{20504} = (23, 63, 3, 1)$ lies on line ℓ_{14}
 215 : $P_{20506} = (25, 63, 3, 1)$ lies on line ℓ_{15}

216 : $P_{20866} = (1, 5, 4, 1)$ lies on line ℓ_3
 217 : $P_{22042} = (25, 23, 4, 1)$ lies on line ℓ_8
 218 : $P_{22066} = (49, 23, 4, 1)$ lies on line ℓ_9
 219 : $P_{22229} = (20, 26, 4, 1)$ lies on line ℓ_{13}
 220 : $P_{22259} = (50, 26, 4, 1)$ lies on line ℓ_{12}
 221 : $P_{23054} = (13, 39, 4, 1)$ lies on line ℓ_6
 222 : $P_{23063} = (22, 39, 4, 1)$ lies on line ℓ_7
 223 : $P_{23177} = (8, 41, 4, 1)$ lies on line ℓ_4
 224 : $P_{23199} = (30, 41, 4, 1)$ lies on line ℓ_5
 225 : $P_{23634} = (17, 48, 4, 1)$ lies on line ℓ_{15}
 226 : $P_{23655} = (38, 48, 4, 1)$ lies on line ℓ_{14}
 227 : $P_{24029} = (28, 54, 4, 1)$ lies on line ℓ_{11}
 228 : $P_{24046} = (45, 54, 4, 1)$ lies on line ℓ_{10}
 229 : $P_{24898} = (1, 4, 5, 1)$ lies on line ℓ_3
 230 : $P_{25895} = (38, 19, 5, 1)$ lies on line ℓ_{10}
 231 : $P_{25913} = (56, 19, 5, 1)$ lies on line ℓ_{11}
 232 : $P_{26670} = (45, 31, 5, 1)$ lies on line ℓ_{14}
 233 : $P_{26688} = (63, 31, 5, 1)$ lies on line ℓ_{15}
 234 : $P_{26884} = (3, 35, 5, 1)$ lies on line ℓ_4
 235 : $P_{26930} = (49, 35, 5, 1)$ lies on line ℓ_5
 236 : $P_{27464} = (7, 44, 5, 1)$ lies on line ℓ_6
 237 : $P_{27507} = (50, 44, 5, 1)$ lies on line ℓ_7
 238 : $P_{27935} = (30, 51, 5, 1)$ lies on line ℓ_9
 239 : $P_{27965} = (60, 51, 5, 1)$ lies on line ℓ_8
 240 : $P_{27991} = (22, 52, 5, 1)$ lies on line ℓ_{12}
 241 : $P_{28028} = (59, 52, 5, 1)$ lies on line ℓ_{13}
 242 : $P_{29186} = (1, 7, 6, 1)$ lies on line ℓ_3
 243 : $P_{29741} = (44, 15, 6, 1)$ lies on line ℓ_{15}
 244 : $P_{29745} = (48, 15, 6, 1)$ lies on line ℓ_{14}
 245 : $P_{30646} = (53, 29, 6, 1)$ lies on line ℓ_{11}
 246 : $P_{30652} = (59, 29, 6, 1)$ lies on line ℓ_{10}
 247 : $P_{31260} = (27, 39, 6, 1)$ lies on line ℓ_{12}
 248 : $P_{31276} = (43, 39, 6, 1)$ lies on line ℓ_{13}
 249 : $P_{31898} = (25, 49, 6, 1)$ lies on line ℓ_6
 250 : $P_{31936} = (63, 49, 6, 1)$ lies on line ℓ_7
 251 : $P_{32671} = (30, 61, 6, 1)$ lies on line ℓ_4
 252 : $P_{32674} = (33, 61, 6, 1)$ lies on line ℓ_5
 253 : $P_{32719} = (14, 62, 6, 1)$ lies on line ℓ_9
 254 : $P_{32755} = (50, 62, 6, 1)$ lies on line ℓ_8
 255 : $P_{33218} = (1, 6, 7, 1)$ lies on line ℓ_3
 256 : $P_{33413} = (4, 9, 7, 1)$ lies on line ℓ_{13}
 257 : $P_{33472} = (63, 9, 7, 1)$ lies on line ℓ_{12}
 258 : $P_{34520} = (23, 26, 7, 1)$ lies on line ℓ_8
 259 : $P_{34530} = (33, 26, 7, 1)$ lies on line ℓ_9
 260 : $P_{34883} = (2, 32, 7, 1)$ lies on line ℓ_{15}
 261 : $P_{34940} = (59, 32, 7, 1)$ lies on line ℓ_{14}
 262 : $P_{36367} = (14, 55, 7, 1)$ lies on line ℓ_5
 263 : $P_{36374} = (21, 55, 7, 1)$ lies on line ℓ_4
 264 : $P_{36434} = (17, 56, 7, 1)$ lies on line ℓ_{11}
 265 : $P_{36465} = (48, 56, 7, 1)$ lies on line ℓ_{10}
 266 : $P_{36564} = (19, 58, 7, 1)$ lies on line ℓ_6
 267 : $P_{36572} = (27, 58, 7, 1)$ lies on line ℓ_7
 268 : $P_{37506} = (1, 9, 8, 1)$ lies on line ℓ_3
 269 : $P_{37865} = (40, 14, 8, 1)$ lies on line ℓ_{11}

270 : $P_{37881} = (56, 14, 8, 1)$ lies on line ℓ_{10}
 271 : $P_{38068} = (51, 17, 8, 1)$ lies on line ℓ_{14}
 272 : $P_{38077} = (60, 17, 8, 1)$ lies on line ℓ_{15}
 273 : $P_{39185} = (16, 35, 8, 1)$ lies on line ℓ_9
 274 : $P_{39202} = (33, 35, 8, 1)$ lies on line ℓ_8
 275 : $P_{40030} = (29, 48, 8, 1)$ lies on line ℓ_4
 276 : $P_{40064} = (63, 48, 8, 1)$ lies on line ℓ_5
 277 : $P_{40149} = (20, 50, 8, 1)$ lies on line ℓ_6
 278 : $P_{40163} = (34, 50, 8, 1)$ lies on line ℓ_7
 279 : $P_{40455} = (6, 55, 8, 1)$ lies on line ℓ_{12}
 280 : $P_{40502} = (53, 55, 8, 1)$ lies on line ℓ_{13}
 281 : $P_{41477} = (4, 7, 9, 1)$ lies on line ℓ_8
 282 : $P_{41536} = (63, 7, 9, 1)$ lies on line ℓ_9
 283 : $P_{41538} = (1, 8, 9, 1)$ lies on line ℓ_3
 284 : $P_{42651} = (26, 25, 9, 1)$ lies on line ℓ_{13}
 285 : $P_{42659} = (34, 25, 9, 1)$ lies on line ℓ_{12}
 286 : $P_{43789} = (12, 43, 9, 1)$ lies on line ℓ_{11}
 287 : $P_{43828} = (51, 43, 9, 1)$ lies on line ℓ_{10}
 288 : $P_{44679} = (6, 57, 9, 1)$ lies on line ℓ_7
 289 : $P_{44703} = (30, 57, 9, 1)$ lies on line ℓ_6
 290 : $P_{44753} = (16, 58, 9, 1)$ lies on line ℓ_5
 291 : $P_{44759} = (22, 58, 9, 1)$ lies on line ℓ_4
 292 : $P_{45011} = (18, 62, 9, 1)$ lies on line ℓ_{15}
 293 : $P_{45049} = (56, 62, 9, 1)$ lies on line ℓ_{14}
 294 : $P_{45826} = (1, 11, 10, 1)$ lies on line ℓ_3
 295 : $P_{47490} = (1, 37, 10, 1)$ lies on line ℓ_{11}
 296 : $P_{47535} = (46, 37, 10, 1)$ lies on line ℓ_{10}
 297 : $P_{48066} = (1, 46, 10, 1)$ lies on line ℓ_{15}
 298 : $P_{48102} = (37, 46, 10, 1)$ lies on line ℓ_{14}
 299 : $P_{49327} = (46, 1, 11, 1)$ lies on line ℓ_{14}
 300 : $P_{49328} = (47, 1, 11, 1)$ lies on line ℓ_{15}
 301 : $P_{49858} = (1, 10, 11, 1)$ lies on line ℓ_3
 302 : $P_{51532} = (11, 36, 11, 1)$ lies on line ℓ_{12}
 303 : $P_{51558} = (37, 36, 11, 1)$ lies on line ℓ_{13}
 304 : $P_{52235} = (10, 47, 11, 1)$ lies on line ℓ_6
 305 : $P_{52272} = (47, 47, 11, 1)$ lies on line ℓ_7
 306 : $P_{54146} = (1, 13, 12, 1)$ lies on line ℓ_3
 307 : $P_{54240} = (31, 14, 12, 1)$ lies on line ℓ_{14}
 308 : $P_{54248} = (39, 14, 12, 1)$ lies on line ℓ_{15}
 309 : $P_{54352} = (15, 16, 12, 1)$ lies on line ℓ_9
 310 : $P_{54359} = (22, 16, 12, 1)$ lies on line ℓ_8
 311 : $P_{54881} = (32, 24, 12, 1)$ lies on line ℓ_5
 312 : $P_{54898} = (49, 24, 12, 1)$ lies on line ℓ_4
 313 : $P_{55250} = (17, 30, 12, 1)$ lies on line ℓ_7
 314 : $P_{55293} = (60, 30, 12, 1)$ lies on line ℓ_6
 315 : $P_{56171} = (42, 44, 12, 1)$ lies on line ℓ_{13}
 316 : $P_{56182} = (53, 44, 12, 1)$ lies on line ℓ_{12}
 317 : $P_{56981} = (20, 57, 12, 1)$ lies on line ℓ_{10}
 318 : $P_{56988} = (27, 57, 12, 1)$ lies on line ℓ_{11}
 319 : $P_{57542} = (5, 2, 13, 1)$ lies on line ℓ_{13}
 320 : $P_{57554} = (17, 2, 13, 1)$ lies on line ℓ_{12}
 321 : $P_{58178} = (1, 12, 13, 1)$ lies on line ℓ_3
 322 : $P_{58576} = (15, 18, 13, 1)$ lies on line ℓ_5
 323 : $P_{58619} = (58, 18, 13, 1)$ lies on line ℓ_4

