

# Rank-76387 over GF(64)

January 15, 2021

## The equation

The equation of the surface is :

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

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

The point rank of the equation over GF(64) is -2130440123

## General information

Number of lines	16
Number of points	4417
Number of singular points	2
Number of Eckardt points	3
Number of double points	29
Number of single points	963
Number of points off lines	3420
Number of Hesse planes	0
Number of axes	0
Type of points on lines	$65^{16}$
Type of lines on points	$5^2, 3^3, 2^{29}, 1^{963}, 0^{3420}$

## Singular Points

The surface has 2 singular points:

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

$$1 : P_5 = \mathbf{P}(1, 1, 0, 0) = \mathbf{P}(1, 1, 0, 0)$$

## The 16 Lines

The lines and their Pluecker coordinates are:

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

$$\begin{aligned}
\ell_1 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{65} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{65} = \mathbf{Pl}(1, 0, 1, 0, 1, 0)_{4353} \\
\ell_2 &= \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047616} = \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047616} = \mathbf{Pl}(0, 1, 0, 0, 0, 0)_1 \\
\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 & 0 & \epsilon^9 & \epsilon^{18} \\ 0 & 1 & \epsilon^9 & \epsilon^{18} \end{bmatrix}_{3125662} = \begin{bmatrix} 1 & 0 & 47 & 11 \\ 0 & 1 & 47 & 11 \end{bmatrix}_{3125662} = \mathbf{Pl}(37, 0, 10, 47, 47, 1)_{12601438} \\
\ell_5 &= \begin{bmatrix} 1 & 0 & \epsilon^{18} & \epsilon^{36} \\ 0 & 1 & \epsilon^{18} & \epsilon^{36} \end{bmatrix}_{9635030} = \begin{bmatrix} 1 & 0 & 11 & 36 \\ 0 & 1 & 11 & 36 \end{bmatrix}_{9635030} = \mathbf{Pl}(46, 0, 37, 11, 11, 1)_{3169996} \\
\ell_6 &= \begin{bmatrix} 1 & 0 & \epsilon^{36} & \epsilon^9 \\ 0 & 1 & \epsilon^{36} & \epsilon^9 \end{bmatrix}_{12669128} = \begin{bmatrix} 1 & 0 & 36 & 47 \\ 0 & 1 & 36 & 47 \end{bmatrix}_{12669128} = \mathbf{Pl}(10, 0, 46, 36, 36, 1)_{9723103} \\
\ell_7 &= \begin{bmatrix} 1 & \epsilon^9 & 0 & 0 \\ 0 & 0 & 1 & \epsilon^{36} \end{bmatrix}_{199699} = \begin{bmatrix} 1 & 47 & 0 & 0 \\ 0 & 0 & 1 & 36 \end{bmatrix}_{199699} = \mathbf{Pl}(0, 0, 46, 36, 46, 1)_{12343893} \\
\ell_8 &= \begin{bmatrix} 1 & \epsilon^{18} & 0 & 0 \\ 0 & 0 & 1 & \epsilon^9 \end{bmatrix}_{49914} = \begin{bmatrix} 1 & 11 & 0 & 0 \\ 0 & 0 & 1 & 47 \end{bmatrix}_{49914} = \mathbf{Pl}(0, 0, 10, 47, 10, 1)_{2904441} \\
\ell_9 &= \begin{bmatrix} 1 & \epsilon^{36} & 0 & 0 \\ 0 & 0 & 1 & \epsilon^{18} \end{bmatrix}_{153903} = \begin{bmatrix} 1 & 36 & 0 & 0 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{153903} = \mathbf{Pl}(0, 0, 37, 11, 37, 1)_{9984030} \\
\ell_{10} &= \begin{bmatrix} 1 & \epsilon^9 & 0 & \epsilon^{54} \\ 0 & 0 & 1 & \epsilon^{36} \end{bmatrix}_{2862739} = \begin{bmatrix} 1 & 47 & 0 & 10 \\ 0 & 0 & 1 & 36 \end{bmatrix}_{2862739} = \mathbf{Pl}(0, 37, 46, 36, 46, 1)_{12343993} \\
\ell_{11} &= \begin{bmatrix} 1 & 0 & \epsilon^{36} & \epsilon^9 \\ 0 & 1 & \epsilon^{45} & \epsilon^{27} \end{bmatrix}_{12669065} = \begin{bmatrix} 1 & 0 & 36 & 47 \\ 0 & 1 & 37 & 46 \end{bmatrix}_{12669065} = \mathbf{Pl}(11, 37, 46, 36, 10, 1)_{3087583} \\
\ell_{12} &= \begin{bmatrix} 1 & 0 & \epsilon^9 & \epsilon^{18} \\ 0 & 1 & \epsilon^{27} & \epsilon^{54} \end{bmatrix}_{3125597} = \begin{bmatrix} 1 & 0 & 47 & 11 \\ 0 & 1 & 46 & 10 \end{bmatrix}_{3125597} = \mathbf{Pl}(36, 46, 10, 47, 37, 1)_{10024853} \\
\ell_{13} &= \begin{bmatrix} 1 & \epsilon^{18} & 0 & \epsilon^{45} \\ 0 & 0 & 1 & \epsilon^9 \end{bmatrix}_{9903162} = \begin{bmatrix} 1 & 11 & 0 & 37 \\ 0 & 0 & 1 & 47 \end{bmatrix}_{9903162} = \mathbf{Pl}(0, 46, 10, 47, 10, 1)_{2904550} \\
\ell_{14} &= \begin{bmatrix} 1 & \epsilon^{36} & 0 & \epsilon^{27} \\ 0 & 0 & 1 & \epsilon^{18} \end{bmatrix}_{12403887} = \begin{bmatrix} 1 & 36 & 0 & 46 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{12403887} = \mathbf{Pl}(0, 10, 37, 11, 37, 1)_{9984103} \\
\ell_{15} &= \begin{bmatrix} 1 & 0 & \epsilon^{18} & \epsilon^{36} \\ 0 & 1 & \epsilon^{54} & \epsilon^{45} \end{bmatrix}_{9635093} = \begin{bmatrix} 1 & 0 & 11 & 36 \\ 0 & 1 & 10 & 37 \end{bmatrix}_{9635093} = \mathbf{Pl}(47, 10, 37, 11, 46, 1)_{12489613}
\end{aligned}$$

Rank of lines: ( 0, 65, 17047616, 8258, 3125662, 9635030, 12669128, 199699, 49914, 153903, 2862739, 12669065, 3125597, 9903162, 12403887, 9635093 )

Rank of points on Klein quadric: ( 0, 4353, 1, 544578, 12601438, 3169996, 9723103, 12343893, 2904441, 9984030, 12343993, 3087583, 10024853, 2904550, 9984103, 12489613 )

### Eckardt Points

The surface has 3 Eckardt points:

$$\begin{aligned}
0 : P_{45121} &= \mathbf{P}(0, 0, \epsilon^{54}, 1) = \mathbf{P}(0, 0, 10, 1), \\
1 : P_{155713} &= \mathbf{P}(0, 0, \epsilon^{45}, 1) = \mathbf{P}(0, 0, 37, 1), \\
2 : P_{192577} &= \mathbf{P}(0, 0, \epsilon^{27}, 1) = \mathbf{P}(0, 0, 46, 1).
\end{aligned}$$

### Double Points

The surface has 29 Double points:

The double points on the surface are:

$$\begin{aligned}
P_0 &= (1, 0, 0, 0) = \ell_0 \cap \ell_1 \\
P_{14} &= (10, 1, 0, 0) = \ell_0 \cap \ell_7 \\
P_{41} &= (37, 1, 0, 0) = \ell_0 \cap \ell_8 \\
P_{50} &= (46, 1, 0, 0) = \ell_0 \cap \ell_9 \\
P_{8331} &= (10, 1, 1, 1) = \ell_1 \cap \ell_{10} \\
P_{8358} &= (37, 1, 1, 1) = \ell_1 \cap \ell_{13} \\
P_{8367} &= (46, 1, 1, 1) = \ell_1 \cap \ell_{14} \\
P_{8258} &= (0, 0, 1, 1) = \ell_2 \cap \ell_3 \\
P_{48139} &= (10, 47, 10, 1) = \ell_4 \cap \ell_8 \\
P_{48076} &= (11, 46, 10, 1) = \ell_4 \cap \ell_{10} \\
P_{45158} &= (37, 0, 10, 1) = \ell_4 \cap \ell_{12} \\
P_{47426} &= (1, 36, 10, 1) = \ell_4 \cap \ell_{14} \\
P_{156454} &= (37, 11, 37, 1) = \ell_5 \cap \ell_9 \\
P_{158722} &= (1, 47, 37, 1) = \ell_5 \cap \ell_{10} \\
P_{156389} &= (36, 10, 37, 1) = \ell_5 \cap \ell_{13}
\end{aligned}$$

$$\begin{aligned}
P_{155759} &= (46, 0, 37, 1) = \ell_5 \cap \ell_{15} \\
P_{194927} &= (46, 36, 46, 1) = \ell_6 \cap \ell_7 \\
P_{192587} &= (10, 0, 46, 1) = \ell_6 \cap \ell_{11} \\
P_{193282} &= (1, 11, 46, 1) = \ell_6 \cap \ell_{13} \\
P_{194992} &= (47, 37, 46, 1) = \ell_6 \cap \ell_{14} \\
P_{193328} &= (47, 11, 46, 1) = \ell_7 \cap \ell_{12} \\
P_{194981} &= (36, 37, 46, 1) = \ell_7 \cap \ell_{15} \\
P_{48112} &= (47, 46, 10, 1) = \ell_8 \cap \ell_{11} \\
P_{47436} &= (11, 36, 10, 1) = \ell_8 \cap \ell_{15} \\
P_{158757} &= (36, 47, 37, 1) = \ell_9 \cap \ell_{11} \\
P_{156364} &= (11, 10, 37, 1) = \ell_9 \cap \ell_{12} \\
P_{197350} &= (37, 10, 47, 1) = \ell_{10} \cap \ell_{11} \\
P_{51631} &= (46, 37, 11, 1) = \ell_{12} \cap \ell_{13} \\
P_{154571} &= (10, 46, 36, 1) = \ell_{14} \cap \ell_{15}
\end{aligned}$$

### Single Points

The surface has 963 single points:  
The single points on the surface are:

$$\begin{aligned}
0 : P_1 &= (0, 1, 0, 0) \text{ lies on line } \ell_0 \\
1 : P_2 &= (0, 0, 1, 0) \text{ lies on line } \ell_2 \\
2 : P_3 &= (0, 0, 0, 1) \text{ lies on line } \ell_2 \\
3 : P_6 &= (2, 1, 0, 0) \text{ lies on line } \ell_0 \\
4 : P_7 &= (3, 1, 0, 0) \text{ lies on line } \ell_0 \\
5 : P_8 &= (4, 1, 0, 0) \text{ lies on line } \ell_0 \\
6 : P_9 &= (5, 1, 0, 0) \text{ lies on line } \ell_0 \\
7 : P_{10} &= (6, 1, 0, 0) \text{ lies on line } \ell_0 \\
8 : P_{11} &= (7, 1, 0, 0) \text{ lies on line } \ell_0 \\
9 : P_{12} &= (8, 1, 0, 0) \text{ lies on line } \ell_0 \\
10 : P_{13} &= (9, 1, 0, 0) \text{ lies on line } \ell_0 \\
11 : P_{15} &= (11, 1, 0, 0) \text{ lies on line } \ell_0 \\
12 : P_{16} &= (12, 1, 0, 0) \text{ lies on line } \ell_0 \\
13 : P_{17} &= (13, 1, 0, 0) \text{ lies on line } \ell_0 \\
14 : P_{18} &= (14, 1, 0, 0) \text{ lies on line } \ell_0 \\
15 : P_{19} &= (15, 1, 0, 0) \text{ lies on line } \ell_0 \\
16 : P_{20} &= (16, 1, 0, 0) \text{ lies on line } \ell_0 \\
17 : P_{21} &= (17, 1, 0, 0) \text{ lies on line } \ell_0 \\
18 : P_{22} &= (18, 1, 0, 0) \text{ lies on line } \ell_0 \\
19 : P_{23} &= (19, 1, 0, 0) \text{ lies on line } \ell_0 \\
20 : P_{24} &= (20, 1, 0, 0) \text{ lies on line } \ell_0 \\
21 : P_{25} &= (21, 1, 0, 0) \text{ lies on line } \ell_0 \\
22 : P_{26} &= (22, 1, 0, 0) \text{ lies on line } \ell_0 \\
23 : P_{27} &= (23, 1, 0, 0) \text{ lies on line } \ell_0 \\
24 : P_{28} &= (24, 1, 0, 0) \text{ lies on line } \ell_0 \\
25 : P_{29} &= (25, 1, 0, 0) \text{ lies on line } \ell_0 \\
26 : P_{30} &= (26, 1, 0, 0) \text{ lies on line } \ell_0 \\
27 : P_{31} &= (27, 1, 0, 0) \text{ lies on line } \ell_0 \\
28 : P_{32} &= (28, 1, 0, 0) \text{ lies on line } \ell_0 \\
29 : P_{33} &= (29, 1, 0, 0) \text{ lies on line } \ell_0 \\
30 : P_{34} &= (30, 1, 0, 0) \text{ lies on line } \ell_0 \\
31 : P_{35} &= (31, 1, 0, 0) \text{ lies on line } \ell_0
\end{aligned}$$

