Rank-65614 over GF(64)

January 15, 2021

The equation

The equation of the surface is :

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

(1, 1, 0, 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(64) is 1091047558

General information

Number of lines	15
Number of points	4417
Number of singular points	1
Number of Eckardt points	0
Number of double points	36
Number of single points	897
Number of points off lines	3483
Number of Hesse planes	0
Number of axes	0
Type of points on lines	65^{15}
Type of lines on points	$6, 2^{36}, 1^{897}, 0^{3483}$

Singular Points

The surface has 1 singular points:

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

The 15 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & 0 & \epsilon^9 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{12520384} = \begin{bmatrix} 1 & 0 & 0 & 47 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{12520384} = \mathbf{Pl}(0,47,1,0,0,0)_{112}$$

$$\ell_1 = \begin{bmatrix} 1 & 0 & 0 & \epsilon^{18} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{2933440} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{2933440} = \mathbf{Pl}(0,11,1,0,0,0)_{76}$$

$$\ell_2 = \begin{bmatrix} 1 & 0 & 0 & \epsilon^{36} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{9591040} = \begin{bmatrix} 1 & 0 & 0 & 36 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{9591040} = \mathbf{Pl}(0,36,1,0,0,0)_{101}$$

$$\ell_3 = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{17043521} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{17043521} = \mathbf{Pl}(0,1,0,0,0,1)_{270465}$$

$$\ell_4 = \begin{bmatrix} 0 & 1 & 0 & \epsilon^{21} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{17047161} = \begin{bmatrix} 0 & 1 & 0 & 57 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{17047161} = \mathbf{Pl}(0,57,0,0,0,1)_{270521}$$

$$\ell_5 = \begin{bmatrix} 0 & 1 & 0 & \epsilon^{42} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{17047096} = \begin{bmatrix} 0 & 1 & 0 & 56 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{17047096} = \mathbf{Pl}(0,56,0,0,0,1)_{270520}$$

$$\ell_6 = \begin{bmatrix} 1 & 0 & \epsilon^{3} & \epsilon^{18} \\ 0 & 1 & \epsilon^{60} & \epsilon^{21} \end{bmatrix}_{2966292} = \begin{bmatrix} 1 & 0 & 8 & 11 \\ 0 & 1 & 12 & 57 \end{bmatrix}_{2966292} = \mathbf{Pl}(45,7,15,21,11,1)_{3228611}$$

$$\ell_7 = \begin{bmatrix} 1 & 0 & \epsilon^{45} & \epsilon^{18} \\ 0 & 1 & \epsilon^{18} & 1 \end{bmatrix}_{3083376} = \begin{bmatrix} 1 & 0 & 37 & 11 \\ 0 & 1 & 11 & 1 \end{bmatrix}_{3083376} = \mathbf{Pl}(37,11,46,36,11,1)_{3349689}$$

$$\ell_8 = \begin{bmatrix} 1 & 0 & \epsilon^{24} & \epsilon^{18} \\ 0 & 1 & \epsilon^{39} & \epsilon^{42} \end{bmatrix}_{3120180} = \begin{bmatrix} 1 & 0 & 45 & 11 \\ 0 & 1 & 7 & 56 \end{bmatrix}_{3120180} = \mathbf{Pl}(8,12,33,49,11,1)_{3298882}$$

$$\ell_9 = \begin{bmatrix} 1 & 0 & \epsilon^{6} & \epsilon^{36} \\ 0 & 1 & \epsilon^{57} & \epsilon^{42} \end{bmatrix}_{9727890} = \begin{bmatrix} 1 & 0 & 33 & 36 \\ 0 & 1 & 49 & 56 \end{bmatrix}_{9727890} = \mathbf{Pl}(15,21,52,54,36,1)_{9926804}$$

$$\ell_{10} = \begin{bmatrix} 1 & 0 & \epsilon^{33} & \epsilon^{9} \\ 0 & 1 & \epsilon^{30} & \epsilon^{42} \end{bmatrix}_{12736298} = \begin{bmatrix} 1 & 0 & 52 & 47 \\ 0 & 1 & 54 & 56 \end{bmatrix}_{12736298} = \mathbf{Pl}(62,25,45,7,47,1)_{12782956}$$

$$\ell_{11} = \begin{bmatrix} 1 & 0 & \epsilon^{27} & \epsilon^{36} \\ 0 & 1 & \epsilon^{36} & 1 \end{bmatrix}_{9778450} = \begin{bmatrix} 1 & 0 & 46 & 36 \\ 0 & 1 & 36 & 1 \end{bmatrix}_{9778450} = \mathbf{Pl}(46,36,10,47,36,1)_{9762783}$$