324 : $P_{58806} = (53, 21, 13, 1)$ lies on line ℓ_7
 325 : $P_{58807} = (54, 21, 13, 1)$ lies on line ℓ_6
 326 : $P_{59232} = (31, 28, 13, 1)$ lies on line ℓ_{10}
 327 : $P_{59264} = (63, 28, 13, 1)$ lies on line ℓ_{11}
 328 : $P_{59530} = (9, 33, 13, 1)$ lies on line ℓ_{15}
 329 : $P_{59541} = (20, 33, 13, 1)$ lies on line ℓ_{14}
 330 : $P_{60769} = (32, 52, 13, 1)$ lies on line ℓ_9
 331 : $P_{60788} = (51, 52, 13, 1)$ lies on line ℓ_8
 332 : $P_{62057} = (40, 8, 14, 1)$ lies on line ℓ_6
 333 : $P_{62073} = (56, 8, 14, 1)$ lies on line ℓ_7
 334 : $P_{62304} = (31, 12, 14, 1)$ lies on line ℓ_5
 335 : $P_{62312} = (39, 12, 14, 1)$ lies on line ℓ_4
 336 : $P_{62466} = (1, 15, 14, 1)$ lies on line ℓ_3
 337 : $P_{62614} = (21, 17, 14, 1)$ lies on line ℓ_{13}
 338 : $P_{62621} = (28, 17, 14, 1)$ lies on line ℓ_{12}
 339 : $P_{62659} = (2, 18, 14, 1)$ lies on line ℓ_{10}
 340 : $P_{62707} = (50, 18, 14, 1)$ lies on line ℓ_{11}
 341 : $P_{64650} = (9, 49, 14, 1)$ lies on line ℓ_{14}
 342 : $P_{64667} = (26, 49, 14, 1)$ lies on line ℓ_{15}
 343 : $P_{65201} = (48, 57, 14, 1)$ lies on line ℓ_9
 344 : $P_{65214} = (61, 57, 14, 1)$ lies on line ℓ_8
 345 : $P_{65821} = (28, 3, 15, 1)$ lies on line ℓ_7
 346 : $P_{65827} = (34, 3, 15, 1)$ lies on line ℓ_6
 347 : $P_{66029} = (44, 6, 15, 1)$ lies on line ℓ_4
 348 : $P_{66033} = (48, 6, 15, 1)$ lies on line ℓ_5
 349 : $P_{66498} = (1, 14, 15, 1)$ lies on line ℓ_3
 350 : $P_{67481} = (24, 29, 15, 1)$ lies on line ℓ_8
 351 : $P_{67488} = (31, 29, 15, 1)$ lies on line ℓ_9
 352 : $P_{67523} = (2, 30, 15, 1)$ lies on line ℓ_{14}
 353 : $P_{67573} = (52, 30, 15, 1)$ lies on line ℓ_{15}
 354 : $P_{69130} = (9, 55, 15, 1)$ lies on line ℓ_{10}
 355 : $P_{69143} = (22, 55, 15, 1)$ lies on line ℓ_{11}
 356 : $P_{69689} = (56, 63, 15, 1)$ lies on line ℓ_{12}
 357 : $P_{69691} = (58, 63, 15, 1)$ lies on line ℓ_{13}
 358 : $P_{69853} = (28, 2, 16, 1)$ lies on line ℓ_5
 359 : $P_{69880} = (55, 2, 16, 1)$ lies on line ℓ_4
 360 : $P_{70480} = (15, 12, 16, 1)$ lies on line ℓ_{12}
 361 : $P_{70487} = (22, 12, 16, 1)$ lies on line ℓ_{13}
 362 : $P_{70786} = (1, 17, 16, 1)$ lies on line ℓ_3
 363 : $P_{71271} = (38, 24, 16, 1)$ lies on line ℓ_6
 364 : $P_{71276} = (43, 24, 16, 1)$ lies on line ℓ_7
 365 : $P_{71699} = (18, 31, 16, 1)$ lies on line ℓ_{10}
 366 : $P_{71714} = (33, 31, 16, 1)$ lies on line ℓ_{11}
 367 : $P_{72433} = (48, 42, 16, 1)$ lies on line ℓ_8
 368 : $P_{72436} = (51, 42, 16, 1)$ lies on line ℓ_9
 369 : $P_{72904} = (7, 50, 16, 1)$ lies on line ℓ_{15}
 370 : $P_{72922} = (25, 50, 16, 1)$ lies on line ℓ_{14}
 371 : $P_{74356} = (51, 8, 17, 1)$ lies on line ℓ_5
 372 : $P_{74365} = (60, 8, 17, 1)$ lies on line ℓ_4
 373 : $P_{74710} = (21, 14, 17, 1)$ lies on line ℓ_8
 374 : $P_{74717} = (28, 14, 17, 1)$ lies on line ℓ_9
 375 : $P_{74818} = (1, 16, 17, 1)$ lies on line ℓ_3
 376 : $P_{75024} = (15, 19, 17, 1)$ lies on line ℓ_7
 377 : $P_{75053} = (44, 19, 17, 1)$ lies on line ℓ_6

378 : $P_{75667} = (18, 29, 17, 1)$ lies on line ℓ_{14}
 379 : $P_{75690} = (41, 29, 17, 1)$ lies on line ℓ_{15}
 380 : $P_{76012} = (43, 34, 17, 1)$ lies on line ℓ_{12}
 381 : $P_{76026} = (57, 34, 17, 1)$ lies on line ℓ_{13}
 382 : $P_{77510} = (5, 58, 17, 1)$ lies on line ℓ_{11}
 383 : $P_{77530} = (25, 58, 17, 1)$ lies on line ℓ_{10}
 384 : $P_{78093} = (12, 3, 18, 1)$ lies on line ℓ_9
 385 : $P_{78108} = (27, 3, 18, 1)$ lies on line ℓ_8
 386 : $P_{78736} = (15, 13, 18, 1)$ lies on line ℓ_{14}
 387 : $P_{78779} = (58, 13, 18, 1)$ lies on line ℓ_{15}
 388 : $P_{78787} = (2, 14, 18, 1)$ lies on line ℓ_7
 389 : $P_{78835} = (50, 14, 18, 1)$ lies on line ℓ_6
 390 : $P_{79106} = (1, 19, 18, 1)$ lies on line ℓ_3
 391 : $P_{79330} = (33, 22, 18, 1)$ lies on line ℓ_4
 392 : $P_{79332} = (35, 22, 18, 1)$ lies on line ℓ_5
 393 : $P_{81063} = (38, 49, 18, 1)$ lies on line ℓ_{12}
 394 : $P_{81066} = (41, 49, 18, 1)$ lies on line ℓ_{13}
 395 : $P_{81221} = (4, 52, 18, 1)$ lies on line ℓ_{10}
 396 : $P_{81225} = (8, 52, 18, 1)$ lies on line ℓ_{11}
 397 : $P_{82343} = (38, 5, 19, 1)$ lies on line ℓ_7
 398 : $P_{82361} = (56, 5, 19, 1)$ lies on line ℓ_6
 399 : $P_{83088} = (15, 17, 19, 1)$ lies on line ℓ_{10}
 400 : $P_{83117} = (44, 17, 19, 1)$ lies on line ℓ_{11}
 401 : $P_{83138} = (1, 18, 19, 1)$ lies on line ℓ_3
 402 : $P_{83789} = (12, 28, 19, 1)$ lies on line ℓ_5
 403 : $P_{83819} = (42, 28, 19, 1)$ lies on line ℓ_4
 404 : $P_{83971} = (2, 31, 19, 1)$ lies on line ℓ_{12}
 405 : $P_{83975} = (6, 31, 19, 1)$ lies on line ℓ_{13}
 406 : $P_{84165} = (4, 34, 19, 1)$ lies on line ℓ_{14}
 407 : $P_{84181} = (20, 34, 19, 1)$ lies on line ℓ_{15}
 408 : $P_{84516} = (35, 39, 19, 1)$ lies on line ℓ_9
 409 : $P_{84543} = (62, 39, 19, 1)$ lies on line ℓ_8
 410 : $P_{87426} = (1, 21, 20, 1)$ lies on line ℓ_3
 411 : $P_{87562} = (9, 23, 20, 1)$ lies on line ℓ_{13}
 412 : $P_{87613} = (60, 23, 20, 1)$ lies on line ℓ_{12}
 413 : $P_{87688} = (7, 25, 20, 1)$ lies on line ℓ_8
 414 : $P_{87725} = (44, 25, 20, 1)$ lies on line ℓ_9
 415 : $P_{88659} = (18, 40, 20, 1)$ lies on line ℓ_{11}
 416 : $P_{88703} = (62, 40, 20, 1)$ lies on line ℓ_{10}
 417 : $P_{88772} = (3, 42, 20, 1)$ lies on line ℓ_5
 418 : $P_{88796} = (27, 42, 20, 1)$ lies on line ℓ_4
 419 : $P_{88989} = (28, 45, 20, 1)$ lies on line ℓ_{15}
 420 : $P_{89014} = (53, 45, 20, 1)$ lies on line ℓ_{14}
 421 : $P_{89423} = (14, 52, 20, 1)$ lies on line ℓ_6
 422 : $P_{89433} = (24, 52, 20, 1)$ lies on line ℓ_7
 423 : $P_{90355} = (50, 2, 21, 1)$ lies on line ℓ_{15}
 424 : $P_{90367} = (62, 2, 21, 1)$ lies on line ℓ_{14}
 425 : $P_{91062} = (53, 13, 21, 1)$ lies on line ℓ_{10}
 426 : $P_{91063} = (54, 13, 21, 1)$ lies on line ℓ_{11}
 427 : $P_{91458} = (1, 20, 21, 1)$ lies on line ℓ_3
 428 : $P_{92241} = (16, 32, 21, 1)$ lies on line ℓ_4
 429 : $P_{92269} = (44, 32, 21, 1)$ lies on line ℓ_5
 430 : $P_{93849} = (24, 57, 21, 1)$ lies on line ℓ_{12}
 431 : $P_{93863} = (38, 57, 21, 1)$ lies on line ℓ_{13}