$$\begin{aligned}
32 : P_{36} &= (32, 1, 0, 0) \text{ lies on line } \ell_0 \\
33 : P_{37} &= (33, 1, 0, 0) \text{ lies on line } \ell_0 \\
34 : P_{38} &= (34, 1, 0, 0) \text{ lies on line } \ell_0 \\
35 : P_{39} &= (35, 1, 0, 0) \text{ lies on line } \ell_0 \\
36 : P_{40} &= (36, 1, 0, 0) \text{ lies on line } \ell_0 \\
37 : P_{42} &= (38, 1, 0, 0) \text{ lies on line } \ell_0 \\
38 : P_{43} &= (39, 1, 0, 0) \text{ lies on line } \ell_0 \\
39 : P_{44} &= (40, 1, 0, 0) \text{ lies on line } \ell_0 \\
40 : P_{45} &= (41, 1, 0, 0) \text{ lies on line } \ell_0 \\
41 : P_{46} &= (42, 1, 0, 0) \text{ lies on line } \ell_0 \\
42 : P_{47} &= (43, 1, 0, 0) \text{ lies on line } \ell_0 \\
43 : P_{48} &= (44, 1, 0, 0) \text{ lies on line } \ell_0 \\
44 : P_{49} &= (45, 1, 0, 0) \text{ lies on line } \ell_0 \\
45 : P_{51} &= (47, 1, 0, 0) \text{ lies on line } \ell_0 \\
46 : P_{52} &= (48, 1, 0, 0) \text{ lies on line } \ell_0 \\
47 : P_{53} &= (49, 1, 0, 0) \text{ lies on line } \ell_0 \\
48 : P_{54} &= (50, 1, 0, 0) \text{ lies on line } \ell_0 \\
49 : P_{55} &= (51, 1, 0, 0) \text{ lies on line } \ell_0 \\
50 : P_{56} &= (52, 1, 0, 0) \text{ lies on line } \ell_0 \\
51 : P_{57} &= (53, 1, 0, 0) \text{ lies on line } \ell_0 \\
52 : P_{58} &= (54, 1, 0, 0) \text{ lies on line } \ell_0 \\
53 : P_{59} &= (55, 1, 0, 0) \text{ lies on line } \ell_0 \\
54 : P_{60} &= (56, 1, 0, 0) \text{ lies on line } \ell_0 \\
55 : P_{61} &= (57, 1, 0, 0) \text{ lies on line } \ell_0 \\
56 : P_{62} &= (58, 1, 0, 0) \text{ lies on line } \ell_0 \\
57 : P_{63} &= (59, 1, 0, 0) \text{ lies on line } \ell_0 \\
58 : P_{64} &= (60, 1, 0, 0) \text{ lies on line } \ell_0 \\
59 : P_{65} &= (61, 1, 0, 0) \text{ lies on line } \ell_0 \\
60 : P_{66} &= (62, 1, 0, 0) \text{ lies on line } \ell_0 \\
61 : P_{67} &= (63, 1, 0, 0) \text{ lies on line } \ell_0 \\
62 : P_{744} &= (37, 10, 1, 0) \text{ lies on line } \ell_{10} \\
63 : P_{754} &= (47, 10, 1, 0) \text{ lies on line } \ell_{11}
\end{aligned}$$

64 :  $P_{2446} = (11, 37, 1, 0)$  lies on line  $\ell_{12}$   
 65 :  $P_{2481} = (46, 37, 1, 0)$  lies on line  $\ell_{13}$   
 66 :  $P_{3021} = (10, 46, 1, 0)$  lies on line  $\ell_{14}$   
 67 :  $P_{3047} = (36, 46, 1, 0)$  lies on line  $\ell_{15}$   
 68 :  $P_{4912} = (46, 11, 0, 1)$  lies on line  $\ell_{11}$   
 69 :  $P_{4913} = (47, 11, 0, 1)$  lies on line  $\ell_{10}$   
 70 :  $P_{6476} = (10, 36, 0, 1)$  lies on line  $\ell_{12}$   
 71 :  $P_{6477} = (11, 36, 0, 1)$  lies on line  $\ell_{13}$   
 72 :  $P_{7206} = (36, 47, 0, 1)$  lies on line  $\ell_{14}$   
 73 :  $P_{7207} = (37, 47, 0, 1)$  lies on line  $\ell_{15}$   
 74 :  $P_{8322} = (0, 1, 1, 1)$  lies on line  $\ell_1$   
 75 :  $P_{8323} = (2, 1, 1, 1)$  lies on line  $\ell_1$   
 76 :  $P_{8324} = (3, 1, 1, 1)$  lies on line  $\ell_1$   
 77 :  $P_{8325} = (4, 1, 1, 1)$  lies on line  $\ell_1$   
 78 :  $P_{8326} = (5, 1, 1, 1)$  lies on line  $\ell_1$   
 79 :  $P_{8327} = (6, 1, 1, 1)$  lies on line  $\ell_1$   
 80 :  $P_{8328} = (7, 1, 1, 1)$  lies on line  $\ell_1$   
 81 :  $P_{8329} = (8, 1, 1, 1)$  lies on line  $\ell_1$   
 82 :  $P_{8330} = (9, 1, 1, 1)$  lies on line  $\ell_1$   
 83 :  $P_{8332} = (11, 1, 1, 1)$  lies on line  $\ell_1$   
 84 :  $P_{8333} = (12, 1, 1, 1)$  lies on line  $\ell_1$   
 85 :  $P_{8334} = (13, 1, 1, 1)$  lies on line  $\ell_1$   
 86 :  $P_{8335} = (14, 1, 1, 1)$  lies on line  $\ell_1$   
 87 :  $P_{8336} = (15, 1, 1, 1)$  lies on line  $\ell_1$   
 88 :  $P_{8337} = (16, 1, 1, 1)$  lies on line  $\ell_1$   
 89 :  $P_{8338} = (17, 1, 1, 1)$  lies on line  $\ell_1$   
 90 :  $P_{8339} = (18, 1, 1, 1)$  lies on line  $\ell_1$   
 91 :  $P_{8340} = (19, 1, 1, 1)$  lies on line  $\ell_1$   
 92 :  $P_{8341} = (20, 1, 1, 1)$  lies on line  $\ell_1$   
 93 :  $P_{8342} = (21, 1, 1, 1)$  lies on line  $\ell_1$   
 94 :  $P_{8343} = (22, 1, 1, 1)$  lies on line  $\ell_1$   
 95 :  $P_{8344} = (23, 1, 1, 1)$  lies on line  $\ell_1$   
 96 :  $P_{8345} = (24, 1, 1, 1)$  lies on line  $\ell_1$   
 97 :  $P_{8346} = (25, 1, 1, 1)$  lies on line  $\ell_1$   
 98 :  $P_{8347} = (26, 1, 1, 1)$  lies on line  $\ell_1$   
 99 :  $P_{8348} = (27, 1, 1, 1)$  lies on line  $\ell_1$   
 100 :  $P_{8349} = (28, 1, 1, 1)$  lies on line  $\ell_1$   
 101 :  $P_{8350} = (29, 1, 1, 1)$  lies on line  $\ell_1$   
 102 :  $P_{8351} = (30, 1, 1, 1)$  lies on line  $\ell_1$   
 103 :  $P_{8352} = (31, 1, 1, 1)$  lies on line  $\ell_1$   
 104 :  $P_{8353} = (32, 1, 1, 1)$  lies on line  $\ell_1$   
 105 :  $P_{8354} = (33, 1, 1, 1)$  lies on line  $\ell_1$   
 106 :  $P_{8355} = (34, 1, 1, 1)$  lies on line  $\ell_1$   
 107 :  $P_{8356} = (35, 1, 1, 1)$  lies on line  $\ell_1$   
 108 :  $P_{8357} = (36, 1, 1, 1)$  lies on line  $\ell_1$   
 109 :  $P_{8359} = (38, 1, 1, 1)$  lies on line  $\ell_1$   
 110 :  $P_{8360} = (39, 1, 1, 1)$  lies on line  $\ell_1$   
 111 :  $P_{8361} = (40, 1, 1, 1)$  lies on line  $\ell_1$   
 112 :  $P_{8362} = (41, 1, 1, 1)$  lies on line  $\ell_1$   
 113 :  $P_{8363} = (42, 1, 1, 1)$  lies on line  $\ell_1$   
 114 :  $P_{8364} = (43, 1, 1, 1)$  lies on line  $\ell_1$   
 115 :  $P_{8365} = (44, 1, 1, 1)$  lies on line  $\ell_1$   
 116 :  $P_{8366} = (45, 1, 1, 1)$  lies on line  $\ell_1$   
 117 :  $P_{8368} = (47, 1, 1, 1)$  lies on line  $\ell_1$

118 :  $P_{8369} = (48, 1, 1, 1)$  lies on line  $\ell_1$   
 119 :  $P_{8370} = (49, 1, 1, 1)$  lies on line  $\ell_1$   
 120 :  $P_{8371} = (50, 1, 1, 1)$  lies on line  $\ell_1$   
 121 :  $P_{8372} = (51, 1, 1, 1)$  lies on line  $\ell_1$   
 122 :  $P_{8373} = (52, 1, 1, 1)$  lies on line  $\ell_1$   
 123 :  $P_{8374} = (53, 1, 1, 1)$  lies on line  $\ell_1$   
 124 :  $P_{8375} = (54, 1, 1, 1)$  lies on line  $\ell_1$   
 125 :  $P_{8376} = (55, 1, 1, 1)$  lies on line  $\ell_1$   
 126 :  $P_{8377} = (56, 1, 1, 1)$  lies on line  $\ell_1$   
 127 :  $P_{8378} = (57, 1, 1, 1)$  lies on line  $\ell_1$   
 128 :  $P_{8379} = (58, 1, 1, 1)$  lies on line  $\ell_1$   
 129 :  $P_{8380} = (59, 1, 1, 1)$  lies on line  $\ell_1$   
 130 :  $P_{8381} = (60, 1, 1, 1)$  lies on line  $\ell_1$   
 131 :  $P_{8382} = (61, 1, 1, 1)$  lies on line  $\ell_1$   
 132 :  $P_{8383} = (62, 1, 1, 1)$  lies on line  $\ell_1$   
 133 :  $P_{8384} = (63, 1, 1, 1)$  lies on line  $\ell_1$   
 134 :  $P_{8387} = (2, 2, 1, 1)$  lies on line  $\ell_3$   
 135 :  $P_{8452} = (3, 3, 1, 1)$  lies on line  $\ell_3$   
 136 :  $P_{8517} = (4, 4, 1, 1)$  lies on line  $\ell_3$   
 137 :  $P_{8582} = (5, 5, 1, 1)$  lies on line  $\ell_3$   
 138 :  $P_{8647} = (6, 6, 1, 1)$  lies on line  $\ell_3$   
 139 :  $P_{8712} = (7, 7, 1, 1)$  lies on line  $\ell_3$   
 140 :  $P_{8777} = (8, 8, 1, 1)$  lies on line  $\ell_3$   
 141 :  $P_{8842} = (9, 9, 1, 1)$  lies on line  $\ell_3$   
 142 :  $P_{8907} = (10, 10, 1, 1)$  lies on line  $\ell_3$   
 143 :  $P_{8972} = (11, 11, 1, 1)$  lies on line  $\ell_3$   
 144 :  $P_{9037} = (12, 12, 1, 1)$  lies on line  $\ell_3$   
 145 :  $P_{9102} = (13, 13, 1, 1)$  lies on line  $\ell_3$   
 146 :  $P_{9167} = (14, 14, 1, 1)$  lies on line  $\ell_3$   
 147 :  $P_{9232} = (15, 15, 1, 1)$  lies on line  $\ell_3$   
 148 :  $P_{9297} = (16, 16, 1, 1)$  lies on line  $\ell_3$   
 149 :  $P_{9362} = (17, 17, 1, 1)$  lies on line  $\ell_3$   
 150 :  $P_{9427} = (18, 18, 1, 1)$  lies on line  $\ell_3$   
 151 :  $P_{9492} = (19, 19, 1, 1)$  lies on line  $\ell_3$   
 152 :  $P_{9557} = (20, 20, 1, 1)$  lies on line  $\ell_3$   
 153 :  $P_{9622} = (21, 21, 1, 1)$  lies on line  $\ell_3$   
 154 :  $P_{9687} = (22, 22, 1, 1)$  lies on line  $\ell_3$   
 155 :  $P_{9752} = (23, 23, 1, 1)$  lies on line  $\ell_3$   
 156 :  $P_{9817} = (24, 24, 1, 1)$  lies on line  $\ell_3$   
 157 :  $P_{9882} = (25, 25, 1, 1)$  lies on line  $\ell_3$   
 158 :  $P_{9947} = (26, 26, 1, 1)$  lies on line  $\ell_3$   
 159 :  $P_{10012} = (27, 27, 1, 1)$  lies on line  $\ell_3$   
 160 :  $P_{10077} = (28, 28, 1, 1)$  lies on line  $\ell_3$   
 161 :  $P_{10142} = (29, 29, 1, 1)$  lies on line  $\ell_3$   
 162 :  $P_{10207} = (30, 30, 1, 1)$  lies on line  $\ell_3$   
 163 :  $P_{10272} = (31, 31, 1, 1)$  lies on line  $\ell_3$   
 164 :  $P_{10337} = (32, 32, 1, 1)$  lies on line  $\ell_3$   
 165 :  $P_{10402} = (33, 33, 1, 1)$  lies on line  $\ell_3$   
 166 :  $P_{10467} = (34, 34, 1, 1)$  lies on line  $\ell_3$   
 167 :  $P_{10532} = (35, 35, 1, 1)$  lies on line  $\ell_3$   
 168 :  $P_{10597} = (36, 36, 1, 1)$  lies on line  $\ell_3$   
 169 :  $P_{10662} = (37, 37, 1, 1)$  lies on line  $\ell_3$   
 170 :  $P_{10727} = (38, 38, 1, 1)$  lies on line  $\ell_3$   
 171 :  $P_{10792} = (39, 39, 1, 1)$  lies on line  $\ell_3$