$$\ell_{12} = \begin{bmatrix} 1 & 0 & \epsilon^{54} & \epsilon^{9} \\ 0 & 1 & \epsilon^{9} & 1 \end{bmatrix}_{12558009} = \begin{bmatrix} 1 & 0 & 10 & 47 \\ 0 & 1 & 47 & 1 \end{bmatrix}_{12558009} = \mathbf{Pl}(10,47,37,11,47,1)_{12751656}$$

$$\ell_{13} = \begin{bmatrix} 1 & 0 & \epsilon^{48} & \epsilon^{36} \\ 0 & 1 & \epsilon^{15} & \epsilon^{21} \end{bmatrix}_{9653028} = \begin{bmatrix} 1 & 0 & 15 & 36 \\ 0 & 1 & 21 & 57 \end{bmatrix}_{9653028} = \mathbf{Pl}(33,49,62,25,36,1)_{9965882}$$

$$\ell_{14} = \begin{bmatrix} 1 & 0 & \epsilon^{12} & \epsilon^{9} \\ 0 & 1 & \epsilon^{51} & \epsilon^{21} \end{bmatrix}_{12777943} = \begin{bmatrix} 1 & 0 & 62 & 47 \\ 0 & 1 & 25 & 57 \end{bmatrix}_{12777943} = \mathbf{Pl}(52,54,8,12,47,1)_{12638424}$$

Rank of lines: (12520384, 2933440, 9591040, 17043521, 17047161, 17047096, 2966292, 3083376, 3120180, 9727890, 12736298, 9778450, 12558009, 9653028, 12777943)

Rank of points on Klein quadric: (112, 76, 101, 270465, 270521, 270520, 3228611, 3349689, 3298882, 9926804, 12782956, 9762783, 12751656, 9965882, 12638424)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

The surface has 36 Double points:
The double points on the surface are:

$P_{188491} = (10, 0, 45, 1) = \ell_0 \cap \ell_{10}$
$P_{155723} = (10, 0, 37, 1) = \ell_0 \cap \ell_{12}$
$P_{36939} = (10, 0, 8, 1) = \ell_0 \cap \ell_{14}$
$P_{65638} = (37, 0, 15, 1) = \ell_1 \cap \ell_6$
$P_{192614} = (37, 0, 46, 1) = \ell_1 \cap \ell_7$
$P_{139366} = (37, 0, 33, 1) = \ell_1 \cap \ell_8$
$P_{217199} = (46, 0, 52, 1) = \ell_2 \cap \ell_9$
$P_{45167} = (46, 0, 10, 1) = \ell_2 \cap \ell_{11}$
$P_{258159} = (46, 0, 62, 1) = \ell_2 \cap \ell_{13}$
$P_{49281} = (0, 1, 11, 1) = \ell_3 \cap \ell_7$
$P_{151681} = (0, 1, 36, 1) = \ell_3 \cap \ell_{11}$
$P_{196737} = (0, 1, 47, 1) = \ell_3 \cap \ell_{12}$
$P_{36417} = (0, 56, 7, 1) = \ell_4 \cap \ell_6$
$P_{208449} = (0, 56, 49, 1) = \ell_4 \cap \ell_{13}$
$P_{228929} = (0, 56, 54, 1) = \ell_4 \cap \ell_{14}$
$P_{56961} = (0, 57, 12, 1) = \ell_5 \cap \ell_8$
$P_{93825} = (0, 57, 21, 1) = \ell_5 \cap \ell_9$
$P_{110209} = (0, 57, 25, 1) = \ell_5 \cap \ell_{10}$
$P_{198867} = (18, 34, 47, 1) = \ell_6 \cap \ell_9$