432 : $P_{94084} = (3, 61, 21, 1)$ lies on line ℓ_9
 433 : $P_{94115} = (34, 61, 21, 1)$ lies on line ℓ_8
 434 : $P_{94213} = (4, 63, 21, 1)$ lies on line ℓ_6
 435 : $P_{94269} = (60, 63, 21, 1)$ lies on line ℓ_7
 436 : $P_{94505} = (40, 3, 22, 1)$ lies on line ℓ_{10}
 437 : $P_{94524} = (59, 3, 22, 1)$ lies on line ℓ_{11}
 438 : $P_{95458} = (33, 18, 22, 1)$ lies on line ℓ_{15}
 439 : $P_{95460} = (35, 18, 22, 1)$ lies on line ℓ_{14}
 440 : $P_{95746} = (1, 23, 22, 1)$ lies on line ℓ_3
 441 : $P_{96475} = (26, 34, 22, 1)$ lies on line ℓ_6
 442 : $P_{96498} = (49, 34, 22, 1)$ lies on line ℓ_7
 443 : $P_{96982} = (21, 42, 22, 1)$ lies on line ℓ_{12}
 444 : $P_{97015} = (54, 42, 22, 1)$ lies on line ℓ_{13}
 445 : $P_{97364} = (19, 48, 22, 1)$ lies on line ℓ_9
 446 : $P_{97389} = (44, 48, 22, 1)$ lies on line ℓ_8
 447 : $P_{98254} = (13, 62, 22, 1)$ lies on line ℓ_4
 448 : $P_{98301} = (60, 62, 22, 1)$ lies on line ℓ_5
 449 : $P_{98650} = (25, 4, 23, 1)$ lies on line ℓ_{13}
 450 : $P_{98674} = (49, 4, 23, 1)$ lies on line ℓ_{12}
 451 : $P_{99658} = (9, 20, 23, 1)$ lies on line ℓ_8
 452 : $P_{99709} = (60, 20, 23, 1)$ lies on line ℓ_9
 453 : $P_{99778} = (1, 22, 23, 1)$ lies on line ℓ_3
 454 : $P_{100832} = (31, 38, 23, 1)$ lies on line ℓ_{11}
 455 : $P_{100836} = (35, 38, 23, 1)$ lies on line ℓ_{10}
 456 : $P_{101009} = (16, 41, 23, 1)$ lies on line ℓ_6
 457 : $P_{101014} = (21, 41, 23, 1)$ lies on line ℓ_7
 458 : $P_{101703} = (6, 52, 23, 1)$ lies on line ℓ_4
 459 : $P_{101716} = (19, 52, 23, 1)$ lies on line ℓ_5
 460 : $P_{102288} = (15, 61, 23, 1)$ lies on line ℓ_{15}
 461 : $P_{102313} = (40, 61, 23, 1)$ lies on line ℓ_{14}
 462 : $P_{103265} = (32, 12, 24, 1)$ lies on line ℓ_{14}
 463 : $P_{103282} = (49, 12, 24, 1)$ lies on line ℓ_{15}
 464 : $P_{103527} = (38, 16, 24, 1)$ lies on line ℓ_{11}
 465 : $P_{103532} = (43, 16, 24, 1)$ lies on line ℓ_{10}
 466 : $P_{104066} = (1, 25, 24, 1)$ lies on line ℓ_3
 467 : $P_{104600} = (23, 33, 24, 1)$ lies on line ℓ_6
 468 : $P_{104621} = (44, 33, 24, 1)$ lies on line ℓ_7
 469 : $P_{105358} = (13, 45, 24, 1)$ lies on line ℓ_9
 470 : $P_{105408} = (63, 45, 24, 1)$ lies on line ℓ_8
 471 : $P_{105743} = (14, 51, 24, 1)$ lies on line ℓ_4
 472 : $P_{105763} = (34, 51, 24, 1)$ lies on line ℓ_5
 473 : $P_{106185} = (8, 58, 24, 1)$ lies on line ℓ_{12}
 474 : $P_{106217} = (40, 58, 24, 1)$ lies on line ℓ_{13}
 475 : $P_{107163} = (26, 9, 25, 1)$ lies on line ℓ_8
 476 : $P_{107171} = (34, 9, 25, 1)$ lies on line ℓ_9
 477 : $P_{107848} = (7, 20, 25, 1)$ lies on line ℓ_{13}
 478 : $P_{107885} = (44, 20, 25, 1)$ lies on line ℓ_{12}
 479 : $P_{108098} = (1, 24, 25, 1)$ lies on line ℓ_3
 480 : $P_{108832} = (31, 35, 25, 1)$ lies on line ℓ_{15}
 481 : $P_{108844} = (43, 35, 25, 1)$ lies on line ℓ_{14}
 482 : $P_{109257} = (8, 42, 25, 1)$ lies on line ℓ_7
 483 : $P_{109278} = (29, 42, 25, 1)$ lies on line ℓ_6
 484 : $P_{109955} = (2, 53, 25, 1)$ lies on line ℓ_{11}
 485 : $P_{109985} = (32, 53, 25, 1)$ lies on line ℓ_{10}