172 :  $P_{10857} = (40, 40, 1, 1)$  lies on line  $\ell_3$   
 173 :  $P_{10922} = (41, 41, 1, 1)$  lies on line  $\ell_3$   
 174 :  $P_{10987} = (42, 42, 1, 1)$  lies on line  $\ell_3$   
 175 :  $P_{11052} = (43, 43, 1, 1)$  lies on line  $\ell_3$   
 176 :  $P_{11117} = (44, 44, 1, 1)$  lies on line  $\ell_3$   
 177 :  $P_{11182} = (45, 45, 1, 1)$  lies on line  $\ell_3$   
 178 :  $P_{11247} = (46, 46, 1, 1)$  lies on line  $\ell_3$   
 179 :  $P_{11312} = (47, 47, 1, 1)$  lies on line  $\ell_3$   
 180 :  $P_{11377} = (48, 48, 1, 1)$  lies on line  $\ell_3$   
 181 :  $P_{11442} = (49, 49, 1, 1)$  lies on line  $\ell_3$   
 182 :  $P_{11507} = (50, 50, 1, 1)$  lies on line  $\ell_3$   
 183 :  $P_{11572} = (51, 51, 1, 1)$  lies on line  $\ell_3$   
 184 :  $P_{11637} = (52, 52, 1, 1)$  lies on line  $\ell_3$   
 185 :  $P_{11702} = (53, 53, 1, 1)$  lies on line  $\ell_3$   
 186 :  $P_{11767} = (54, 54, 1, 1)$  lies on line  $\ell_3$   
 187 :  $P_{11832} = (55, 55, 1, 1)$  lies on line  $\ell_3$   
 188 :  $P_{11897} = (56, 56, 1, 1)$  lies on line  $\ell_3$   
 189 :  $P_{11962} = (57, 57, 1, 1)$  lies on line  $\ell_3$   
 190 :  $P_{12027} = (58, 58, 1, 1)$  lies on line  $\ell_3$   
 191 :  $P_{12092} = (59, 59, 1, 1)$  lies on line  $\ell_3$   
 192 :  $P_{12157} = (60, 60, 1, 1)$  lies on line  $\ell_3$   
 193 :  $P_{12222} = (61, 61, 1, 1)$  lies on line  $\ell_3$   
 194 :  $P_{12287} = (62, 62, 1, 1)$  lies on line  $\ell_3$   
 195 :  $P_{12352} = (63, 63, 1, 1)$  lies on line  $\ell_3$   
 196 :  $P_{12353} = (0, 0, 2, 1)$  lies on line  $\ell_2$   
 197 :  $P_{13341} = (28, 15, 2, 1)$  lies on line  $\ell_{12}$   
 198 :  $P_{13367} = (54, 15, 2, 1)$  lies on line  $\ell_{13}$   
 199 :  $P_{13517} = (12, 18, 2, 1)$  lies on line  $\ell_{15}$   
 200 :  $P_{13553} = (48, 18, 2, 1)$  lies on line  $\ell_{14}$   
 201 :  $P_{14341} = (4, 31, 2, 1)$  lies on line  $\ell_{10}$   
 202 :  $P_{14354} = (17, 31, 2, 1)$  lies on line  $\ell_{11}$   
 203 :  $P_{16449} = (0, 0, 3, 1)$  lies on line  $\ell_2$   
 204 :  $P_{17826} = (33, 21, 3, 1)$  lies on line  $\ell_{10}$   
 205 :  $P_{17855} = (62, 21, 3, 1)$  lies on line  $\ell_{11}$   
 206 :  $P_{19160} = (23, 42, 3, 1)$  lies on line  $\ell_{12}$   
 207 :  $P_{19161} = (24, 42, 3, 1)$  lies on line  $\ell_{13}$   
 208 :  $P_{20329} = (40, 60, 3, 1)$  lies on line  $\ell_{15}$   
 209 :  $P_{20347} = (58, 60, 3, 1)$  lies on line  $\ell_{14}$   
 210 :  $P_{20545} = (0, 0, 4, 1)$  lies on line  $\ell_2$   
 211 :  $P_{21777} = (16, 19, 4, 1)$  lies on line  $\ell_{13}$   
 212 :  $P_{21799} = (38, 19, 4, 1)$  lies on line  $\ell_{12}$   
 213 :  $P_{22809} = (24, 35, 4, 1)$  lies on line  $\ell_{10}$   
 214 :  $P_{22834} = (49, 35, 4, 1)$  lies on line  $\ell_{11}$   
 215 :  $P_{23885} = (12, 52, 4, 1)$  lies on line  $\ell_{14}$   
 216 :  $P_{23895} = (22, 52, 4, 1)$  lies on line  $\ell_{15}$   
 217 :  $P_{24641} = (0, 0, 5, 1)$  lies on line  $\ell_2$   
 218 :  $P_{26311} = (6, 26, 5, 1)$  lies on line  $\ell_{14}$   
 219 :  $P_{26355} = (50, 26, 5, 1)$  lies on line  $\ell_{15}$   
 220 :  $P_{27295} = (30, 41, 5, 1)$  lies on line  $\ell_{11}$   
 221 :  $P_{27326} = (61, 41, 5, 1)$  lies on line  $\ell_{10}$   
 222 :  $P_{28142} = (45, 54, 5, 1)$  lies on line  $\ell_{12}$   
 223 :  $P_{28159} = (62, 54, 5, 1)$  lies on line  $\ell_{13}$   
 224 :  $P_{28737} = (0, 0, 6, 1)$  lies on line  $\ell_2$   
 225 :  $P_{29337} = (24, 9, 6, 1)$  lies on line  $\ell_{14}$

226 :  $P_{29376} = (63, 9, 6, 1)$  lies on line  $\ell_{15}$   
 227 :  $P_{32271} = (14, 55, 6, 1)$  lies on line  $\ell_{11}$   
 228 :  $P_{32308} = (51, 55, 6, 1)$  lies on line  $\ell_{10}$   
 229 :  $P_{32366} = (45, 56, 6, 1)$  lies on line  $\ell_{13}$   
 230 :  $P_{32369} = (48, 56, 6, 1)$  lies on line  $\ell_{12}$   
 231 :  $P_{32833} = (0, 0, 7, 1)$  lies on line  $\ell_2$   
 232 :  $P_{34692} = (3, 29, 7, 1)$  lies on line  $\ell_{13}$   
 233 :  $P_{34748} = (59, 29, 7, 1)$  lies on line  $\ell_{12}$   
 234 :  $P_{35347} = (18, 39, 7, 1)$  lies on line  $\ell_{14}$   
 235 :  $P_{35356} = (27, 39, 7, 1)$  lies on line  $\ell_{15}$   
 236 :  $P_{36759} = (22, 61, 7, 1)$  lies on line  $\ell_{10}$   
 237 :  $P_{36770} = (33, 61, 7, 1)$  lies on line  $\ell_{11}$   
 238 :  $P_{36929} = (0, 0, 8, 1)$  lies on line  $\ell_2$   
 239 :  $P_{38550} = (21, 25, 8, 1)$  lies on line  $\ell_{14}$   
 240 :  $P_{38563} = (34, 25, 8, 1)$  lies on line  $\ell_{15}$   
 241 :  $P_{39732} = (51, 43, 8, 1)$  lies on line  $\ell_{12}$   
 242 :  $P_{39742} = (61, 43, 8, 1)$  lies on line  $\ell_{13}$   
 243 :  $P_{40657} = (16, 58, 8, 1)$  lies on line  $\ell_{11}$   
 244 :  $P_{40673} = (32, 58, 8, 1)$  lies on line  $\ell_{10}$   
 245 :  $P_{41025} = (0, 0, 9, 1)$  lies on line  $\ell_2$   
 246 :  $P_{41940} = (19, 14, 9, 1)$  lies on line  $\ell_{13}$   
 247 :  $P_{41977} = (56, 14, 9, 1)$  lies on line  $\ell_{12}$   
 248 :  $P_{44102} = (5, 48, 9, 1)$  lies on line  $\ell_{10}$   
 249 :  $P_{44160} = (63, 48, 9, 1)$  lies on line  $\ell_{11}$   
 250 :  $P_{44551} = (6, 55, 9, 1)$  lies on line  $\ell_{15}$   
 251 :  $P_{44576} = (31, 55, 9, 1)$  lies on line  $\ell_{14}$   
 252 :  $P_{45221} = (36, 1, 10, 1)$  lies on line  $\ell_4$   
 253 :  $P_{45222} = (37, 1, 10, 1)$  lies on line  $\ell_8$   
 254 :  $P_{45288} = (39, 2, 10, 1)$  lies on line  $\ell_4$   
 255 :  $P_{45292} = (43, 2, 10, 1)$  lies on line  $\ell_8$   
 256 :  $P_{45327} = (14, 3, 10, 1)$  lies on line  $\ell_8$   
 257 :  $P_{45351} = (38, 3, 10, 1)$  lies on line  $\ell_4$   
 258 :  $P_{45410} = (33, 4, 10, 1)$  lies on line  $\ell_4$   
 259 :  $P_{45432} = (55, 4, 10, 1)$  lies on line  $\ell_8$   
 260 :  $P_{45459} = (18, 5, 10, 1)$  lies on line  $\ell_8$   
 261 :  $P_{45473} = (32, 5, 10, 1)$  lies on line  $\ell_4$   
 262 :  $P_{45533} = (28, 6, 10, 1)$  lies on line  $\ell_8$   
 263 :  $P_{45540} = (35, 6, 10, 1)$  lies on line  $\ell_4$   
 264 :  $P_{45603} = (34, 7, 10, 1)$  lies on line  $\ell_4$   
 265 :  $P_{45626} = (57, 7, 10, 1)$  lies on line  $\ell_8$   
 266 :  $P_{45648} = (15, 8, 10, 1)$  lies on line  $\ell_8$   
 267 :  $P_{45678} = (45, 8, 10, 1)$  lies on line  $\ell_4$   
 268 :  $P_{45739} = (42, 9, 10, 1)$  lies on line  $\ell_8$   
 269 :  $P_{45741} = (44, 9, 10, 1)$  lies on line  $\ell_4$   
 270 :  $P_{45797} = (36, 10, 10, 1)$  lies on line  $\ell_8$   
 271 :  $P_{45808} = (47, 10, 10, 1)$  lies on line  $\ell_4$   
 272 :  $P_{45826} = (1, 11, 10, 1)$  lies on line  $\ell_8$   
 273 :  $P_{45871} = (46, 11, 10, 1)$  lies on line  $\ell_4$   
 274 :  $P_{45930} = (41, 12, 10, 1)$  lies on line  $\ell_4$   
 275 :  $P_{45945} = (56, 12, 10, 1)$  lies on line  $\ell_8$   
 276 :  $P_{45982} = (29, 13, 10, 1)$  lies on line  $\ell_8$   
 277 :  $P_{45993} = (40, 13, 10, 1)$  lies on line  $\ell_4$   
 278 :  $P_{46036} = (19, 14, 10, 1)$  lies on line  $\ell_8$   
 279 :  $P_{46060} = (43, 14, 10, 1)$  lies on line  $\ell_4$

280 :  $P_{46123} = (42, 15, 10, 1)$  lies on line  $\ell_4$   
 281 :  $P_{46135} = (54, 15, 10, 1)$  lies on line  $\ell_8$   
 282 :  $P_{46175} = (30, 16, 10, 1)$  lies on line  $\ell_8$   
 283 :  $P_{46198} = (53, 16, 10, 1)$  lies on line  $\ell_4$   
 284 :  $P_{46261} = (52, 17, 10, 1)$  lies on line  $\ell_4$   
 285 :  $P_{46268} = (59, 17, 10, 1)$  lies on line  $\ell_8$   
 286 :  $P_{46326} = (53, 18, 10, 1)$  lies on line  $\ell_8$   
 287 :  $P_{46328} = (55, 18, 10, 1)$  lies on line  $\ell_4$   
 288 :  $P_{46353} = (16, 19, 10, 1)$  lies on line  $\ell_8$   
 289 :  $P_{46391} = (54, 19, 10, 1)$  lies on line  $\ell_4$   
 290 :  $P_{46442} = (41, 20, 10, 1)$  lies on line  $\ell_8$   
 291 :  $P_{46450} = (49, 20, 10, 1)$  lies on line  $\ell_4$   
 292 :  $P_{46477} = (12, 21, 10, 1)$  lies on line  $\ell_8$   
 293 :  $P_{46513} = (48, 21, 10, 1)$  lies on line  $\ell_4$   
 294 :  $P_{46531} = (2, 22, 10, 1)$  lies on line  $\ell_8$   
 295 :  $P_{46580} = (51, 22, 10, 1)$  lies on line  $\ell_4$   
 296 :  $P_{46632} = (39, 23, 10, 1)$  lies on line  $\ell_8$   
 297 :  $P_{46643} = (50, 23, 10, 1)$  lies on line  $\ell_4$   
 298 :  $P_{46674} = (17, 24, 10, 1)$  lies on line  $\ell_8$   
 299 :  $P_{46718} = (61, 24, 10, 1)$  lies on line  $\ell_4$   
 300 :  $P_{46773} = (52, 25, 10, 1)$  lies on line  $\ell_8$   
 301 :  $P_{46781} = (60, 25, 10, 1)$  lies on line  $\ell_4$   
 302 :  $P_{46843} = (58, 26, 10, 1)$  lies on line  $\ell_8$   
 303 :  $P_{46848} = (63, 26, 10, 1)$  lies on line  $\ell_4$   
 304 :  $P_{46880} = (31, 27, 10, 1)$  lies on line  $\ell_8$   
 305 :  $P_{46911} = (62, 27, 10, 1)$  lies on line  $\ell_4$   
 306 :  $P_{46951} = (38, 28, 10, 1)$  lies on line  $\ell_8$   
 307 :  $P_{46970} = (57, 28, 10, 1)$  lies on line  $\ell_4$   
 308 :  $P_{46980} = (3, 29, 10, 1)$  lies on line  $\ell_8$   
 309 :  $P_{47033} = (56, 29, 10, 1)$  lies on line  $\ell_4$   
 310 :  $P_{47054} = (13, 30, 10, 1)$  lies on line  $\ell_8$   
 311 :  $P_{47100} = (59, 30, 10, 1)$  lies on line  $\ell_4$   
 312 :  $P_{47145} = (40, 31, 10, 1)$  lies on line  $\ell_8$   
 313 :  $P_{47163} = (58, 31, 10, 1)$  lies on line  $\ell_4$   
 314 :  $P_{47174} = (5, 32, 10, 1)$  lies on line  $\ell_4$   
 315 :  $P_{47229} = (60, 32, 10, 1)$  lies on line  $\ell_8$   
 316 :  $P_{47237} = (4, 33, 10, 1)$  lies on line  $\ell_4$   
 317 :  $P_{47258} = (25, 33, 10, 1)$  lies on line  $\ell_8$   
 318 :  $P_{47304} = (7, 34, 10, 1)$  lies on line  $\ell_4$   
 319 :  $P_{47320} = (23, 34, 10, 1)$  lies on line  $\ell_8$   
 320 :  $P_{47367} = (6, 35, 10, 1)$  lies on line  $\ell_4$   
 321 :  $P_{47411} = (50, 35, 10, 1)$  lies on line  $\ell_8$   
 322 :  $P_{47489} = (0, 37, 10, 1)$  lies on line  $\ell_4$   
 323 :  $P_{47535} = (46, 37, 10, 1)$  lies on line  $\ell_8$   
 324 :  $P_{47556} = (3, 38, 10, 1)$  lies on line  $\ell_4$   
 325 :  $P_{47585} = (32, 38, 10, 1)$  lies on line  $\ell_8$   
 326 :  $P_{47619} = (2, 39, 10, 1)$  lies on line  $\ell_4$   
 327 :  $P_{47622} = (5, 39, 10, 1)$  lies on line  $\ell_8$   
 328 :  $P_{47694} = (13, 40, 10, 1)$  lies on line  $\ell_4$   
 329 :  $P_{47732} = (51, 40, 10, 1)$  lies on line  $\ell_8$   
 330 :  $P_{47757} = (12, 41, 10, 1)$  lies on line  $\ell_4$   
 331 :  $P_{47767} = (22, 41, 10, 1)$  lies on line  $\ell_8$   
 332 :  $P_{47824} = (15, 42, 10, 1)$  lies on line  $\ell_4$   
 333 :  $P_{47833} = (24, 42, 10, 1)$  lies on line  $\ell_8$   
 334 :  $P_{47887} = (14, 43, 10, 1)$  lies on line  $\ell_4$   
 335 :  $P_{47934} = (61, 43, 10, 1)$  lies on line  $\ell_8$   
 336 :  $P_{47941} = (4, 44, 10, 1)$  lies on line  $\ell_8$   
 337 :  $P_{47946} = (9, 44, 10, 1)$  lies on line  $\ell_4$   
 338 :  $P_{48009} = (8, 45, 10, 1)$  lies on line  $\ell_4$   
 339 :  $P_{48034} = (33, 45, 10, 1)$  lies on line  $\ell_8$   
 340 :  $P_{48214} = (21, 48, 10, 1)$  lies on line  $\ell_4$   
 341 :  $P_{48227} = (34, 48, 10, 1)$  lies on line  $\ell_8$   
 342 :  $P_{48264} = (7, 49, 10, 1)$  lies on line  $\ell_8$   
 343 :  $P_{48277} = (20, 49, 10, 1)$  lies on line  $\ell_4$   
 344 :  $P_{48330} = (9, 50, 10, 1)$  lies on line  $\ell_8$   
 345 :  $P_{48344} = (23, 50, 10, 1)$  lies on line  $\ell_4$   
 346 :  $P_{48407} = (22, 51, 10, 1)$  lies on line  $\ell_4$   
 347 :  $P_{48429} = (44, 51, 10, 1)$  lies on line  $\ell_8$   
 348 :  $P_{48466} = (17, 52, 10, 1)$  lies on line  $\ell_4$   
 349 :  $P_{48470} = (21, 52, 10, 1)$  lies on line  $\ell_8$   
 350 :  $P_{48529} = (16, 53, 10, 1)$  lies on line  $\ell_4$   
 351 :  $P_{48561} = (48, 53, 10, 1)$  lies on line  $\ell_8$   
 352 :  $P_{48596} = (19, 54, 10, 1)$  lies on line  $\ell_4$   
 353 :  $P_{48639} = (62, 54, 10, 1)$  lies on line  $\ell_8$   
 354 :  $P_{48659} = (18, 55, 10, 1)$  lies on line  $\ell_4$   
 355 :  $P_{48668} = (27, 55, 10, 1)$  lies on line  $\ell_8$   
 356 :  $P_{48734} = (29, 56, 10, 1)$  lies on line  $\ell_4$   
 357 :  $P_{48750} = (45, 56, 10, 1)$  lies on line  $\ell_8$   
 358 :  $P_{48777} = (8, 57, 10, 1)$  lies on line  $\ell_8$   
 359 :  $P_{48797} = (28, 57, 10, 1)$  lies on line  $\ell_4$   
 360 :  $P_{48839} = (6, 58, 10, 1)$  lies on line  $\ell_8$   
 361 :  $P_{48864} = (31, 58, 10, 1)$  lies on line  $\ell_4$   
 362 :  $P_{48927} = (30, 59, 10, 1)$  lies on line  $\ell_4$   
 363 :  $P_{48932} = (35, 59, 10, 1)$  lies on line  $\ell_8$   
 364 :  $P_{48986} = (25, 60, 10, 1)$  lies on line  $\ell_4$   
 365 :  $P_{48987} = (26, 60, 10, 1)$  lies on line  $\ell_8$   
 366 :  $P_{49049} = (24, 61, 10, 1)$  lies on line  $\ell_4$   
 367 :  $P_{49088} = (63, 61, 10, 1)$  lies on line  $\ell_8$   
 368 :  $P_{49116} = (27, 62, 10, 1)$  lies on line  $\ell_4$   
 369 :  $P_{49138} = (49, 62, 10, 1)$  lies on line  $\ell_8$   
 370 :  $P_{49173} = (20, 63, 10, 1)$  lies on line  $\ell_8$   
 371 :  $P_{49179} = (26, 63, 10, 1)$  lies on line  $\ell_4$   
 372 :  $P_{49217} = (0, 0, 11, 1)$  lies on line  $\ell_2$   
 373 :  $P_{49868} = (11, 10, 11, 1)$  lies on line  $\ell_{14}$   
 374 :  $P_{49904} = (47, 10, 11, 1)$  lies on line  $\ell_{15}$   
 375 :  $P_{51521} = (0, 36, 11, 1)$  lies on line  $\ell_{11}$   
 376 :  $P_{51567} = (46, 36, 11, 1)$  lies on line  $\ell_{10}$   
 377 :  $P_{53313} = (0, 0, 12, 1)$  lies on line  $\ell_2$   
 378 :  $P_{53458} = (17, 2, 12, 1)$  lies on line  $\ell_{15}$   
 379 :  $P_{53502} = (61, 2, 12, 1)$  lies on line  $\ell_{14}$   
 380 :  $P_{54480} = (15, 18, 12, 1)$  lies on line  $\ell_{11}$   
 381 :  $P_{54488} = (23, 18, 12, 1)$  lies on line  $\ell_{10}$   
 382 :  $P_{55136} = (31, 28, 12, 1)$  lies on line  $\ell_{12}$   
 383 :  $P_{55143} = (38, 28, 12, 1)$  lies on line  $\ell_{13}$   
 384 :  $P_{57409} = (0, 0, 13, 1)$  lies on line  $\ell_2$   
 385 :  $P_{58977} = (32, 24, 13, 1)$  lies on line  $\ell_{11}$   
 386 :  $P_{58995} = (50, 24, 13, 1)$  lies on line  $\ell_{10}$   
 387 :  $P_{60278} = (53, 44, 13, 1)$  lies on line  $\ell_{15}$

388 :  $P_{60280} = (55, 44, 13, 1)$  lies on line  $\ell_{14}$   
 389 :  $P_{61065} = (8, 57, 13, 1)$  lies on line  $\ell_{13}$   
 390 :  $P_{61077} = (20, 57, 13, 1)$  lies on line  $\ell_{12}$   
 391 :  $P_{61505} = (0, 0, 14, 1)$  lies on line  $\ell_2$   
 392 :  $P_{61937} = (48, 6, 14, 1)$  lies on line  $\ell_{11}$   
 393 :  $P_{61949} = (60, 6, 14, 1)$  lies on line  $\ell_{10}$   
 394 :  $P_{65034} = (9, 55, 14, 1)$  lies on line  $\ell_{12}$   
 395 :  $P_{65052} = (27, 55, 14, 1)$  lies on line  $\ell_{13}$   
 396 :  $P_{65578} = (41, 63, 14, 1)$  lies on line  $\ell_{14}$   
 397 :  $P_{65593} = (56, 63, 14, 1)$  lies on line  $\ell_{15}$   
 398 :  $P_{65601} = (0, 0, 15, 1)$  lies on line  $\ell_2$   
 399 :  $P_{66394} = (25, 12, 15, 1)$  lies on line  $\ell_{10}$   
 400 :  $P_{66400} = (31, 12, 15, 1)$  lies on line  $\ell_{11}$   
 401 :  $P_{66717} = (28, 17, 15, 1)$  lies on line  $\ell_{15}$   
 402 :  $P_{66724} = (35, 17, 15, 1)$  lies on line  $\ell_{14}$   
 403 :  $P_{66755} = (2, 18, 15, 1)$  lies on line  $\ell_{12}$   
 404 :  $P_{66806} = (53, 18, 15, 1)$  lies on line  $\ell_{13}$   
 405 :  $P_{69697} = (0, 0, 16, 1)$  lies on line  $\ell_2$   
 406 :  $P_{70258} = (49, 8, 16, 1)$  lies on line  $\ell_{10}$   
 407 :  $P_{70260} = (51, 8, 16, 1)$  lies on line  $\ell_{11}$   
 408 :  $P_{71912} = (39, 34, 16, 1)$  lies on line  $\ell_{14}$   
 409 :  $P_{71916} = (43, 34, 16, 1)$  lies on line  $\ell_{15}$   
 410 :  $P_{73415} = (6, 58, 16, 1)$  lies on line  $\ell_{13}$   
 411 :  $P_{73434} = (25, 58, 16, 1)$  lies on line  $\ell_{12}$   
 412 :  $P_{73793} = (0, 0, 17, 1)$  lies on line  $\ell_2$   
 413 :  $P_{73941} = (20, 2, 17, 1)$  lies on line  $\ell_{10}$   
 414 :  $P_{73949} = (28, 2, 17, 1)$  lies on line  $\ell_{11}$   
 415 :  $P_{74576} = (15, 12, 17, 1)$  lies on line  $\ell_{15}$   
 416 :  $P_{74606} = (45, 12, 17, 1)$  lies on line  $\ell_{14}$   
 417 :  $P_{75795} = (18, 31, 17, 1)$  lies on line  $\ell_{12}$   
 418 :  $P_{75817} = (40, 31, 17, 1)$  lies on line  $\ell_{13}$   
 419 :  $P_{77889} = (0, 0, 18, 1)$  lies on line  $\ell_2$   
 420 :  $P_{78992} = (15, 17, 18, 1)$  lies on line  $\ell_{12}$   
 421 :  $P_{79036} = (59, 17, 18, 1)$  lies on line  $\ell_{13}$   
 422 :  $P_{79693} = (12, 28, 18, 1)$  lies on line  $\ell_{11}$   
 423 :  $P_{79707} = (26, 28, 18, 1)$  lies on line  $\ell_{10}$   
 424 :  $P_{79875} = (2, 31, 18, 1)$  lies on line  $\ell_{15}$   
 425 :  $P_{79924} = (51, 31, 18, 1)$  lies on line  $\ell_{14}$   
 426 :  $P_{81985} = (0, 0, 19, 1)$  lies on line  $\ell_2$   
 427 :  $P_{83428} = (35, 22, 19, 1)$  lies on line  $\ell_{11}$   
 428 :  $P_{83456} = (63, 22, 19, 1)$  lies on line  $\ell_{10}$   
 429 :  $P_{85159} = (38, 49, 19, 1)$  lies on line  $\ell_{15}$   
 430 :  $P_{85178} = (57, 49, 19, 1)$  lies on line  $\ell_{14}$   
 431 :  $P_{85317} = (4, 52, 19, 1)$  lies on line  $\ell_{12}$   
 432 :  $P_{85334} = (21, 52, 19, 1)$  lies on line  $\ell_{13}$   
 433 :  $P_{86081} = (0, 0, 20, 1)$  lies on line  $\ell_2$   
 434 :  $P_{86942} = (29, 13, 20, 1)$  lies on line  $\ell_{13}$   
 435 :  $P_{86966} = (53, 13, 20, 1)$  lies on line  $\ell_{12}$   
 436 :  $P_{88135} = (6, 32, 20, 1)$  lies on line  $\ell_{10}$   
 437 :  $P_{88173} = (44, 32, 20, 1)$  lies on line  $\ell_{11}$   
 438 :  $P_{89744} = (15, 57, 20, 1)$  lies on line  $\ell_{14}$   
 439 :  $P_{89753} = (24, 57, 20, 1)$  lies on line  $\ell_{15}$   
 440 :  $P_{90177} = (0, 0, 21, 1)$  lies on line  $\ell_2$   
 441 :  $P_{91654} = (5, 23, 21, 1)$  lies on line  $\ell_{14}$