486 : $P_{110214} = (5, 57, 25, 1)$ lies on line ℓ_4
 487 : $P_{110222} = (13, 57, 25, 1)$ lies on line ℓ_5
 488 : $P_{110933} = (20, 4, 26, 1)$ lies on line ℓ_8
 489 : $P_{110963} = (50, 4, 26, 1)$ lies on line ℓ_9
 490 : $P_{111128} = (23, 7, 26, 1)$ lies on line ℓ_{13}
 491 : $P_{111138} = (33, 7, 26, 1)$ lies on line ℓ_{12}
 492 : $P_{112386} = (1, 27, 26, 1)$ lies on line ℓ_3
 493 : $P_{113177} = (24, 39, 26, 1)$ lies on line ℓ_4
 494 : $P_{113182} = (29, 39, 26, 1)$ lies on line ℓ_5
 495 : $P_{113933} = (12, 51, 26, 1)$ lies on line ℓ_{15}
 496 : $P_{113975} = (54, 51, 26, 1)$ lies on line ℓ_{14}
 497 : $P_{114180} = (3, 55, 26, 1)$ lies on line ℓ_6
 498 : $P_{114182} = (5, 55, 26, 1)$ lies on line ℓ_7
 499 : $P_{114448} = (15, 59, 26, 1)$ lies on line ℓ_{11}
 500 : $P_{114494} = (61, 59, 26, 1)$ lies on line ℓ_{10}
 501 : $P_{116418} = (1, 26, 27, 1)$ lies on line ℓ_3
 502 : $P_{116579} = (34, 28, 27, 1)$ lies on line ℓ_{15}
 503 : $P_{116606} = (61, 28, 27, 1)$ lies on line ℓ_{14}
 504 : $P_{116716} = (43, 30, 27, 1)$ lies on line ℓ_{11}
 505 : $P_{116727} = (54, 30, 27, 1)$ lies on line ℓ_{10}
 506 : $P_{116830} = (29, 32, 27, 1)$ lies on line ℓ_9
 507 : $P_{116850} = (49, 32, 27, 1)$ lies on line ℓ_8
 508 : $P_{117382} = (5, 41, 27, 1)$ lies on line ℓ_{12}
 509 : $P_{117433} = (56, 41, 27, 1)$ lies on line ℓ_{13}
 510 : $P_{117652} = (19, 45, 27, 1)$ lies on line ℓ_4
 511 : $P_{117683} = (50, 45, 27, 1)$ lies on line ℓ_5
 512 : $P_{118602} = (9, 60, 27, 1)$ lies on line ℓ_6
 513 : $P_{118626} = (33, 60, 27, 1)$ lies on line ℓ_7
 514 : $P_{119712} = (31, 13, 28, 1)$ lies on line ℓ_7
 515 : $P_{119744} = (63, 13, 28, 1)$ lies on line ℓ_6
 516 : $P_{120077} = (12, 19, 28, 1)$ lies on line ℓ_{14}
 517 : $P_{120107} = (42, 19, 28, 1)$ lies on line ℓ_{15}
 518 : $P_{120611} = (34, 27, 28, 1)$ lies on line ℓ_4
 519 : $P_{120638} = (61, 27, 28, 1)$ lies on line ℓ_5
 520 : $P_{120706} = (1, 29, 28, 1)$ lies on line ℓ_3
 521 : $P_{120777} = (8, 30, 28, 1)$ lies on line ℓ_8
 522 : $P_{120787} = (18, 30, 28, 1)$ lies on line ℓ_9
 523 : $P_{121016} = (55, 33, 28, 1)$ lies on line ℓ_{13}
 524 : $P_{121020} = (59, 33, 28, 1)$ lies on line ℓ_{12}
 525 : $P_{121352} = (7, 39, 28, 1)$ lies on line ℓ_{10}
 526 : $P_{121366} = (21, 39, 28, 1)$ lies on line ℓ_{11}
 527 : $P_{123085} = (12, 2, 29, 1)$ lies on line ℓ_{10}
 528 : $P_{123122} = (49, 2, 29, 1)$ lies on line ℓ_{11}
 529 : $P_{123382} = (53, 6, 29, 1)$ lies on line ℓ_6
 530 : $P_{123388} = (59, 6, 29, 1)$ lies on line ℓ_7
 531 : $P_{123929} = (24, 15, 29, 1)$ lies on line ℓ_{13}
 532 : $P_{123936} = (31, 15, 29, 1)$ lies on line ℓ_{12}
 533 : $P_{124051} = (18, 17, 29, 1)$ lies on line ℓ_5
 534 : $P_{124074} = (41, 17, 29, 1)$ lies on line ℓ_4
 535 : $P_{124738} = (1, 28, 29, 1)$ lies on line ℓ_3
 536 : $P_{126702} = (45, 58, 29, 1)$ lies on line ℓ_8
 537 : $P_{126718} = (61, 58, 29, 1)$ lies on line ℓ_9
 538 : $P_{126789} = (4, 60, 29, 1)$ lies on line ℓ_{15}
 539 : $P_{126792} = (7, 60, 29, 1)$ lies on line ℓ_{14}

540 : $P_{127826} = (17, 12, 30, 1)$ lies on line ℓ_{10}
 541 : $P_{127869} = (60, 12, 30, 1)$ lies on line ℓ_{11}
 542 : $P_{128003} = (2, 15, 30, 1)$ lies on line ℓ_5
 543 : $P_{128053} = (52, 15, 30, 1)$ lies on line ℓ_4
 544 : $P_{128812} = (43, 27, 30, 1)$ lies on line ℓ_6
 545 : $P_{128823} = (54, 27, 30, 1)$ lies on line ℓ_7
 546 : $P_{128841} = (8, 28, 30, 1)$ lies on line ℓ_{13}
 547 : $P_{128851} = (18, 28, 30, 1)$ lies on line ℓ_{12}
 548 : $P_{129026} = (1, 31, 30, 1)$ lies on line ℓ_3
 549 : $P_{129880} = (23, 44, 30, 1)$ lies on line ℓ_{15}
 550 : $P_{129883} = (26, 44, 30, 1)$ lies on line ℓ_{14}
 551 : $P_{130596} = (35, 55, 30, 1)$ lies on line ℓ_8
 552 : $P_{130606} = (45, 55, 30, 1)$ lies on line ℓ_9
 553 : $P_{131346} = (17, 3, 31, 1)$ lies on line ℓ_{14}
 554 : $P_{131386} = (57, 3, 31, 1)$ lies on line ℓ_{15}
 555 : $P_{131502} = (45, 5, 31, 1)$ lies on line ℓ_5
 556 : $P_{131520} = (63, 5, 31, 1)$ lies on line ℓ_4
 557 : $P_{132179} = (18, 16, 31, 1)$ lies on line ℓ_7
 558 : $P_{132194} = (33, 16, 31, 1)$ lies on line ℓ_6
 559 : $P_{132355} = (2, 19, 31, 1)$ lies on line ℓ_9
 560 : $P_{132359} = (6, 19, 31, 1)$ lies on line ℓ_8
 561 : $P_{133058} = (1, 30, 31, 1)$ lies on line ℓ_3
 562 : $P_{133785} = (24, 41, 31, 1)$ lies on line ℓ_{11}
 563 : $P_{133787} = (26, 41, 31, 1)$ lies on line ℓ_{10}
 564 : $P_{134376} = (39, 50, 31, 1)$ lies on line ℓ_{13}
 565 : $P_{134391} = (54, 50, 31, 1)$ lies on line ℓ_{12}
 566 : $P_{135683} = (2, 7, 32, 1)$ lies on line ℓ_4
 567 : $P_{135740} = (59, 7, 32, 1)$ lies on line ℓ_5
 568 : $P_{136593} = (16, 21, 32, 1)$ lies on line ℓ_{15}
 569 : $P_{136621} = (44, 21, 32, 1)$ lies on line ℓ_{14}
 570 : $P_{136990} = (29, 27, 32, 1)$ lies on line ℓ_{12}
 571 : $P_{137010} = (49, 27, 32, 1)$ lies on line ℓ_{13}
 572 : $P_{137346} = (1, 33, 32, 1)$ lies on line ℓ_3
 573 : $P_{138148} = (35, 45, 32, 1)$ lies on line ℓ_6
 574 : $P_{138170} = (57, 45, 32, 1)$ lies on line ℓ_7
 575 : $P_{138835} = (18, 56, 32, 1)$ lies on line ℓ_8
 576 : $P_{138837} = (20, 56, 32, 1)$ lies on line ℓ_9
 577 : $P_{139176} = (39, 61, 32, 1)$ lies on line ℓ_{10}
 578 : $P_{139188} = (51, 61, 32, 1)$ lies on line ℓ_{11}
 579 : $P_{140170} = (9, 13, 33, 1)$ lies on line ℓ_4
 580 : $P_{140181} = (20, 13, 33, 1)$ lies on line ℓ_5
 581 : $P_{140888} = (23, 24, 33, 1)$ lies on line ℓ_{11}
 582 : $P_{140909} = (44, 24, 33, 1)$ lies on line ℓ_{10}
 583 : $P_{141176} = (55, 28, 33, 1)$ lies on line ℓ_8
 584 : $P_{141180} = (59, 28, 33, 1)$ lies on line ℓ_9
 585 : $P_{141378} = (1, 32, 33, 1)$ lies on line ℓ_3
 586 : $P_{141790} = (29, 38, 33, 1)$ lies on line ℓ_7
 587 : $P_{141802} = (41, 38, 33, 1)$ lies on line ℓ_6
 588 : $P_{142751} = (30, 53, 33, 1)$ lies on line ℓ_{13}
 589 : $P_{142778} = (57, 53, 33, 1)$ lies on line ℓ_{12}
 590 : $P_{143080} = (39, 58, 33, 1)$ lies on line ℓ_{14}
 591 : $P_{143103} = (62, 58, 33, 1)$ lies on line ℓ_{15}
 592 : $P_{144556} = (43, 17, 34, 1)$ lies on line ℓ_9
 593 : $P_{144570} = (57, 17, 34, 1)$ lies on line ℓ_8