442 :  $P_{91709} = (60, 23, 21, 1)$  lies on line  $\ell_{15}$   
 443 :  $P_{92788} = (51, 40, 21, 1)$  lies on line  $\ell_{13}$   
 444 :  $P_{92799} = (62, 40, 21, 1)$  lies on line  $\ell_{12}$   
 445 :  $P_{92868} = (3, 42, 21, 1)$  lies on line  $\ell_{11}$   
 446 :  $P_{92900} = (35, 42, 21, 1)$  lies on line  $\ell_{10}$   
 447 :  $P_{94273} = (0, 0, 22, 1)$  lies on line  $\ell_2$   
 448 :  $P_{94556} = (27, 4, 22, 1)$  lies on line  $\ell_{14}$   
 449 :  $P_{94578} = (49, 4, 22, 1)$  lies on line  $\ell_{15}$   
 450 :  $P_{96737} = (32, 38, 22, 1)$  lies on line  $\ell_{13}$   
 451 :  $P_{96740} = (35, 38, 22, 1)$  lies on line  $\ell_{12}$   
 452 :  $P_{97620} = (19, 52, 22, 1)$  lies on line  $\ell_{11}$   
 453 :  $P_{97646} = (45, 52, 22, 1)$  lies on line  $\ell_{10}$   
 454 :  $P_{98369} = (0, 0, 23, 1)$  lies on line  $\ell_2$   
 455 :  $P_{98575} = (14, 3, 23, 1)$  lies on line  $\ell_{13}$   
 456 :  $P_{98601} = (40, 3, 23, 1)$  lies on line  $\ell_{12}$   
 457 :  $P_{101074} = (17, 42, 23, 1)$  lies on line  $\ell_{14}$   
 458 :  $P_{101078} = (21, 42, 23, 1)$  lies on line  $\ell_{15}$   
 459 :  $P_{102345} = (8, 62, 23, 1)$  lies on line  $\ell_{10}$   
 460 :  $P_{102397} = (60, 62, 23, 1)$  lies on line  $\ell_{11}$   
 461 :  $P_{102465} = (0, 0, 24, 1)$  lies on line  $\ell_2$   
 462 :  $P_{103767} = (22, 20, 24, 1)$  lies on line  $\ell_{14}$   
 463 :  $P_{103789} = (44, 20, 24, 1)$  lies on line  $\ell_{15}$   
 464 :  $P_{105889} = (32, 53, 24, 1)$  lies on line  $\ell_{12}$   
 465 :  $P_{105905} = (48, 53, 24, 1)$  lies on line  $\ell_{13}$   
 466 :  $P_{106126} = (13, 57, 24, 1)$  lies on line  $\ell_{11}$   
 467 :  $P_{106175} = (62, 57, 24, 1)$  lies on line  $\ell_{10}$   
 468 :  $P_{106561} = (0, 0, 25, 1)$  lies on line  $\ell_2$   
 469 :  $P_{107615} = (30, 16, 25, 1)$  lies on line  $\ell_{13}$   
 470 :  $P_{107628} = (43, 16, 25, 1)$  lies on line  $\ell_{12}$   
 471 :  $P_{109852} = (27, 51, 25, 1)$  lies on line  $\ell_{10}$   
 472 :  $P_{109859} = (34, 51, 25, 1)$  lies on line  $\ell_{11}$   
 473 :  $P_{110281} = (8, 58, 25, 1)$  lies on line  $\ell_{15}$   
 474 :  $P_{110301} = (28, 58, 25, 1)$  lies on line  $\ell_{14}$   
 475 :  $P_{110657} = (0, 0, 26, 1)$  lies on line  $\ell_2$   
 476 :  $P_{112590} = (13, 30, 26, 1)$  lies on line  $\ell_{13}$   
 477 :  $P_{112631} = (54, 30, 26, 1)$  lies on line  $\ell_{12}$   
 478 :  $P_{113283} = (2, 41, 26, 1)$  lies on line  $\ell_{14}$   
 479 :  $P_{113286} = (5, 41, 26, 1)$  lies on line  $\ell_{15}$   
 480 :  $P_{113558} = (21, 45, 26, 1)$  lies on line  $\ell_{10}$   
 481 :  $P_{113587} = (50, 45, 26, 1)$  lies on line  $\ell_{11}$   
 482 :  $P_{114753} = (0, 0, 27, 1)$  lies on line  $\ell_2$   
 483 :  $P_{115209} = (8, 7, 27, 1)$  lies on line  $\ell_{14}$   
 484 :  $P_{115234} = (33, 7, 27, 1)$  lies on line  $\ell_{15}$   
 485 :  $P_{117278} = (29, 39, 27, 1)$  lies on line  $\ell_{11}$   
 486 :  $P_{117297} = (48, 39, 27, 1)$  lies on line  $\ell_{10}$   
 487 :  $P_{118564} = (35, 59, 27, 1)$  lies on line  $\ell_{13}$   
 488 :  $P_{118590} = (61, 59, 27, 1)$  lies on line  $\ell_{12}$   
 489 :  $P_{118849} = (0, 0, 28, 1)$  lies on line  $\ell_2$   
 490 :  $P_{118989} = (12, 2, 28, 1)$  lies on line  $\ell_{12}$   
 491 :  $P_{119020} = (43, 2, 28, 1)$  lies on line  $\ell_{13}$   
 492 :  $P_{119840} = (31, 15, 28, 1)$  lies on line  $\ell_{15}$   
 493 :  $P_{119871} = (62, 15, 28, 1)$  lies on line  $\ell_{14}$   
 494 :  $P_{119946} = (9, 17, 28, 1)$  lies on line  $\ell_{10}$   
 495 :  $P_{119955} = (18, 17, 28, 1)$  lies on line  $\ell_{11}$

496 :  $P_{122945} = (0, 0, 29, 1)$  lies on line  $\ell_2$   
 497 :  $P_{124717} = (44, 27, 29, 1)$  lies on line  $\ell_{10}$   
 498 :  $P_{124734} = (61, 27, 29, 1)$  lies on line  $\ell_{11}$   
 499 :  $P_{125109} = (52, 33, 29, 1)$  lies on line  $\ell_{14}$   
 500 :  $P_{125116} = (59, 33, 29, 1)$  lies on line  $\ell_{15}$   
 501 :  $P_{125446} = (5, 39, 29, 1)$  lies on line  $\ell_{13}$   
 502 :  $P_{125448} = (7, 39, 29, 1)$  lies on line  $\ell_{12}$   
 503 :  $P_{127041} = (0, 0, 30, 1)$  lies on line  $\ell_2$   
 504 :  $P_{127395} = (34, 5, 30, 1)$  lies on line  $\ell_{10}$   
 505 :  $P_{127406} = (45, 5, 30, 1)$  lies on line  $\ell_{11}$   
 506 :  $P_{129687} = (22, 41, 30, 1)$  lies on line  $\ell_{13}$   
 507 :  $P_{129691} = (26, 41, 30, 1)$  lies on line  $\ell_{12}$   
 508 :  $P_{130283} = (42, 50, 30, 1)$  lies on line  $\ell_{14}$   
 509 :  $P_{130295} = (54, 50, 30, 1)$  lies on line  $\ell_{15}$   
 510 :  $P_{131137} = (0, 0, 31, 1)$  lies on line  $\ell_2$   
 511 :  $P_{131922} = (17, 12, 31, 1)$  lies on line  $\ell_{12}$   
 512 :  $P_{131961} = (56, 12, 31, 1)$  lies on line  $\ell_{13}$   
 513 :  $P_{132099} = (2, 15, 31, 1)$  lies on line  $\ell_{11}$   
 514 :  $P_{132104} = (7, 15, 31, 1)$  lies on line  $\ell_{10}$   
 515 :  $P_{132947} = (18, 28, 31, 1)$  lies on line  $\ell_{15}$   
 516 :  $P_{132961} = (32, 28, 31, 1)$  lies on line  $\ell_{14}$   
 517 :  $P_{135233} = (0, 0, 32, 1)$  lies on line  $\ell_2$   
 518 :  $P_{136084} = (19, 13, 32, 1)$  lies on line  $\ell_{10}$   
 519 :  $P_{136085} = (20, 13, 32, 1)$  lies on line  $\ell_{11}$   
 520 :  $P_{136786} = (17, 24, 32, 1)$  lies on line  $\ell_{13}$   
 521 :  $P_{136813} = (44, 24, 32, 1)$  lies on line  $\ell_{12}$   
 522 :  $P_{138659} = (34, 53, 32, 1)$  lies on line  $\ell_{14}$   
 523 :  $P_{138682} = (57, 53, 32, 1)$  lies on line  $\ell_{15}$   
 524 :  $P_{139329} = (0, 0, 33, 1)$  lies on line  $\ell_2$   
 525 :  $P_{139831} = (54, 7, 33, 1)$  lies on line  $\ell_{10}$   
 526 :  $P_{139836} = (59, 7, 33, 1)$  lies on line  $\ell_{11}$   
 527 :  $P_{141086} = (29, 27, 33, 1)$  lies on line  $\ell_{15}$   
 528 :  $P_{141097} = (40, 27, 33, 1)$  lies on line  $\ell_{14}$   
 529 :  $P_{143272} = (39, 61, 33, 1)$  lies on line  $\ell_{12}$   
 530 :  $P_{143296} = (63, 61, 33, 1)$  lies on line  $\ell_{13}$   
 531 :  $P_{143425} = (0, 0, 34, 1)$  lies on line  $\ell_2$   
 532 :  $P_{143953} = (16, 8, 34, 1)$  lies on line  $\ell_{15}$   
 533 :  $P_{143991} = (54, 8, 34, 1)$  lies on line  $\ell_{14}$   
 534 :  $P_{145068} = (43, 25, 34, 1)$  lies on line  $\ell_{11}$   
 535 :  $P_{145081} = (56, 25, 34, 1)$  lies on line  $\ell_{10}$   
 536 :  $P_{146733} = (44, 51, 34, 1)$  lies on line  $\ell_{13}$   
 537 :  $P_{146747} = (58, 51, 34, 1)$  lies on line  $\ell_{12}$   
 538 :  $P_{147521} = (0, 0, 35, 1)$  lies on line  $\ell_2$   
 539 :  $P_{148741} = (4, 19, 35, 1)$  lies on line  $\ell_{11}$   
 540 :  $P_{148766} = (29, 19, 35, 1)$  lies on line  $\ell_{10}$   
 541 :  $P_{148931} = (2, 22, 35, 1)$  lies on line  $\ell_{13}$   
 542 :  $P_{148978} = (49, 22, 35, 1)$  lies on line  $\ell_{12}$   
 543 :  $P_{150005} = (52, 38, 35, 1)$  lies on line  $\ell_{15}$   
 544 :  $P_{150013} = (60, 38, 35, 1)$  lies on line  $\ell_{14}$   
 545 :  $P_{151617} = (0, 0, 36, 1)$  lies on line  $\ell_2$   
 546 :  $P_{153996} = (11, 37, 36, 1)$  lies on line  $\ell_{11}$   
 547 :  $P_{154021} = (36, 37, 36, 1)$  lies on line  $\ell_{10}$   
 548 :  $P_{154625} = (0, 47, 36, 1)$  lies on line  $\ell_{12}$   
 549 :  $P_{154635} = (10, 47, 36, 1)$  lies on line  $\ell_{13}$

550 :  $P_{155823} = (46, 1, 37, 1)$  lies on line  $\ell_9$   
 551 :  $P_{155824} = (47, 1, 37, 1)$  lies on line  $\ell_5$   
 552 :  $P_{155885} = (44, 2, 37, 1)$  lies on line  $\ell_5$   
 553 :  $P_{155902} = (61, 2, 37, 1)$  lies on line  $\ell_9$   
 554 :  $P_{155924} = (19, 3, 37, 1)$  lies on line  $\ell_9$   
 555 :  $P_{155950} = (45, 3, 37, 1)$  lies on line  $\ell_5$   
 556 :  $P_{155996} = (27, 4, 37, 1)$  lies on line  $\ell_9$   
 557 :  $P_{156011} = (42, 4, 37, 1)$  lies on line  $\ell_5$   
 558 :  $P_{156076} = (43, 5, 37, 1)$  lies on line  $\ell_5$   
 559 :  $P_{156086} = (53, 5, 37, 1)$  lies on line  $\ell_9$   
 560 :  $P_{156135} = (38, 6, 37, 1)$  lies on line  $\ell_9$   
 561 :  $P_{156137} = (40, 6, 37, 1)$  lies on line  $\ell_5$   
 562 :  $P_{156169} = (8, 7, 37, 1)$  lies on line  $\ell_9$   
 563 :  $P_{156202} = (41, 7, 37, 1)$  lies on line  $\ell_5$   
 564 :  $P_{156263} = (38, 8, 37, 1)$  lies on line  $\ell_5$   
 565 :  $P_{156279} = (54, 8, 37, 1)$  lies on line  $\ell_9$   
 566 :  $P_{156313} = (24, 9, 37, 1)$  lies on line  $\ell_9$   
 567 :  $P_{156328} = (39, 9, 37, 1)$  lies on line  $\ell_5$   
 568 :  $P_{156515} = (34, 12, 37, 1)$  lies on line  $\ell_5$   
 569 :  $P_{156526} = (45, 12, 37, 1)$  lies on line  $\ell_9$   
 570 :  $P_{156548} = (3, 13, 37, 1)$  lies on line  $\ell_9$   
 571 :  $P_{156580} = (35, 13, 37, 1)$  lies on line  $\ell_5$   
 572 :  $P_{156625} = (16, 14, 37, 1)$  lies on line  $\ell_9$   
 573 :  $P_{156641} = (32, 14, 37, 1)$  lies on line  $\ell_5$   
 574 :  $P_{156706} = (33, 15, 37, 1)$  lies on line  $\ell_5$   
 575 :  $P_{156735} = (62, 15, 37, 1)$  lies on line  $\ell_9$   
 576 :  $P_{156750} = (13, 16, 37, 1)$  lies on line  $\ell_9$   
 577 :  $P_{156799} = (62, 16, 37, 1)$  lies on line  $\ell_5$   
 578 :  $P_{156836} = (35, 17, 37, 1)$  lies on line  $\ell_9$   
 579 :  $P_{156864} = (63, 17, 37, 1)$  lies on line  $\ell_5$   
 580 :  $P_{156913} = (48, 18, 37, 1)$  lies on line  $\ell_9$   
 581 :  $P_{156925} = (60, 18, 37, 1)$  lies on line  $\ell_5$   
 582 :  $P_{156959} = (30, 19, 37, 1)$  lies on line  $\ell_9$   
 583 :  $P_{156990} = (61, 19, 37, 1)$  lies on line  $\ell_5$   
 584 :  $P_{157015} = (22, 20, 37, 1)$  lies on line  $\ell_9$   
 585 :  $P_{157051} = (58, 20, 37, 1)$  lies on line  $\ell_5$   
 586 :  $P_{157113} = (56, 21, 37, 1)$  lies on line  $\ell_9$   
 587 :  $P_{157116} = (59, 21, 37, 1)$  lies on line  $\ell_5$   
 588 :  $P_{157164} = (43, 22, 37, 1)$  lies on line  $\ell_9$   
 589 :  $P_{157177} = (56, 22, 37, 1)$  lies on line  $\ell_5$   
 590 :  $P_{157190} = (5, 23, 37, 1)$  lies on line  $\ell_9$   
 591 :  $P_{157242} = (57, 23, 37, 1)$  lies on line  $\ell_5$   
 592 :  $P_{157303} = (54, 24, 37, 1)$  lies on line  $\ell_5$   
 593 :  $P_{157308} = (59, 24, 37, 1)$  lies on line  $\ell_9$   
 594 :  $P_{157334} = (21, 25, 37, 1)$  lies on line  $\ell_9$   
 595 :  $P_{157368} = (55, 25, 37, 1)$  lies on line  $\ell_5$   
 596 :  $P_{157383} = (6, 26, 37, 1)$  lies on line  $\ell_9$   
 597 :  $P_{157429} = (52, 26, 37, 1)$  lies on line  $\ell_5$   
 598 :  $P_{157481} = (40, 27, 37, 1)$  lies on line  $\ell_9$   
 599 :  $P_{157494} = (53, 27, 37, 1)$  lies on line  $\ell_5$   
 600 :  $P_{157537} = (32, 28, 37, 1)$  lies on line  $\ell_9$   
 601 :  $P_{157555} = (50, 28, 37, 1)$  lies on line  $\ell_5$   
 602 :  $P_{157583} = (14, 29, 37, 1)$  lies on line  $\ell_9$   
 603 :  $P_{157620} = (51, 29, 37, 1)$  lies on line  $\ell_5$



604 :  $P_{157662} = (29, 30, 37, 1)$  lies on line  $\ell_9$   
 605 :  $P_{157681} = (48, 30, 37, 1)$  lies on line  $\ell_5$   
 606 :  $P_{157746} = (49, 31, 37, 1)$  lies on line  $\ell_5$   
 607 :  $P_{157748} = (51, 31, 37, 1)$  lies on line  $\ell_9$   
 608 :  $P_{157775} = (14, 32, 37, 1)$  lies on line  $\ell_5$   
 609 :  $P_{157787} = (26, 32, 37, 1)$  lies on line  $\ell_9$   
 610 :  $P_{157840} = (15, 33, 37, 1)$  lies on line  $\ell_5$   
 611 :  $P_{157877} = (52, 33, 37, 1)$  lies on line  $\ell_9$   
 612 :  $P_{157901} = (12, 34, 37, 1)$  lies on line  $\ell_5$   
 613 :  $P_{157928} = (39, 34, 37, 1)$  lies on line  $\ell_9$   
 614 :  $P_{157962} = (9, 35, 37, 1)$  lies on line  $\ell_9$   
 615 :  $P_{157966} = (13, 35, 37, 1)$  lies on line  $\ell_5$   
 616 :  $P_{158018} = (1, 36, 37, 1)$  lies on line  $\ell_9$   
 617 :  $P_{158027} = (10, 36, 37, 1)$  lies on line  $\ell_5$   
 618 :  $P_{158092} = (11, 37, 37, 1)$  lies on line  $\ell_5$   
 619 :  $P_{158128} = (47, 37, 37, 1)$  lies on line  $\ell_9$   
 620 :  $P_{158153} = (8, 38, 37, 1)$  lies on line  $\ell_5$   
 621 :  $P_{158205} = (60, 38, 37, 1)$  lies on line  $\ell_9$   
 622 :  $P_{158218} = (9, 39, 37, 1)$  lies on line  $\ell_5$   
 623 :  $P_{158227} = (18, 39, 37, 1)$  lies on line  $\ell_9$   
 624 :  $P_{158279} = (6, 40, 37, 1)$  lies on line  $\ell_5$   
 625 :  $P_{158317} = (44, 40, 37, 1)$  lies on line  $\ell_9$   
 626 :  $P_{158339} = (2, 41, 37, 1)$  lies on line  $\ell_9$   
 627 :  $P_{158344} = (7, 41, 37, 1)$  lies on line  $\ell_5$   
 628 :  $P_{158405} = (4, 42, 37, 1)$  lies on line  $\ell_5$   
 629 :  $P_{158418} = (17, 42, 37, 1)$  lies on line  $\ell_9$   
 630 :  $P_{158470} = (5, 43, 37, 1)$  lies on line  $\ell_5$   
 631 :  $P_{158528} = (63, 43, 37, 1)$  lies on line  $\ell_9$   
 632 :  $P_{158531} = (2, 44, 37, 1)$  lies on line  $\ell_5$   
 633 :  $P_{158584} = (55, 44, 37, 1)$  lies on line  $\ell_9$   
 634 :  $P_{158596} = (3, 45, 37, 1)$  lies on line  $\ell_5$   
 635 :  $P_{158618} = (25, 45, 37, 1)$  lies on line  $\ell_9$   
 636 :  $P_{158657} = (0, 46, 37, 1)$  lies on line  $\ell_5$   
 637 :  $P_{158667} = (10, 46, 37, 1)$  lies on line  $\ell_9$   
 638 :  $P_{158808} = (23, 48, 37, 1)$  lies on line  $\ell_9$   
 639 :  $P_{158815} = (30, 48, 37, 1)$  lies on line  $\ell_5$   
 640 :  $P_{158880} = (31, 49, 37, 1)$  lies on line  $\ell_5$   
 641 :  $P_{158906} = (57, 49, 37, 1)$  lies on line  $\ell_9$   
 642 :  $P_{158941} = (28, 50, 37, 1)$  lies on line  $\ell_5$   
 643 :  $P_{158955} = (42, 50, 37, 1)$  lies on line  $\ell_9$   
 644 :  $P_{158981} = (4, 51, 37, 1)$  lies on line  $\ell_9$   
 645 :  $P_{159006} = (29, 51, 37, 1)$  lies on line  $\ell_5$   
 646 :  $P_{159053} = (12, 52, 37, 1)$  lies on line  $\ell_9$   
 647 :  $P_{159067} = (26, 52, 37, 1)$  lies on line  $\ell_5$   
 648 :  $P_{159132} = (27, 53, 37, 1)$  lies on line  $\ell_5$   
 649 :  $P_{159139} = (34, 53, 37, 1)$  lies on line  $\ell_9$   
 650 :  $P_{159193} = (24, 54, 37, 1)$  lies on line  $\ell_5$   
 651 :  $P_{159218} = (49, 54, 37, 1)$  lies on line  $\ell_9$   
 652 :  $P_{159258} = (25, 55, 37, 1)$  lies on line  $\ell_5$   
 653 :  $P_{159264} = (31, 55, 37, 1)$  lies on line  $\ell_9$   
 654 :  $P_{159319} = (22, 56, 37, 1)$  lies on line  $\ell_5$   
 655 :  $P_{159330} = (33, 56, 37, 1)$  lies on line  $\ell_9$   
 656 :  $P_{159376} = (15, 57, 37, 1)$  lies on line  $\ell_9$   
 657 :  $P_{159384} = (23, 57, 37, 1)$  lies on line  $\ell_5$

658 :  $P_{159445} = (20, 58, 37, 1)$  lies on line  $\ell_5$   
 659 :  $P_{159453} = (28, 58, 37, 1)$  lies on line  $\ell_9$   
 660 :  $P_{159510} = (21, 59, 37, 1)$  lies on line  $\ell_5$   
 661 :  $P_{159539} = (50, 59, 37, 1)$  lies on line  $\ell_9$   
 662 :  $P_{159571} = (18, 60, 37, 1)$  lies on line  $\ell_5$   
 663 :  $P_{159611} = (58, 60, 37, 1)$  lies on line  $\ell_9$   
 664 :  $P_{159636} = (19, 61, 37, 1)$  lies on line  $\ell_5$   
 665 :  $P_{159637} = (20, 61, 37, 1)$  lies on line  $\ell_9$   
 666 :  $P_{159688} = (7, 62, 37, 1)$  lies on line  $\ell_9$   
 667 :  $P_{159697} = (16, 62, 37, 1)$  lies on line  $\ell_5$   
 668 :  $P_{159762} = (17, 63, 37, 1)$  lies on line  $\ell_5$   
 669 :  $P_{159786} = (41, 63, 37, 1)$  lies on line  $\ell_9$   
 670 :  $P_{159809} = (0, 0, 38, 1)$  lies on line  $\ell_2$   
 671 :  $P_{160087} = (22, 4, 38, 1)$  lies on line  $\ell_{12}$   
 672 :  $P_{160120} = (55, 4, 38, 1)$  lies on line  $\ell_{13}$   
 673 :  $P_{161055} = (30, 19, 38, 1)$  lies on line  $\ell_{14}$   
 674 :  $P_{161060} = (35, 19, 38, 1)$  lies on line  $\ell_{15}$   
 675 :  $P_{162960} = (15, 49, 38, 1)$  lies on line  $\ell_{10}$   
 676 :  $P_{162997} = (52, 49, 38, 1)$  lies on line  $\ell_{11}$   
 677 :  $P_{163905} = (0, 0, 39, 1)$  lies on line  $\ell_2$   
 678 :  $P_{166042} = (25, 33, 39, 1)$  lies on line  $\ell_{13}$   
 679 :  $P_{166046} = (29, 33, 39, 1)$  lies on line  $\ell_{12}$   
 680 :  $P_{167708} = (27, 59, 39, 1)$  lies on line  $\ell_{11}$   
 681 :  $P_{167723} = (42, 59, 39, 1)$  lies on line  $\ell_{10}$   
 682 :  $P_{167816} = (7, 61, 39, 1)$  lies on line  $\ell_{15}$   
 683 :  $P_{167829} = (20, 61, 39, 1)$  lies on line  $\ell_{14}$   
 684 :  $P_{168001} = (0, 0, 40, 1)$  lies on line  $\ell_2$   
 685 :  $P_{168212} = (19, 3, 40, 1)$  lies on line  $\ell_{14}$   
 686 :  $P_{168255} = (62, 3, 40, 1)$  lies on line  $\ell_{15}$   
 687 :  $P_{169494} = (21, 23, 40, 1)$  lies on line  $\ell_{12}$   
 688 :  $P_{169512} = (39, 23, 40, 1)$  lies on line  $\ell_{13}$   
 689 :  $P_{171869} = (28, 60, 40, 1)$  lies on line  $\ell_{10}$   
 690 :  $P_{171883} = (42, 60, 40, 1)$  lies on line  $\ell_{11}$   
 691 :  $P_{172097} = (0, 0, 41, 1)$  lies on line  $\ell_2$   
 692 :  $P_{175002} = (25, 45, 41, 1)$  lies on line  $\ell_{14}$   
 693 :  $P_{175003} = (26, 45, 41, 1)$  lies on line  $\ell_{15}$   
 694 :  $P_{175306} = (9, 50, 41, 1)$  lies on line  $\ell_{13}$   
 695 :  $P_{175327} = (30, 50, 41, 1)$  lies on line  $\ell_{12}$   
 696 :  $P_{175558} = (5, 54, 41, 1)$  lies on line  $\ell_{11}$   
 697 :  $P_{175610} = (57, 54, 41, 1)$  lies on line  $\ell_{10}$   
 698 :  $P_{176193} = (0, 0, 42, 1)$  lies on line  $\ell_2$   
 699 :  $P_{178774} = (21, 40, 42, 1)$  lies on line  $\ell_{11}$   
 700 :  $P_{178808} = (55, 40, 42, 1)$  lies on line  $\ell_{10}$   
 701 :  $P_{180036} = (3, 60, 42, 1)$  lies on line  $\ell_{12}$   
 702 :  $P_{180059} = (26, 60, 42, 1)$  lies on line  $\ell_{13}$   
 703 :  $P_{180168} = (7, 62, 42, 1)$  lies on line  $\ell_{14}$   
 704 :  $P_{180184} = (23, 62, 42, 1)$  lies on line  $\ell_{15}$   
 705 :  $P_{180289} = (0, 0, 43, 1)$  lies on line  $\ell_2$   
 706 :  $P_{181326} = (13, 16, 43, 1)$  lies on line  $\ell_{14}$   
 707 :  $P_{181364} = (51, 16, 43, 1)$  lies on line  $\ell_{15}$   
 708 :  $P_{181897} = (8, 25, 43, 1)$  lies on line  $\ell_{12}$   
 709 :  $P_{181941} = (52, 25, 43, 1)$  lies on line  $\ell_{13}$   
 710 :  $P_{182483} = (18, 34, 43, 1)$  lies on line  $\ell_{10}$   
 711 :  $P_{182523} = (58, 34, 43, 1)$  lies on line  $\ell_{11}$

712 :  $P_{184385} = (0, 0, 44, 1)$  lies on line  $\ell_2$   
 713 :  $P_{185708} = (43, 20, 44, 1)$  lies on line  $\ell_{10}$   
 714 :  $P_{185718} = (53, 20, 44, 1)$  lies on line  $\ell_{11}$   
 715 :  $P_{185934} = (13, 24, 44, 1)$  lies on line  $\ell_{15}$   
 716 :  $P_{185980} = (59, 24, 44, 1)$  lies on line  $\ell_{14}$   
 717 :  $P_{186490} = (57, 32, 44, 1)$  lies on line  $\ell_{12}$   
 718 :  $P_{186493} = (60, 32, 44, 1)$  lies on line  $\ell_{13}$   
 719 :  $P_{188481} = (0, 0, 45, 1)$  lies on line  $\ell_2$   
 720 :  $P_{188819} = (18, 5, 45, 1)$  lies on line  $\ell_{13}$   
 721 :  $P_{188851} = (50, 5, 45, 1)$  lies on line  $\ell_{12}$   
 722 :  $P_{190415} = (14, 30, 45, 1)$  lies on line  $\ell_{10}$   
 723 :  $P_{190427} = (26, 30, 45, 1)$  lies on line  $\ell_{11}$   
 724 :  $P_{191978} = (41, 54, 45, 1)$  lies on line  $\ell_{15}$   
 725 :  $P_{191986} = (49, 54, 45, 1)$  lies on line  $\ell_{14}$   
 726 :  $P_{192651} = (10, 1, 46, 1)$  lies on line  $\ell_7$   
 727 :  $P_{192652} = (11, 1, 46, 1)$  lies on line  $\ell_6$   
 728 :  $P_{192713} = (8, 2, 46, 1)$  lies on line  $\ell_6$   
 729 :  $P_{192725} = (20, 2, 46, 1)$  lies on line  $\ell_7$   
 730 :  $P_{192778} = (9, 3, 46, 1)$  lies on line  $\ell_6$   
 731 :  $P_{192799} = (30, 3, 46, 1)$  lies on line  $\ell_7$   
 732 :  $P_{192847} = (14, 4, 46, 1)$  lies on line  $\ell_6$   
 733 :  $P_{192873} = (40, 4, 46, 1)$  lies on line  $\ell_7$   
 734 :  $P_{192912} = (15, 5, 46, 1)$  lies on line  $\ell_6$   
 735 :  $P_{192931} = (34, 5, 46, 1)$  lies on line  $\ell_7$   
 736 :  $P_{192973} = (12, 6, 46, 1)$  lies on line  $\ell_6$   
 737 :  $P_{193021} = (60, 6, 46, 1)$  lies on line  $\ell_7$   
 738 :  $P_{193038} = (13, 7, 46, 1)$  lies on line  $\ell_6$   
 739 :  $P_{193079} = (54, 7, 46, 1)$  lies on line  $\ell_7$   
 740 :  $P_{193091} = (2, 8, 46, 1)$  lies on line  $\ell_6$   
 741 :  $P_{193138} = (49, 8, 46, 1)$  lies on line  $\ell_7$   
 742 :  $P_{193156} = (3, 9, 46, 1)$  lies on line  $\ell_6$   
 743 :  $P_{193212} = (59, 9, 46, 1)$  lies on line  $\ell_7$   
 744 :  $P_{193217} = (0, 10, 46, 1)$  lies on line  $\ell_6$   
 745 :  $P_{193254} = (37, 10, 46, 1)$  lies on line  $\ell_7$   
 746 :  $P_{193351} = (6, 12, 46, 1)$  lies on line  $\ell_6$   
 747 :  $P_{193370} = (25, 12, 46, 1)$  lies on line  $\ell_7$   
 748 :  $P_{193416} = (7, 13, 46, 1)$  lies on line  $\ell_6$   
 749 :  $P_{193428} = (19, 13, 46, 1)$  lies on line  $\ell_7$   
 750 :  $P_{193477} = (4, 14, 46, 1)$  lies on line  $\ell_6$   
 751 :  $P_{193486} = (13, 14, 46, 1)$  lies on line  $\ell_7$   
 752 :  $P_{193542} = (5, 15, 46, 1)$  lies on line  $\ell_6$   
 753 :  $P_{193544} = (7, 15, 46, 1)$  lies on line  $\ell_7$   
 754 :  $P_{193604} = (3, 16, 46, 1)$  lies on line  $\ell_7$   
 755 :  $P_{193627} = (26, 16, 46, 1)$  lies on line  $\ell_6$   
 756 :  $P_{193674} = (9, 17, 46, 1)$  lies on line  $\ell_7$   
 757 :  $P_{193692} = (27, 17, 46, 1)$  lies on line  $\ell_6$   
 758 :  $P_{193752} = (23, 18, 46, 1)$  lies on line  $\ell_7$   
 759 :  $P_{193753} = (24, 18, 46, 1)$  lies on line  $\ell_6$   
 760 :  $P_{193818} = (25, 19, 46, 1)$  lies on line  $\ell_6$   
 761 :  $P_{193822} = (29, 19, 46, 1)$  lies on line  $\ell_7$   
 762 :  $P_{193887} = (30, 20, 46, 1)$  lies on line  $\ell_6$   
 763 :  $P_{193900} = (43, 20, 46, 1)$  lies on line  $\ell_7$   
 764 :  $P_{193952} = (31, 21, 46, 1)$  lies on line  $\ell_6$   
 765 :  $P_{193954} = (33, 21, 46, 1)$  lies on line  $\ell_7$