594 : $P_{144645} = (4, 19, 34, 1)$ lies on line ℓ_5
 595 : $P_{144661} = (20, 19, 34, 1)$ lies on line ℓ_4
 596 : $P_{144859} = (26, 22, 34, 1)$ lies on line ℓ_{11}
 597 : $P_{144882} = (49, 22, 34, 1)$ lies on line ℓ_{10}
 598 : $P_{145666} = (1, 35, 34, 1)$ lies on line ℓ_3
 599 : $P_{145871} = (14, 38, 34, 1)$ lies on line ℓ_{13}
 600 : $P_{145909} = (52, 38, 34, 1)$ lies on line ℓ_{12}
 601 : $P_{146158} = (45, 42, 34, 1)$ lies on line ℓ_{15}
 602 : $P_{146171} = (58, 42, 34, 1)$ lies on line ℓ_{14}
 603 : $P_{147217} = (16, 59, 34, 1)$ lies on line ℓ_7
 604 : $P_{147256} = (55, 59, 34, 1)$ lies on line ℓ_6
 605 : $P_{147844} = (3, 5, 35, 1)$ lies on line ℓ_{15}
 606 : $P_{147890} = (49, 5, 35, 1)$ lies on line ℓ_{14}
 607 : $P_{148049} = (16, 8, 35, 1)$ lies on line ℓ_{12}
 608 : $P_{148066} = (33, 8, 35, 1)$ lies on line ℓ_{13}
 609 : $P_{149152} = (31, 25, 35, 1)$ lies on line ℓ_4
 610 : $P_{149164} = (43, 25, 35, 1)$ lies on line ℓ_5
 611 : $P_{149698} = (1, 34, 35, 1)$ lies on line ℓ_3
 612 : $P_{150645} = (52, 48, 35, 1)$ lies on line ℓ_7
 613 : $P_{150654} = (61, 48, 35, 1)$ lies on line ℓ_6
 614 : $P_{150843} = (58, 51, 35, 1)$ lies on line ℓ_{10}
 615 : $P_{150847} = (62, 51, 35, 1)$ lies on line ℓ_{11}
 616 : $P_{150917} = (4, 53, 35, 1)$ lies on line ℓ_9
 617 : $P_{150941} = (28, 53, 35, 1)$ lies on line ℓ_8
 618 : $P_{151691} = (10, 1, 36, 1)$ lies on line ℓ_7
 619 : $P_{151692} = (11, 1, 36, 1)$ lies on line ℓ_6
 620 : $P_{152332} = (11, 11, 36, 1)$ lies on line ℓ_9
 621 : $P_{152358} = (37, 11, 36, 1)$ lies on line ℓ_8
 622 : $P_{153986} = (1, 37, 36, 1)$ lies on line ℓ_3
 623 : $P_{154661} = (36, 47, 36, 1)$ lies on line ℓ_5
 624 : $P_{154671} = (46, 47, 36, 1)$ lies on line ℓ_4
 625 : $P_{156354} = (1, 10, 37, 1)$ lies on line ℓ_6
 626 : $P_{156399} = (46, 10, 37, 1)$ lies on line ℓ_7
 627 : $P_{158018} = (1, 36, 37, 1)$ lies on line ℓ_3
 628 : $P_{158658} = (1, 46, 37, 1)$ lies on line ℓ_{13}
 629 : $P_{158667} = (10, 46, 37, 1)$ lies on line ℓ_{12}
 630 : $P_{161312} = (31, 23, 38, 1)$ lies on line ℓ_6
 631 : $P_{161316} = (35, 23, 38, 1)$ lies on line ℓ_7
 632 : $P_{161950} = (29, 33, 38, 1)$ lies on line ℓ_{10}
 633 : $P_{161962} = (41, 33, 38, 1)$ lies on line ℓ_{11}
 634 : $P_{161999} = (14, 34, 38, 1)$ lies on line ℓ_8
 635 : $P_{162037} = (52, 34, 38, 1)$ lies on line ℓ_9
 636 : $P_{162306} = (1, 39, 38, 1)$ lies on line ℓ_3
 637 : $P_{163223} = (22, 53, 38, 1)$ lies on line ℓ_{14}
 638 : $P_{163255} = (54, 53, 38, 1)$ lies on line ℓ_{15}
 639 : $P_{163612} = (27, 59, 38, 1)$ lies on line ℓ_5
 640 : $P_{163641} = (56, 59, 38, 1)$ lies on line ℓ_4
 641 : $P_{163720} = (7, 61, 38, 1)$ lies on line ℓ_{12}
 642 : $P_{163730} = (17, 61, 38, 1)$ lies on line ℓ_{13}
 643 : $P_{164174} = (13, 4, 39, 1)$ lies on line ℓ_{11}
 644 : $P_{164183} = (22, 4, 39, 1)$ lies on line ℓ_{10}
 645 : $P_{164316} = (27, 6, 39, 1)$ lies on line ℓ_9
 646 : $P_{164332} = (43, 6, 39, 1)$ lies on line ℓ_8
 647 : $P_{165156} = (35, 19, 39, 1)$ lies on line ℓ_{12}

648 : $P_{165183} = (62, 19, 39, 1)$ lies on line ℓ_{13}
 649 : $P_{165593} = (24, 26, 39, 1)$ lies on line ℓ_{15}
 650 : $P_{165598} = (29, 26, 39, 1)$ lies on line ℓ_{14}
 651 : $P_{165704} = (7, 28, 39, 1)$ lies on line ℓ_7
 652 : $P_{165718} = (21, 28, 39, 1)$ lies on line ℓ_6
 653 : $P_{166338} = (1, 38, 39, 1)$ lies on line ℓ_3
 654 : $P_{167092} = (51, 49, 39, 1)$ lies on line ℓ_4
 655 : $P_{167093} = (52, 49, 39, 1)$ lies on line ℓ_5
 656 : $P_{169299} = (18, 20, 40, 1)$ lies on line ℓ_6
 657 : $P_{169343} = (62, 20, 40, 1)$ lies on line ℓ_7
 658 : $P_{170626} = (1, 41, 40, 1)$ lies on line ℓ_3
 659 : $P_{170774} = (21, 43, 40, 1)$ lies on line ℓ_{14}
 660 : $P_{170791} = (38, 43, 40, 1)$ lies on line ℓ_{15}
 661 : $P_{170896} = (15, 45, 40, 1)$ lies on line ℓ_{13}
 662 : $P_{170907} = (26, 45, 40, 1)$ lies on line ℓ_{12}
 663 : $P_{171231} = (30, 50, 40, 1)$ lies on line ℓ_{10}
 664 : $P_{171253} = (52, 50, 40, 1)$ lies on line ℓ_{11}
 665 : $P_{171462} = (5, 54, 40, 1)$ lies on line ℓ_5
 666 : $P_{171516} = (59, 54, 40, 1)$ lies on line ℓ_4
 667 : $P_{172062} = (29, 63, 40, 1)$ lies on line ℓ_8
 668 : $P_{172075} = (42, 63, 40, 1)$ lies on line ℓ_9
 669 : $P_{172321} = (32, 3, 41, 1)$ lies on line ℓ_{13}
 670 : $P_{172351} = (62, 3, 41, 1)$ lies on line ℓ_{12}
 671 : $P_{172361} = (8, 4, 41, 1)$ lies on line ℓ_{15}
 672 : $P_{172383} = (30, 4, 41, 1)$ lies on line ℓ_{14}
 673 : $P_{173585} = (16, 23, 41, 1)$ lies on line ℓ_{11}
 674 : $P_{173590} = (21, 23, 41, 1)$ lies on line ℓ_{10}
 675 : $P_{173830} = (5, 27, 41, 1)$ lies on line ℓ_9
 676 : $P_{173881} = (56, 27, 41, 1)$ lies on line ℓ_8
 677 : $P_{174105} = (24, 31, 41, 1)$ lies on line ℓ_6
 678 : $P_{174107} = (26, 31, 41, 1)$ lies on line ℓ_7
 679 : $P_{174658} = (1, 40, 41, 1)$ lies on line ℓ_3
 680 : $P_{175979} = (42, 60, 41, 1)$ lies on line ℓ_5
 681 : $P_{175985} = (48, 60, 41, 1)$ lies on line ℓ_4
 682 : $P_{176327} = (6, 2, 42, 1)$ lies on line ℓ_6
 683 : $P_{176344} = (23, 2, 42, 1)$ lies on line ℓ_7
 684 : $P_{177265} = (48, 16, 42, 1)$ lies on line ℓ_{13}
 685 : $P_{177268} = (51, 16, 42, 1)$ lies on line ℓ_{12}
 686 : $P_{177476} = (3, 20, 42, 1)$ lies on line ℓ_{14}
 687 : $P_{177500} = (27, 20, 42, 1)$ lies on line ℓ_{15}
 688 : $P_{177622} = (21, 22, 42, 1)$ lies on line ℓ_9
 689 : $P_{177655} = (54, 22, 42, 1)$ lies on line ℓ_8
 690 : $P_{177801} = (8, 25, 42, 1)$ lies on line ℓ_{10}
 691 : $P_{177822} = (29, 25, 42, 1)$ lies on line ℓ_{11}
 692 : $P_{178414} = (45, 34, 42, 1)$ lies on line ℓ_4
 693 : $P_{178427} = (58, 34, 42, 1)$ lies on line ℓ_5
 694 : $P_{178946} = (1, 43, 42, 1)$ lies on line ℓ_3
 695 : $P_{180877} = (12, 9, 43, 1)$ lies on line ℓ_6
 696 : $P_{180916} = (51, 9, 43, 1)$ lies on line ℓ_7
 697 : $P_{182870} = (21, 40, 43, 1)$ lies on line ℓ_5
 698 : $P_{182887} = (38, 40, 43, 1)$ lies on line ℓ_4
 699 : $P_{182978} = (1, 42, 43, 1)$ lies on line ℓ_3
 700 : $P_{183508} = (19, 50, 43, 1)$ lies on line ℓ_8
 701 : $P_{183547} = (58, 50, 43, 1)$ lies on line ℓ_9