766 :  $P_{194013} = (28, 22, 46, 1)$  lies on line  $\ell_6$   
 767 :  $P_{194048} = (63, 22, 46, 1)$  lies on line  $\ell_7$   
 768 :  $P_{194078} = (29, 23, 46, 1)$  lies on line  $\ell_6$   
 769 :  $P_{194102} = (53, 23, 46, 1)$  lies on line  $\ell_7$   
 770 :  $P_{194131} = (18, 24, 46, 1)$  lies on line  $\ell_6$   
 771 :  $P_{194163} = (50, 24, 46, 1)$  lies on line  $\ell_7$   
 772 :  $P_{194196} = (19, 25, 46, 1)$  lies on line  $\ell_6$   
 773 :  $P_{194233} = (56, 25, 46, 1)$  lies on line  $\ell_7$   
 774 :  $P_{194257} = (16, 26, 46, 1)$  lies on line  $\ell_6$   
 775 :  $P_{194279} = (38, 26, 46, 1)$  lies on line  $\ell_7$   
 776 :  $P_{194322} = (17, 27, 46, 1)$  lies on line  $\ell_6$   
 777 :  $P_{194349} = (44, 27, 46, 1)$  lies on line  $\ell_7$   
 778 :  $P_{194391} = (22, 28, 46, 1)$  lies on line  $\ell_6$   
 779 :  $P_{194395} = (26, 28, 46, 1)$  lies on line  $\ell_7$   
 780 :  $P_{194449} = (16, 29, 46, 1)$  lies on line  $\ell_7$   
 781 :  $P_{194456} = (23, 29, 46, 1)$  lies on line  $\ell_6$   
 782 :  $P_{194511} = (14, 30, 46, 1)$  lies on line  $\ell_7$   
 783 :  $P_{194517} = (20, 30, 46, 1)$  lies on line  $\ell_6$   
 784 :  $P_{194565} = (4, 31, 46, 1)$  lies on line  $\ell_7$   
 785 :  $P_{194582} = (21, 31, 46, 1)$  lies on line  $\ell_6$   
 786 :  $P_{194631} = (6, 32, 46, 1)$  lies on line  $\ell_7$   
 787 :  $P_{194667} = (42, 32, 46, 1)$  lies on line  $\ell_6$   
 788 :  $P_{194701} = (12, 33, 46, 1)$  lies on line  $\ell_7$   
 789 :  $P_{194732} = (43, 33, 46, 1)$  lies on line  $\ell_6$   
 790 :  $P_{194771} = (18, 34, 46, 1)$  lies on line  $\ell_7$   
 791 :  $P_{194793} = (40, 34, 46, 1)$  lies on line  $\ell_6$   
 792 :  $P_{194841} = (24, 35, 46, 1)$  lies on line  $\ell_7$   
 793 :  $P_{194858} = (41, 35, 46, 1)$  lies on line  $\ell_6$   
 794 :  $P_{195053} = (44, 38, 46, 1)$  lies on line  $\ell_6$   
 795 :  $P_{195067} = (58, 38, 46, 1)$  lies on line  $\ell_7$   
 796 :  $P_{195118} = (45, 39, 46, 1)$  lies on line  $\ell_6$   
 797 :  $P_{195121} = (48, 39, 46, 1)$  lies on line  $\ell_7$   
 798 :  $P_{195171} = (34, 40, 46, 1)$  lies on line  $\ell_6$   
 799 :  $P_{195192} = (55, 40, 46, 1)$  lies on line  $\ell_7$   
 800 :  $P_{195236} = (35, 41, 46, 1)$  lies on line  $\ell_6$   
 801 :  $P_{195262} = (61, 41, 46, 1)$  lies on line  $\ell_7$   
 802 :  $P_{195297} = (32, 42, 46, 1)$  lies on line  $\ell_6$   
 803 :  $P_{195300} = (35, 42, 46, 1)$  lies on line  $\ell_7$   
 804 :  $P_{195362} = (33, 43, 46, 1)$  lies on line  $\ell_6$   
 805 :  $P_{195370} = (41, 43, 46, 1)$  lies on line  $\ell_7$   
 806 :  $P_{195424} = (31, 44, 46, 1)$  lies on line  $\ell_7$   
 807 :  $P_{195431} = (38, 44, 46, 1)$  lies on line  $\ell_6$   
 808 :  $P_{195478} = (21, 45, 46, 1)$  lies on line  $\ell_7$   
 809 :  $P_{195496} = (39, 45, 46, 1)$  lies on line  $\ell_6$   
 810 :  $P_{195532} = (11, 46, 46, 1)$  lies on line  $\ell_7$   
 811 :  $P_{195557} = (36, 46, 46, 1)$  lies on line  $\ell_6$   
 812 :  $P_{195586} = (1, 47, 46, 1)$  lies on line  $\ell_7$   
 813 :  $P_{195622} = (37, 47, 46, 1)$  lies on line  $\ell_6$   
 814 :  $P_{195654} = (5, 48, 46, 1)$  lies on line  $\ell_7$   
 815 :  $P_{195707} = (58, 48, 46, 1)$  lies on line  $\ell_6$   
 816 :  $P_{195728} = (15, 49, 46, 1)$  lies on line  $\ell_7$   
 817 :  $P_{195772} = (59, 49, 46, 1)$  lies on line  $\ell_6$   
 818 :  $P_{195794} = (17, 50, 46, 1)$  lies on line  $\ell_7$   
 819 :  $P_{195833} = (56, 50, 46, 1)$  lies on line  $\ell_6$

820 :  $P_{195868} = (27, 51, 46, 1)$  lies on line  $\ell_7$   
 821 :  $P_{195898} = (57, 51, 46, 1)$  lies on line  $\ell_6$   
 822 :  $P_{195950} = (45, 52, 46, 1)$  lies on line  $\ell_7$   
 823 :  $P_{195967} = (62, 52, 46, 1)$  lies on line  $\ell_6$   
 824 :  $P_{196008} = (39, 53, 46, 1)$  lies on line  $\ell_7$   
 825 :  $P_{196032} = (63, 53, 46, 1)$  lies on line  $\ell_6$   
 826 :  $P_{196090} = (57, 54, 46, 1)$  lies on line  $\ell_7$   
 827 :  $P_{196093} = (60, 54, 46, 1)$  lies on line  $\ell_6$   
 828 :  $P_{196148} = (51, 55, 46, 1)$  lies on line  $\ell_7$   
 829 :  $P_{196158} = (61, 55, 46, 1)$  lies on line  $\ell_6$   
 830 :  $P_{196211} = (50, 56, 46, 1)$  lies on line  $\ell_6$   
 831 :  $P_{196213} = (52, 56, 46, 1)$  lies on line  $\ell_7$   
 832 :  $P_{196276} = (51, 57, 46, 1)$  lies on line  $\ell_6$   
 833 :  $P_{196287} = (62, 57, 46, 1)$  lies on line  $\ell_7$   
 834 :  $P_{196321} = (32, 58, 46, 1)$  lies on line  $\ell_7$   
 835 :  $P_{196337} = (48, 58, 46, 1)$  lies on line  $\ell_6$   
 836 :  $P_{196395} = (42, 59, 46, 1)$  lies on line  $\ell_7$   
 837 :  $P_{196402} = (49, 59, 46, 1)$  lies on line  $\ell_6$   
 838 :  $P_{196445} = (28, 60, 46, 1)$  lies on line  $\ell_7$   
 839 :  $P_{196471} = (54, 60, 46, 1)$  lies on line  $\ell_6$   
 840 :  $P_{196503} = (22, 61, 46, 1)$  lies on line  $\ell_7$   
 841 :  $P_{196536} = (55, 61, 46, 1)$  lies on line  $\ell_6$   
 842 :  $P_{196553} = (8, 62, 46, 1)$  lies on line  $\ell_7$   
 843 :  $P_{196597} = (52, 62, 46, 1)$  lies on line  $\ell_6$   
 844 :  $P_{196611} = (2, 63, 46, 1)$  lies on line  $\ell_7$   
 845 :  $P_{196662} = (53, 63, 46, 1)$  lies on line  $\ell_6$   
 846 :  $P_{196673} = (0, 0, 47, 1)$  lies on line  $\ell_2$   
 847 :  $P_{197377} = (0, 11, 47, 1)$  lies on line  $\ell_{15}$   
 848 :  $P_{197414} = (37, 11, 47, 1)$  lies on line  $\ell_{14}$   
 849 :  $P_{199653} = (36, 46, 47, 1)$  lies on line  $\ell_{12}$   
 850 :  $P_{199664} = (47, 46, 47, 1)$  lies on line  $\ell_{13}$   
 851 :  $P_{200769} = (0, 0, 48, 1)$  lies on line  $\ell_2$   
 852 :  $P_{201181} = (28, 6, 48, 1)$  lies on line  $\ell_{13}$   
 853 :  $P_{201216} = (63, 6, 48, 1)$  lies on line  $\ell_{12}$   
 854 :  $P_{201674} = (9, 14, 48, 1)$  lies on line  $\ell_{11}$   
 855 :  $P_{201678} = (13, 14, 48, 1)$  lies on line  $\ell_{10}$   
 856 :  $P_{204386} = (33, 56, 48, 1)$  lies on line  $\ell_{14}$   
 857 :  $P_{204408} = (55, 56, 48, 1)$  lies on line  $\ell_{15}$   
 858 :  $P_{204865} = (0, 0, 49, 1)$  lies on line  $\ell_2$   
 859 :  $P_{205159} = (38, 4, 49, 1)$  lies on line  $\ell_{11}$   
 860 :  $P_{205161} = (40, 4, 49, 1)$  lies on line  $\ell_{10}$   
 861 :  $P_{206292} = (19, 22, 49, 1)$  lies on line  $\ell_{15}$   
 862 :  $P_{206316} = (43, 22, 49, 1)$  lies on line  $\ell_{14}$   
 863 :  $P_{207155} = (50, 35, 49, 1)$  lies on line  $\ell_{13}$   
 864 :  $P_{207157} = (52, 35, 49, 1)$  lies on line  $\ell_{12}$   
 865 :  $P_{208961} = (0, 0, 50, 1)$  lies on line  $\ell_2$   
 866 :  $P_{209311} = (30, 5, 50, 1)$  lies on line  $\ell_{15}$   
 867 :  $P_{209334} = (53, 5, 50, 1)$  lies on line  $\ell_{14}$   
 868 :  $P_{210663} = (38, 26, 50, 1)$  lies on line  $\ell_{10}$   
 869 :  $P_{210679} = (54, 26, 50, 1)$  lies on line  $\ell_{11}$   
 870 :  $P_{211874} = (33, 45, 50, 1)$  lies on line  $\ell_{13}$   
 871 :  $P_{211882} = (41, 45, 50, 1)$  lies on line  $\ell_{12}$   
 872 :  $P_{213057} = (0, 0, 51, 1)$  lies on line  $\ell_2$   
 873 :  $P_{213584} = (15, 8, 51, 1)$  lies on line  $\ell_{13}$