702 : $P_{184073} = (8, 59, 43, 1)$ lies on line ℓ_{14}
703 : $P_{184118} = (53, 59, 43, 1)$ lies on line ℓ_{15}
704 : $P_{184132} = (3, 60, 43, 1)$ lies on line ℓ_{10}
705 : $P_{184186} = (57, 60, 43, 1)$ lies on line ℓ_{11}
706 : $P_{184280} = (23, 62, 43, 1)$ lies on line ℓ_{12}
707 : $P_{184288} = (31, 62, 43, 1)$ lies on line ℓ_{13}
708 : $P_{184712} = (7, 5, 44, 1)$ lies on line ℓ_{11}
709 : $P_{184755} = (50, 5, 44, 1)$ lies on line ℓ_{10}
710 : $P_{185195} = (42, 12, 44, 1)$ lies on line ℓ_8
711 : $P_{185206} = (53, 12, 44, 1)$ lies on line ℓ_9
712 : $P_{186328} = (23, 30, 44, 1)$ lies on line ℓ_4
713 : $P_{186331} = (26, 30, 44, 1)$ lies on line ℓ_5
714 : $P_{187266} = (1, 45, 44, 1)$ lies on line ℓ_3
715 : $P_{187770} = (57, 52, 44, 1)$ lies on line ℓ_{14}
716 : $P_{187774} = (61, 52, 44, 1)$ lies on line ℓ_{15}
717 : $P_{187857} = (16, 54, 44, 1)$ lies on line ℓ_{13}
718 : $P_{187882} = (41, 54, 44, 1)$ lies on line ℓ_{12}
719 : $P_{187982} = (13, 56, 44, 1)$ lies on line ℓ_7
720 : $P_{188027} = (58, 56, 44, 1)$ lies on line ℓ_6
721 : $P_{189789} = (28, 20, 45, 1)$ lies on line ℓ_4
722 : $P_{189814} = (53, 20, 45, 1)$ lies on line ℓ_5
723 : $P_{190030} = (13, 24, 45, 1)$ lies on line ℓ_{12}
724 : $P_{190080} = (63, 24, 45, 1)$ lies on line ℓ_{13}
725 : $P_{190228} = (19, 27, 45, 1)$ lies on line ℓ_{15}
726 : $P_{190259} = (50, 27, 45, 1)$ lies on line ℓ_{14}
727 : $P_{190564} = (35, 32, 45, 1)$ lies on line ℓ_{11}
728 : $P_{190586} = (57, 32, 45, 1)$ lies on line ℓ_{10}
729 : $P_{191056} = (15, 40, 45, 1)$ lies on line ℓ_8
730 : $P_{191067} = (26, 40, 45, 1)$ lies on line ℓ_9
731 : $P_{191298} = (1, 44, 45, 1)$ lies on line ℓ_3
732 : $P_{191786} = (41, 51, 45, 1)$ lies on line ℓ_7
733 : $P_{191793} = (48, 51, 45, 1)$ lies on line ℓ_6
734 : $P_{193218} = (1, 10, 46, 1)$ lies on line ℓ_4
735 : $P_{193254} = (37, 10, 46, 1)$ lies on line ℓ_5
736 : $P_{194946} = (1, 37, 46, 1)$ lies on line ℓ_8
737 : $P_{194955} = (10, 37, 46, 1)$ lies on line ℓ_9
738 : $P_{195586} = (1, 47, 46, 1)$ lies on line ℓ_3
739 : $P_{196773} = (36, 1, 47, 1)$ lies on line ℓ_8
740 : $P_{196774} = (37, 1, 47, 1)$ lies on line ℓ_9
741 : $P_{197387} = (10, 11, 47, 1)$ lies on line ℓ_{11}
742 : $P_{197424} = (47, 11, 47, 1)$ lies on line ℓ_{10}
743 : $P_{199013} = (36, 36, 47, 1)$ lies on line ℓ_{14}
744 : $P_{199023} = (46, 36, 47, 1)$ lies on line ℓ_{15}
745 : $P_{199618} = (1, 46, 47, 1)$ lies on line ℓ_3
746 : $P_{201042} = (17, 4, 48, 1)$ lies on line ℓ_4
747 : $P_{201063} = (38, 4, 48, 1)$ lies on line ℓ_5
748 : $P_{201310} = (29, 8, 48, 1)$ lies on line ℓ_{15}
749 : $P_{201344} = (63, 8, 48, 1)$ lies on line ℓ_{14}
750 : $P_{202196} = (19, 22, 48, 1)$ lies on line ℓ_{12}
751 : $P_{202221} = (44, 22, 48, 1)$ lies on line ℓ_{13}
752 : $P_{203061} = (52, 35, 48, 1)$ lies on line ℓ_{10}
753 : $P_{203070} = (61, 35, 48, 1)$ lies on line ℓ_{11}
754 : $P_{203906} = (1, 49, 48, 1)$ lies on line ℓ_3
755 : $P_{204234} = (9, 54, 48, 1)$ lies on line ℓ_9
756 : $P_{204237} = (12, 54, 48, 1)$ lies on line ℓ_8
757 : $P_{204769} = (32, 62, 48, 1)$ lies on line ℓ_6
758 : $P_{204792} = (55, 62, 48, 1)$ lies on line ℓ_7
759 : $P_{205274} = (25, 6, 49, 1)$ lies on line ℓ_{11}
760 : $P_{205312} = (63, 6, 49, 1)$ lies on line ℓ_{10}
761 : $P_{205770} = (9, 14, 49, 1)$ lies on line ℓ_5
762 : $P_{205787} = (26, 14, 49, 1)$ lies on line ℓ_4
763 : $P_{206055} = (38, 18, 49, 1)$ lies on line ℓ_9
764 : $P_{206058} = (41, 18, 49, 1)$ lies on line ℓ_8
765 : $P_{207412} = (51, 39, 49, 1)$ lies on line ℓ_{15}
766 : $P_{207413} = (52, 39, 49, 1)$ lies on line ℓ_{14}
767 : $P_{207938} = (1, 48, 49, 1)$ lies on line ℓ_3
768 : $P_{208276} = (19, 53, 49, 1)$ lies on line ℓ_7
769 : $P_{208299} = (42, 53, 49, 1)$ lies on line ℓ_6
770 : $P_{208452} = (3, 56, 49, 1)$ lies on line ℓ_{13}
771 : $P_{208504} = (55, 56, 49, 1)$ lies on line ℓ_{12}
772 : $P_{209493} = (20, 8, 50, 1)$ lies on line ℓ_{11}
773 : $P_{209507} = (34, 8, 50, 1)$ lies on line ℓ_{10}
774 : $P_{209992} = (7, 16, 50, 1)$ lies on line ℓ_4
775 : $P_{210010} = (25, 16, 50, 1)$ lies on line ℓ_5
776 : $P_{210984} = (39, 31, 50, 1)$ lies on line ℓ_8
777 : $P_{210999} = (54, 31, 50, 1)$ lies on line ℓ_9
778 : $P_{211551} = (30, 40, 50, 1)$ lies on line ℓ_7
779 : $P_{211573} = (52, 40, 50, 1)$ lies on line ℓ_6
780 : $P_{211732} = (19, 43, 50, 1)$ lies on line ℓ_{13}
781 : $P_{211771} = (58, 43, 50, 1)$ lies on line ℓ_{12}
782 : $P_{212226} = (1, 51, 50, 1)$ lies on line ℓ_3
783 : $P_{212513} = (32, 55, 50, 1)$ lies on line ℓ_{15}
784 : $P_{212522} = (41, 55, 50, 1)$ lies on line ℓ_{14}
785 : $P_{213407} = (30, 5, 51, 1)$ lies on line ℓ_{12}
786 : $P_{213437} = (60, 5, 51, 1)$ lies on line ℓ_{13}
787 : $P_{214607} = (14, 24, 51, 1)$ lies on line ℓ_{15}
788 : $P_{214627} = (34, 24, 51, 1)$ lies on line ℓ_{14}
789 : $P_{214733} = (12, 26, 51, 1)$ lies on line ℓ_4
790 : $P_{214775} = (54, 26, 51, 1)$ lies on line ℓ_5
791 : $P_{215355} = (58, 35, 51, 1)$ lies on line ℓ_7
792 : $P_{215359} = (62, 35, 51, 1)$ lies on line ℓ_6
793 : $P_{215978} = (41, 45, 51, 1)$ lies on line ℓ_{10}
794 : $P_{215985} = (48, 45, 51, 1)$ lies on line ℓ_{11}
795 : $P_{216258} = (1, 50, 51, 1)$ lies on line ℓ_3
796 : $P_{216835} = (2, 59, 51, 1)$ lies on line ℓ_8
797 : $P_{216858} = (25, 59, 51, 1)$ lies on line ℓ_9
798 : $P_{217495} = (22, 5, 52, 1)$ lies on line ℓ_9
799 : $P_{217532} = (59, 5, 52, 1)$ lies on line ℓ_8
800 : $P_{218017} = (32, 13, 52, 1)$ lies on line ℓ_{12}
801 : $P_{218036} = (51, 13, 52, 1)$ lies on line ℓ_{13}
802 : $P_{218309} = (4, 18, 52, 1)$ lies on line ℓ_7
803 : $P_{218313} = (8, 18, 52, 1)$ lies on line ℓ_6
804 : $P_{218447} = (14, 20, 52, 1)$ lies on line ℓ_{11}
805 : $P_{218457} = (24, 20, 52, 1)$ lies on line ℓ_{10}
806 : $P_{218631} = (6, 23, 52, 1)$ lies on line ℓ_{15}
807 : $P_{218644} = (19, 23, 52, 1)$ lies on line ℓ_{14}
808 : $P_{220026} = (57, 44, 52, 1)$ lies on line ℓ_5
809 : $P_{220030} = (61, 44, 52, 1)$ lies on line ℓ_4

810 : $P_{220546} = (1, 53, 52, 1)$ lies on line ℓ_3
 811 : $P_{222851} = (2, 25, 53, 1)$ lies on line ℓ_6
 812 : $P_{222881} = (32, 25, 53, 1)$ lies on line ℓ_7
 813 : $P_{223391} = (30, 33, 53, 1)$ lies on line ℓ_8
 814 : $P_{223418} = (57, 33, 53, 1)$ lies on line ℓ_9
 815 : $P_{223493} = (4, 35, 53, 1)$ lies on line ℓ_{12}
 816 : $P_{223517} = (28, 35, 53, 1)$ lies on line ℓ_{13}
 817 : $P_{223703} = (22, 38, 53, 1)$ lies on line ℓ_5
 818 : $P_{223735} = (54, 38, 53, 1)$ lies on line ℓ_4
 819 : $P_{224404} = (19, 49, 53, 1)$ lies on line ℓ_{10}
 820 : $P_{224427} = (42, 49, 53, 1)$ lies on line ℓ_{11}
 821 : $P_{224578} = (1, 52, 53, 1)$ lies on line ℓ_3
 822 : $P_{224857} = (24, 56, 53, 1)$ lies on line ℓ_{14}
 823 : $P_{224873} = (40, 56, 53, 1)$ lies on line ℓ_{15}
 824 : $P_{225629} = (28, 4, 54, 1)$ lies on line ℓ_6
 825 : $P_{225646} = (45, 4, 54, 1)$ lies on line ℓ_7
 826 : $P_{227910} = (5, 40, 54, 1)$ lies on line ℓ_{14}
 827 : $P_{227964} = (59, 40, 54, 1)$ lies on line ℓ_{15}
 828 : $P_{228177} = (16, 44, 54, 1)$ lies on line ℓ_8
 829 : $P_{228202} = (41, 44, 54, 1)$ lies on line ℓ_9
 830 : $P_{228426} = (9, 48, 54, 1)$ lies on line ℓ_{12}
 831 : $P_{228429} = (12, 48, 54, 1)$ lies on line ℓ_{13}
 832 : $P_{228866} = (1, 55, 54, 1)$ lies on line ℓ_3
 833 : $P_{228935} = (6, 56, 54, 1)$ lies on line ℓ_5
 834 : $P_{228972} = (43, 56, 54, 1)$ lies on line ℓ_4
 835 : $P_{229391} = (14, 63, 54, 1)$ lies on line ℓ_{10}
 836 : $P_{229416} = (39, 63, 54, 1)$ lies on line ℓ_{11}
 837 : $P_{229903} = (14, 7, 55, 1)$ lies on line ℓ_{14}
 838 : $P_{229910} = (21, 7, 55, 1)$ lies on line ℓ_{15}
 839 : $P_{229959} = (6, 8, 55, 1)$ lies on line ℓ_9
 840 : $P_{230006} = (53, 8, 55, 1)$ lies on line ℓ_8
 841 : $P_{230410} = (9, 15, 55, 1)$ lies on line ℓ_7
 842 : $P_{230423} = (22, 15, 55, 1)$ lies on line ℓ_6
 843 : $P_{231108} = (3, 26, 55, 1)$ lies on line ℓ_{11}
 844 : $P_{231110} = (5, 26, 55, 1)$ lies on line ℓ_{10}
 845 : $P_{231396} = (35, 30, 55, 1)$ lies on line ℓ_{13}
 846 : $P_{231406} = (45, 30, 55, 1)$ lies on line ℓ_{12}
 847 : $P_{232673} = (32, 50, 55, 1)$ lies on line ℓ_4
 848 : $P_{232682} = (41, 50, 55, 1)$ lies on line ℓ_5
 849 : $P_{232898} = (1, 54, 55, 1)$ lies on line ℓ_3
 850 : $P_{234002} = (17, 7, 56, 1)$ lies on line ℓ_6
 851 : $P_{234033} = (48, 7, 56, 1)$ lies on line ℓ_7
 852 : $P_{235603} = (18, 32, 56, 1)$ lies on line ℓ_{13}
 853 : $P_{235605} = (20, 32, 56, 1)$ lies on line ℓ_{12}
 854 : $P_{236366} = (13, 44, 56, 1)$ lies on line ℓ_{10}
 855 : $P_{236411} = (58, 44, 56, 1)$ lies on line ℓ_{11}
 856 : $P_{236676} = (3, 49, 56, 1)$ lies on line ℓ_8
 857 : $P_{236728} = (55, 49, 56, 1)$ lies on line ℓ_9
 858 : $P_{236953} = (24, 53, 56, 1)$ lies on line ℓ_5
 859 : $P_{236969} = (40, 53, 56, 1)$ lies on line ℓ_4
 860 : $P_{236999} = (6, 54, 56, 1)$ lies on line ℓ_{14}
 861 : $P_{237036} = (43, 54, 56, 1)$ lies on line ℓ_{15}
 862 : $P_{237186} = (1, 57, 56, 1)$ lies on line ℓ_3
 863 : $P_{238215} = (6, 9, 57, 1)$ lies on line ℓ_{10}

864 : $P_{238239} = (30, 9, 57, 1)$ lies on line ℓ_{11}
 865 : $P_{238421} = (20, 12, 57, 1)$ lies on line ℓ_7
 866 : $P_{238428} = (27, 12, 57, 1)$ lies on line ℓ_6
 867 : $P_{238577} = (48, 14, 57, 1)$ lies on line ℓ_{12}
 868 : $P_{238590} = (61, 14, 57, 1)$ lies on line ℓ_{13}
 869 : $P_{239001} = (24, 21, 57, 1)$ lies on line ℓ_9
 870 : $P_{239015} = (38, 21, 57, 1)$ lies on line ℓ_8
 871 : $P_{239238} = (5, 25, 57, 1)$ lies on line ℓ_{15}
 872 : $P_{239246} = (13, 25, 57, 1)$ lies on line ℓ_{14}
 873 : $P_{241218} = (1, 56, 57, 1)$ lies on line ℓ_3
 874 : $P_{241700} = (35, 63, 57, 1)$ lies on line ℓ_4
 875 : $P_{241720} = (55, 63, 57, 1)$ lies on line ℓ_5
 876 : $P_{242196} = (19, 7, 58, 1)$ lies on line ℓ_{11}
 877 : $P_{242204} = (27, 7, 58, 1)$ lies on line ℓ_{10}
 878 : $P_{242321} = (16, 9, 58, 1)$ lies on line ℓ_{14}
 879 : $P_{242327} = (22, 9, 58, 1)$ lies on line ℓ_{15}
 880 : $P_{242822} = (5, 17, 58, 1)$ lies on line ℓ_6
 881 : $P_{242842} = (25, 17, 58, 1)$ lies on line ℓ_7
 882 : $P_{243273} = (8, 24, 58, 1)$ lies on line ℓ_9
 883 : $P_{243305} = (40, 24, 58, 1)$ lies on line ℓ_8
 884 : $P_{243630} = (45, 29, 58, 1)$ lies on line ℓ_{13}
 885 : $P_{243646} = (61, 29, 58, 1)$ lies on line ℓ_{12}
 886 : $P_{243880} = (39, 33, 58, 1)$ lies on line ℓ_5
 887 : $P_{243903} = (62, 33, 58, 1)$ lies on line ℓ_4
 888 : $P_{245506} = (1, 59, 58, 1)$ lies on line ℓ_3
 889 : $P_{247504} = (15, 26, 59, 1)$ lies on line ℓ_6
 890 : $P_{247550} = (61, 26, 59, 1)$ lies on line ℓ_7
 891 : $P_{248017} = (16, 34, 59, 1)$ lies on line ℓ_{10}
 892 : $P_{248056} = (55, 34, 59, 1)$ lies on line ℓ_{11}
 893 : $P_{248284} = (27, 38, 59, 1)$ lies on line ℓ_{14}
 894 : $P_{248313} = (56, 38, 59, 1)$ lies on line ℓ_{15}
 895 : $P_{248585} = (8, 43, 59, 1)$ lies on line ℓ_5
 896 : $P_{248630} = (53, 43, 59, 1)$ lies on line ℓ_4
 897 : $P_{249091} = (2, 51, 59, 1)$ lies on line ℓ_{13}
 898 : $P_{249114} = (25, 51, 59, 1)$ lies on line ℓ_{12}
 899 : $P_{249538} = (1, 58, 59, 1)$ lies on line ℓ_3
 900 : $P_{249678} = (13, 60, 59, 1)$ lies on line ℓ_8
 901 : $P_{249704} = (39, 60, 59, 1)$ lies on line ℓ_9
 902 : $P_{250089} = (40, 2, 60, 1)$ lies on line ℓ_9
 903 : $P_{250101} = (52, 2, 60, 1)$ lies on line ℓ_8
 904 : $P_{251658} = (9, 27, 60, 1)$ lies on line ℓ_{11}
 905 : $P_{251682} = (33, 27, 60, 1)$ lies on line ℓ_{10}
 906 : $P_{251781} = (4, 29, 60, 1)$ lies on line ℓ_4
 907 : $P_{251784} = (7, 29, 60, 1)$ lies on line ℓ_5
 908 : $P_{252587} = (42, 41, 60, 1)$ lies on line ℓ_{14}
 909 : $P_{252593} = (48, 41, 60, 1)$ lies on line ℓ_{15}
 910 : $P_{252676} = (3, 43, 60, 1)$ lies on line ℓ_7
 911 : $P_{252730} = (57, 43, 60, 1)$ lies on line ℓ_6
 912 : $P_{253710} = (13, 59, 60, 1)$ lies on line ℓ_{13}
 913 : $P_{253736} = (39, 59, 60, 1)$ lies on line ℓ_{12}
 914 : $P_{253826} = (1, 61, 60, 1)$ lies on line ℓ_3
 915 : $P_{254431} = (30, 6, 61, 1)$ lies on line ℓ_{15}
 916 : $P_{254434} = (33, 6, 61, 1)$ lies on line ℓ_{14}
 917 : $P_{255364} = (3, 21, 61, 1)$ lies on line ℓ_{12}