874 :  $P_{213603} = (34, 8, 51, 1)$  lies on line  $\ell_{12}$   
 875 :  $P_{214084} = (3, 16, 51, 1)$  lies on line  $\ell_{10}$   
 876 :  $P_{214106} = (25, 16, 51, 1)$  lies on line  $\ell_{11}$   
 877 :  $P_{215867} = (58, 43, 51, 1)$  lies on line  $\ell_{15}$   
 878 :  $P_{215872} = (63, 43, 51, 1)$  lies on line  $\ell_{14}$   
 879 :  $P_{217153} = (0, 0, 52, 1)$  lies on line  $\ell_2$   
 880 :  $P_{219397} = (4, 35, 52, 1)$  lies on line  $\ell_{15}$   
 881 :  $P_{219402} = (9, 35, 52, 1)$  lies on line  $\ell_{14}$   
 882 :  $P_{219607} = (22, 38, 52, 1)$  lies on line  $\ell_{11}$   
 883 :  $P_{219643} = (58, 38, 52, 1)$  lies on line  $\ell_{10}$   
 884 :  $P_{220296} = (7, 49, 52, 1)$  lies on line  $\ell_{13}$   
 885 :  $P_{220308} = (19, 49, 52, 1)$  lies on line  $\ell_{12}$   
 886 :  $P_{221249} = (0, 0, 53, 1)$  lies on line  $\ell_2$   
 887 :  $P_{222084} = (3, 13, 53, 1)$  lies on line  $\ell_{14}$   
 888 :  $P_{222113} = (32, 13, 53, 1)$  lies on line  $\ell_{15}$   
 889 :  $P_{222553} = (24, 20, 53, 1)$  lies on line  $\ell_{12}$   
 890 :  $P_{222570} = (41, 20, 53, 1)$  lies on line  $\ell_{13}$   
 891 :  $P_{224096} = (31, 44, 53, 1)$  lies on line  $\ell_{10}$   
 892 :  $P_{224122} = (57, 44, 53, 1)$  lies on line  $\ell_{11}$   
 893 :  $P_{225345} = (0, 0, 54, 1)$  lies on line  $\ell_2$   
 894 :  $P_{227014} = (5, 26, 54, 1)$  lies on line  $\ell_{12}$   
 895 :  $P_{227067} = (58, 26, 54, 1)$  lies on line  $\ell_{13}$   
 896 :  $P_{227294} = (29, 30, 54, 1)$  lies on line  $\ell_{14}$   
 897 :  $P_{227310} = (45, 30, 54, 1)$  lies on line  $\ell_{15}$   
 898 :  $P_{228562} = (17, 50, 54, 1)$  lies on line  $\ell_{10}$   
 899 :  $P_{228586} = (41, 50, 54, 1)$  lies on line  $\ell_{11}$   
 900 :  $P_{229441} = (0, 0, 55, 1)$  lies on line  $\ell_2$   
 901 :  $P_{232522} = (9, 48, 55, 1)$  lies on line  $\ell_{15}$   
 902 :  $P_{232536} = (23, 48, 55, 1)$  lies on line  $\ell_{14}$   
 903 :  $P_{233031} = (6, 56, 55, 1)$  lies on line  $\ell_{11}$   
 904 :  $P_{233077} = (52, 56, 55, 1)$  lies on line  $\ell_{10}$   
 905 :  $P_{233487} = (14, 63, 55, 1)$  lies on line  $\ell_{12}$   
 906 :  $P_{233493} = (20, 63, 55, 1)$  lies on line  $\ell_{13}$   
 907 :  $P_{233537} = (0, 0, 56, 1)$  lies on line  $\ell_2$   
 908 :  $P_{234119} = (6, 9, 56, 1)$  lies on line  $\ell_{12}$   
 909 :  $P_{234155} = (42, 9, 56, 1)$  lies on line  $\ell_{13}$   
 910 :  $P_{234449} = (16, 14, 56, 1)$  lies on line  $\ell_{14}$   
 911 :  $P_{234481} = (48, 14, 56, 1)$  lies on line  $\ell_{15}$   
 912 :  $P_{237571} = (2, 63, 56, 1)$  lies on line  $\ell_{10}$   
 913 :  $P_{237624} = (55, 63, 56, 1)$  lies on line  $\ell_{11}$   
 914 :  $P_{237633} = (0, 0, 57, 1)$  lies on line  $\ell_2$   
 915 :  $P_{239701} = (20, 32, 57, 1)$  lies on line  $\ell_{15}$   
 916 :  $P_{239707} = (26, 32, 57, 1)$  lies on line  $\ell_{14}$   
 917 :  $P_{240453} = (4, 44, 57, 1)$  lies on line  $\ell_{13}$   
 918 :  $P_{240462} = (13, 44, 57, 1)$  lies on line  $\ell_{12}$   
 919 :  $P_{241049} = (24, 53, 57, 1)$  lies on line  $\ell_{11}$   
 920 :  $P_{241064} = (39, 53, 57, 1)$  lies on line  $\ell_{10}$   
 921 :  $P_{241729} = (0, 0, 58, 1)$  lies on line  $\ell_2$   
 922 :  $P_{243921} = (16, 34, 58, 1)$  lies on line  $\ell_{12}$   
 923 :  $P_{243928} = (23, 34, 58, 1)$  lies on line  $\ell_{13}$   
 924 :  $P_{244489} = (8, 43, 58, 1)$  lies on line  $\ell_{11}$   
 925 :  $P_{244522} = (41, 43, 58, 1)$  lies on line  $\ell_{10}$   
 926 :  $P_{244997} = (4, 51, 58, 1)$  lies on line  $\ell_{14}$   
 927 :  $P_{245018} = (25, 51, 58, 1)$  lies on line  $\ell_{15}$

928 :  $P_{245825} = (0, 0, 59, 1)$  lies on line  $\ell_2$   
 929 :  $P_{246300} = (27, 7, 59, 1)$  lies on line  $\ell_{12}$   
 930 :  $P_{246330} = (57, 7, 59, 1)$  lies on line  $\ell_{13}$   
 931 :  $P_{247695} = (14, 29, 59, 1)$  lies on line  $\ell_{14}$   
 932 :  $P_{247742} = (61, 29, 59, 1)$  lies on line  $\ell_{15}$   
 933 :  $P_{247949} = (12, 33, 59, 1)$  lies on line  $\ell_{10}$   
 934 :  $P_{247976} = (39, 33, 59, 1)$  lies on line  $\ell_{11}$   
 935 :  $P_{249921} = (0, 0, 60, 1)$  lies on line  $\ell_2$   
 936 :  $P_{251268} = (3, 21, 60, 1)$  lies on line  $\ell_{15}$   
 937 :  $P_{251321} = (56, 21, 60, 1)$  lies on line  $\ell_{14}$   
 938 :  $P_{251433} = (40, 23, 60, 1)$  lies on line  $\ell_{11}$   
 939 :  $P_{251446} = (53, 23, 60, 1)$  lies on line  $\ell_{10}$   
 940 :  $P_{253931} = (42, 62, 60, 1)$  lies on line  $\ell_{12}$   
 941 :  $P_{253938} = (49, 62, 60, 1)$  lies on line  $\ell_{13}$   
 942 :  $P_{254017} = (0, 0, 61, 1)$  lies on line  $\ell_2$   
 943 :  $P_{255776} = (31, 27, 61, 1)$  lies on line  $\ell_{13}$   
 944 :  $P_{255778} = (33, 27, 61, 1)$  lies on line  $\ell_{12}$   
 945 :  $P_{255880} = (7, 29, 61, 1)$  lies on line  $\ell_{11}$   
 946 :  $P_{255889} = (16, 29, 61, 1)$  lies on line  $\ell_{10}$   
 947 :  $P_{257832} = (39, 59, 61, 1)$  lies on line  $\ell_{15}$   
 948 :  $P_{257843} = (50, 59, 61, 1)$  lies on line  $\ell_{14}$   
 949 :  $P_{258113} = (0, 0, 62, 1)$  lies on line  $\ell_2$   
 950 :  $P_{258328} = (23, 3, 62, 1)$  lies on line  $\ell_{11}$   
 951 :  $P_{258335} = (30, 3, 62, 1)$  lies on line  $\ell_{10}$   
 952 :  $P_{259469} = (12, 21, 62, 1)$  lies on line  $\ell_{13}$   
 953 :  $P_{259517} = (60, 21, 62, 1)$  lies on line  $\ell_{12}$   
 954 :  $P_{260715} = (42, 40, 62, 1)$  lies on line  $\ell_{15}$   
 955 :  $P_{260717} = (44, 40, 62, 1)$  lies on line  $\ell_{14}$   
 956 :  $P_{262209} = (0, 0, 63, 1)$  lies on line  $\ell_2$   
 957 :  $P_{262607} = (14, 6, 63, 1)$  lies on line  $\ell_{15}$   
 958 :  $P_{262631} = (38, 6, 63, 1)$  lies on line  $\ell_{14}$   
 959 :  $P_{262841} = (56, 9, 63, 1)$  lies on line  $\ell_{11}$   
 960 :  $P_{262844} = (59, 9, 63, 1)$  lies on line  $\ell_{10}$   
 961 :  $P_{265315} = (34, 48, 63, 1)$  lies on line  $\ell_{13}$   
 962 :  $P_{265336} = (55, 48, 63, 1)$  lies on line  $\ell_{12}$

The single points on the surface are:

### Points on surface but on no line

The surface has 3420 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	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0
1	1	0	0	1	0	0	0	0	0	0	1	1	1	1	1	1
2	0	0	0	1	0	0	0	1	1	1	1	0	0	1	1	0
3	1	1	1	0	1	1	1	0	0	0	0	1	1	0	0	1
4	1	0	0	1	0	1	1	0	1	0	1	0	1	0	1	0
5	1	0	0	1	1	0	1	0	0	1	1	0	0	1	0	1
6	1	0	0	1	1	1	0	1	0	0	0	1	0	1	1	0
7	1	0	1	0	0	0	1	0	0	0	1	0	1	0	0	1
8	1	0	1	0	1	0	0	0	0	0	0	1	0	1	0	1
9	1	0	1	0	0	1	0	0	0	0	0	1	1	0	1	0
10	0	1	1	0	1	1	0	1	0	0	0	1	0	0	0	0
11	0	1	0	1	0	0	1	0	1	1	1	0	1	0	0	1
12	0	1	0	1	1	0	0	1	0	1	0	1	0	1	0	1
13	0	1	1	0	0	1	1	0	1	0	0	0	1	0	0	0
14	0	1	1	0	1	0	1	0	0	1	0	0	0	0	0	1
15	0	1	0	1	0	1	0	1	1	0	0	1	1	0	1	0

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	$\ell_1$	$\ell_3$	$\ell_4$	$\ell_5$	$\ell_6$	$\ell_7$	$\ell_8$	$\ell_9$
in point	$P_0$	$P_5$	$P_5$	$P_5$	$P_5$	$P_{14}$	$P_{41}$	$P_{50}$

Line 1 intersects

Line	$\ell_0$	$\ell_3$	$\ell_{10}$	$\ell_{11}$	$\ell_{12}$	$\ell_{13}$	$\ell_{14}$	$\ell_{15}$
in point	$P_0$	$P_4$	$P_{8331}$	$P_4$	$P_4$	$P_{8358}$	$P_{8367}$	$P_4$

Line 2 intersects

Line	$\ell_3$	$\ell_7$	$\ell_8$	$\ell_9$	$\ell_{10}$	$\ell_{13}$	$\ell_{14}$
in point	$P_{8258}$	$P_{192577}$	$P_{45121}$	$P_{155713}$	$P_{192577}$	$P_{45121}$	$P_{155713}$

Line 3 intersects

Line	$\ell_0$	$\ell_1$	$\ell_2$	$\ell_4$	$\ell_5$	$\ell_6$	$\ell_{11}$	$\ell_{12}$	$\ell_{15}$
in point	$P_5$	$P_4$	$P_{8258}$	$P_5$	$P_5$	$P_5$	$P_4$	$P_4$	$P_4$

Line 4 intersects

Line	$\ell_0$	$\ell_3$	$\ell_5$	$\ell_6$	$\ell_8$	$\ell_{10}$	$\ell_{12}$	$\ell_{14}$
in point	$P_5$	$P_5$	$P_5$	$P_5$	$P_{48139}$	$P_{48076}$	$P_{45158}$	$P_{47426}$

Line 5 intersects

Line	$\ell_0$	$\ell_3$	$\ell_4$	$\ell_6$	$\ell_9$	$\ell_{10}$	$\ell_{13}$	$\ell_{15}$
in point	$P_5$	$P_5$	$P_5$	$P_5$	$P_{156454}$	$P_{158722}$	$P_{156389}$	$P_{155759}$

Line 6 intersects

Line	$\ell_0$	$\ell_3$	$\ell_4$	$\ell_5$	$\ell_7$	$\ell_{11}$	$\ell_{13}$	$\ell_{14}$
in point	$P_5$	$P_5$	$P_5$	$P_5$	$P_{194927}$	$P_{192587}$	$P_{193282}$	$P_{194992}$

Line 7 intersects

Line	$\ell_0$	$\ell_2$	$\ell_6$	$\ell_{10}$	$\ell_{12}$	$\ell_{15}$
in point	$P_{14}$	$P_{192577}$	$P_{194927}$	$P_{192577}$	$P_{193328}$	$P_{194981}$

Line 8 intersects

Line	$\ell_0$	$\ell_2$	$\ell_4$	$\ell_{11}$	$\ell_{13}$	$\ell_{15}$
in point	$P_{41}$	$P_{45121}$	$P_{48139}$	$P_{48112}$	$P_{45121}$	$P_{47436}$

Line 9 intersects

Line	$\ell_0$	$\ell_2$	$\ell_5$	$\ell_{11}$	$\ell_{12}$	$\ell_{14}$
in point	$P_{50}$	$P_{155713}$	$P_{156454}$	$P_{158757}$	$P_{156364}$	$P_{155713}$

Line 10 intersects

Line	$\ell_1$	$\ell_2$	$\ell_4$	$\ell_5$	$\ell_7$	$\ell_{11}$
in point	$P_{8331}$	$P_{192577}$	$P_{48076}$	$P_{158722}$	$P_{192577}$	$P_{197350}$

Line 11 intersects

Line	$\ell_1$	$\ell_3$	$\ell_6$	$\ell_8$	$\ell_9$	$\ell_{10}$	$\ell_{12}$	$\ell_{15}$
in point	$P_4$	$P_4$	$P_{192587}$	$P_{48112}$	$P_{158757}$	$P_{197350}$	$P_4$	$P_4$

Line 12 intersects

Line	$\ell_1$	$\ell_3$	$\ell_4$	$\ell_7$	$\ell_9$	$\ell_{11}$	$\ell_{13}$	$\ell_{15}$
in point	$P_4$	$P_4$	$P_{45158}$	$P_{193328}$	$P_{156364}$	$P_4$	$P_{51631}$	$P_4$

Line 13 intersects

Line	$\ell_1$	$\ell_2$	$\ell_5$	$\ell_6$	$\ell_8$	$\ell_{12}$
in point	$P_{8358}$	$P_{45121}$	$P_{156389}$	$P_{193282}$	$P_{45121}$	$P_{51631}$

Line 14 intersects

Line	$\ell_1$	$\ell_2$	$\ell_4$	$\ell_6$	$\ell_9$	$\ell_{15}$
in point	$P_{8367}$	$P_{155713}$	$P_{47426}$	$P_{194992}$	$P_{155713}$	$P_{154571}$

Line 15 intersects

Line	$\ell_1$	$\ell_3$	$\ell_5$	$\ell_7$	$\ell_8$	$\ell_{11}$	$\ell_{12}$	$\ell_{14}$
in point	$P_4$	$P_4$	$P_{155759}$	$P_{194981}$	$P_{47436}$	$P_4$	$P_4$	$P_{154571}$

The surface has 4417 points:

Too many to print.