918 : $P_{255395} = (34, 21, 61, 1)$ lies on line ℓ_{13}
 919 : $P_{255504} = (15, 23, 61, 1)$ lies on line ℓ_4
 920 : $P_{255529} = (40, 23, 61, 1)$ lies on line ℓ_5
 921 : $P_{256104} = (39, 32, 61, 1)$ lies on line ℓ_7
 922 : $P_{256116} = (51, 32, 61, 1)$ lies on line ℓ_6
 923 : $P_{256456} = (7, 38, 61, 1)$ lies on line ℓ_9
 924 : $P_{256466} = (17, 38, 61, 1)$ lies on line ℓ_8
 925 : $P_{257858} = (1, 60, 61, 1)$ lies on line ℓ_3
 926 : $P_{258027} = (42, 62, 61, 1)$ lies on line ℓ_{10}
 927 : $P_{258030} = (45, 62, 61, 1)$ lies on line ℓ_{11}
 928 : $P_{258511} = (14, 6, 62, 1)$ lies on line ℓ_{12}
 929 : $P_{258547} = (50, 6, 62, 1)$ lies on line ℓ_{13}
 930 : $P_{258707} = (18, 9, 62, 1)$ lies on line ℓ_4
 931 : $P_{258745} = (56, 9, 62, 1)$ lies on line ℓ_5
 932 : $P_{259534} = (13, 22, 62, 1)$ lies on line ℓ_{15}
 933 : $P_{259581} = (60, 22, 62, 1)$ lies on line ℓ_{14}
 934 : $P_{260888} = (23, 43, 62, 1)$ lies on line ℓ_9
 935 : $P_{260896} = (31, 43, 62, 1)$ lies on line ℓ_8
 936 : $P_{261217} = (32, 48, 62, 1)$ lies on line ℓ_{11}
 937 : $P_{261240} = (55, 48, 62, 1)$ lies on line ℓ_{10}
 938 : $P_{262059} = (42, 61, 62, 1)$ lies on line ℓ_7
 939 : $P_{262062} = (45, 61, 62, 1)$ lies on line ℓ_6
 940 : $P_{262146} = (1, 63, 62, 1)$ lies on line ℓ_3
 941 : $P_{262424} = (23, 3, 63, 1)$ lies on line ℓ_5
 942 : $P_{262426} = (25, 3, 63, 1)$ lies on line ℓ_4
 943 : $P_{263225} = (56, 15, 63, 1)$ lies on line ℓ_9
 944 : $P_{263227} = (58, 15, 63, 1)$ lies on line ℓ_8
 945 : $P_{263557} = (4, 21, 63, 1)$ lies on line ℓ_{11}
 946 : $P_{263613} = (60, 21, 63, 1)$ lies on line ℓ_{10}
 947 : $P_{264798} = (29, 40, 63, 1)$ lies on line ℓ_{13}
 948 : $P_{264811} = (42, 40, 63, 1)$ lies on line ℓ_{12}
 949 : $P_{265679} = (14, 54, 63, 1)$ lies on line ℓ_7
 950 : $P_{265704} = (39, 54, 63, 1)$ lies on line ℓ_6
 951 : $P_{265892} = (35, 57, 63, 1)$ lies on line ℓ_{15}
 952 : $P_{265912} = (55, 57, 63, 1)$ lies on line ℓ_{14}
 953 : $P_{266178} = (1, 62, 63, 1)$ lies on line ℓ_3

The single points on the surface are:

Points on surface but on no line

The surface has 3423 points not on any line:
 Too many to print.

Line Intersection Graph

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	0	0	1	1	0	1	0	1	0	0	1	0	1	0	1
1	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0
2	0	1	0	1	0	0	1	1	1	1	0	0	0	0	1	1
3	1	1	1	0	0	1	0	1	0	1	1	0	1	0	1	0
4	1	1	0	0	0	1	0	1	0	1	0	0	0	0	0	1
5	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0
6	1	0	1	0	0	1	0	1	0	0	0	1	1	0	0	0
7	0	0	1	1	1	0	1	0	0	1	1	0	0	1	1	0
8	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	0
9	0	0	1	1	1	0	0	1	1	0	0	1	1	0	1	0
10	0	1	0	1	0	1	0	1	1	0	0	1	1	0	0	1
11	1	1	0	0	0	0	1	0	0	1	1	0	0	0	1	0
12	0	1	0	1	0	1	1	0	0	1	1	0	0	1	0	1
13	1	1	0	0	0	0	0	1	1	0	0	0	1	0	1	0
14	0	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
15	1	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	ℓ_3	ℓ_4	ℓ_6	ℓ_8	ℓ_{11}	ℓ_{13}	ℓ_{15}
in point	P_{131}	P_{718}	P_{781}	P_{2408}	P_{2471}	P_{3058}	P_{3121}

Line 1 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}
in point	P_0	P_{4227}	P_{4262}	P_{4227}	P_{4227}	P_{4273}	P_{4227}	P_{4237}

Line 2 intersects

Line	ℓ_1	ℓ_3	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{14}	ℓ_{15}
in point	P_0	P_{8259}	P_{8305}	P_{8259}	P_{8269}	P_{8259}	P_{8259}	P_{8294}

Line 3 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_5	ℓ_7	ℓ_9	ℓ_{10}	ℓ_{12}	ℓ_{14}
in point	P_{131}	P_{4227}	P_{8259}	P_{4227}	P_{8259}	P_{8259}	P_{4227}	P_{4227}	P_{8259}

Line 4 intersects

Line	ℓ_0	ℓ_1	ℓ_5	ℓ_7	ℓ_9	ℓ_{15}
in point	P_{718}	P_{4262}	P_{196683}	P_{47436}	P_{52161}	P_{158118}

Line 5 intersects

Line	ℓ_1	ℓ_3	ℓ_4	ℓ_6	ℓ_8	ℓ_{10}	ℓ_{12}	ℓ_{14}
in point	P_{4227}	P_{4227}	P_{196683}	P_{47425}	P_{52208}	P_{4227}	P_{4227}	P_{158092}

Line 6 intersects

Line	ℓ_0	ℓ_2	ℓ_5	ℓ_7	ℓ_{11}	ℓ_{12}
in point	P_{781}	P_{8305}	P_{47425}	P_{4903}	P_{195567}	P_{199077}

Line 7 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_6	ℓ_9	ℓ_{10}	ℓ_{13}	ℓ_{14}
in point	P_{8259}	P_{8259}	P_{47436}	P_{4903}	P_{8259}	P_{195557}	P_{199041}	P_{8259}

Line 8 intersects

Line	ℓ_0	ℓ_2	ℓ_5	ℓ_9	ℓ_{10}	ℓ_{13}
in point	P_{2408}	P_{8269}	P_{52208}	P_{6512}	P_{158721}	P_{45771}

Line 9 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_7	ℓ_8	ℓ_{11}	ℓ_{12}	ℓ_{14}
in point	P_{8259}	P_{8259}	P_{52161}	P_{8259}	P_{6512}	P_{158757}	P_{45808}	P_{8259}

Line 10 intersects

Line	ℓ_1	ℓ_3	ℓ_5	ℓ_7	ℓ_8	ℓ_{11}	ℓ_{12}	ℓ_{15}
in point	P_{4227}	P_{4227}	P_{4227}	P_{195557}	P_{158721}	P_{49254}	P_{4227}	P_{152268}

Line 11 intersects

Line	ℓ_0	ℓ_1	ℓ_6	ℓ_9	ℓ_{10}	ℓ_{14}
in point	P_{2471}	P_{4273}	P_{195567}	P_{158757}	P_{49254}	P_{152257}

Line 12 intersects

Line	ℓ_1	ℓ_3	ℓ_5	ℓ_6	ℓ_9	ℓ_{10}	ℓ_{13}	ℓ_{15}
in point	P_{4227}	P_{4227}	P_{4227}	P_{199077}	P_{45808}	P_{4227}	P_{151663}	P_{193281}

Line 13 intersects

Line	ℓ_0	ℓ_1	ℓ_7	ℓ_8	ℓ_{12}	ℓ_{14}
in point	P_{3058}	P_{4237}	P_{199041}	P_{45771}	P_{151663}	P_{193328}

Line 14 intersects

Line	ℓ_2	ℓ_3	ℓ_5	ℓ_7	ℓ_9	ℓ_{11}	ℓ_{13}	ℓ_{15}
in point	P_{8259}	P_{8259}	P_{158092}	P_{8259}	P_{8259}	P_{152257}	P_{193328}	P_{7180}

Line 15 intersects

Line	ℓ_0	ℓ_2	ℓ_4	ℓ_{10}	ℓ_{12}	ℓ_{14}
in point	P_{3121}	P_{8294}	P_{158118}	P_{152268}	P_{193281}	P_{7180}

The surface has 4417 points:

Too many to print.