$P_{152863} = (30, 19, 36, 1) = \ell_6 \cap \ell_{10}$
$P_{106814} = (61, 3, 25, 1) = \ell_6 \cap \ell_{11}$
$P_{92731} = (58, 39, 21, 1) = \ell_6 \cap \ell_{12}$
$P_{228094} = (61, 42, 54, 1) = \ell_7 \cap \ell_9$
$P_{206651} = (58, 27, 49, 1) = \ell_7 \cap \ell_{10}$
$P_{106835} = (18, 4, 25, 1) = \ell_7 \cap \ell_{13}$
$P_{91295} = (30, 17, 21, 1) = \ell_7 \cap \ell_{14}$
$P_{227795} = (18, 38, 54, 1) = \ell_8 \cap \ell_{11}$
$P_{205023} = (30, 2, 49, 1) = \ell_8 \cap \ell_{12}$
$P_{199358} = (61, 41, 47, 1) = \ell_8 \cap \ell_{13}$
$P_{155515} = (58, 60, 36, 1) = \ell_8 \cap \ell_{14}$
$P_{33193} = (40, 5, 7, 1) = \ell_9 \cap \ell_{12}$
$P_{53028} = (35, 59, 11, 1) = \ell_9 \cap \ell_{14}$
$P_{33892} = (35, 16, 7, 1) = \ell_{10} \cap \ell_{11}$
$P_{51241} = (40, 31, 11, 1) = \ell_{10} \cap \ell_{13}$
$P_{55017} = (40, 26, 12, 1) = \ell_{11} \cap \ell_{14}$
$P_{56100} = (35, 43, 12, 1) = \ell_{12} \cap \ell_{13}$

Single Points

The surface has 897 single points:
The single points on the surface are:

$0 : P_{571} = (56, 7, 1, 0)$ lies on line ℓ_6
$1 : P_{772} = (1, 11, 1, 0)$ lies on line ℓ_7
$2 : P_{892} = (57, 12, 1, 0)$ lies on line ℓ_8
$3 : P_{1468} = (57, 21, 1, 0)$ lies on line ℓ_9
$4 : P_{1724} = (57, 25, 1, 0)$ lies on line ℓ_{10}
$5 : P_{2372} = (1, 36, 1, 0)$ lies on line ℓ_{11}
$6 : P_{3076} = (1, 47, 1, 0)$ lies on line ℓ_{12}
$7 : P_{3259} = (56, 49, 1, 0)$ lies on line ℓ_{13}
$8 : P_{3579} = (56, 54, 1, 0)$ lies on line ℓ_{14}
$9 : P_{4172} = (10, 0, 0, 1)$ lies on line ℓ_0
$10 : P_{4199} = (37, 0, 0, 1)$ lies on line ℓ_1
$11 : P_{4208} = (46, 0, 0, 1)$ lies on line ℓ_2
$12 : P_{4226} = (0, 1, 0, 1)$ lies on line ℓ_3
$13 : P_{4685} = (11, 8, 0, 1)$ lies on line ℓ_8
$14 : P_{4849} = (47, 10, 0, 1)$ lies on line ℓ_{12}
$15 : P_{5158} = (36, 15, 0, 1)$ lies on line ℓ_9
$16 : P_{6310} = (36, 33, 0, 1)$ lies on line ℓ_{13}
$17 : P_{6541} = (11, 37, 0, 1)$ lies on line ℓ_7
$18 : P_{7053} = (11, 45, 0, 1)$ lies on line ℓ_6
$19 : P_{7142} = (36, 46, 0, 1)$ lies on line ℓ_{11}
$20 : P_{7537} = (47, 52, 0, 1)$ lies on line ℓ_{14}
$21 : P_{7746} = (0, 56, 0, 1)$ lies on line ℓ_4
$22 : P_{7810} = (0, 57, 0, 1)$ lies on line ℓ_5
$23 : P_{8177} = (47, 62, 0, 1)$ lies on line ℓ_{10}
$24 : P_{8268} = (10, 0, 1, 1)$ lies on line ℓ_0
$25 : P_{8295} = (37, 0, 1, 1)$ lies on line ℓ_1
$26 : P_{8304} = (46, 0, 1, 1)$ lies on line ℓ_2
$27 : P_{8322} = (0, 1, 1, 1)$ lies on line ℓ_3

$28 : P_{8408} = (23, 2, 1, 1)$ lies on line ℓ_{14}
$29 : P_{8563} = (50, 4, 1, 1)$ lies on line ℓ_8
$30 : P_{8934} = (37, 10, 1, 1)$ lies on line ℓ_{11}
$31 : P_{9309} = (28, 16, 1, 1)$ lies on line ℓ_{13}
$32 : P_{9950} = (29, 26, 1, 1)$ lies on line ℓ_9
$33 : P_{10671} = (46, 37, 1, 1)$ lies on line ℓ_{12}
$34 : P_{10775} = (22, 39, 1, 1)$ lies on line ℓ_{10}
$35 : P_{10996} = (51, 42, 1, 1)$ lies on line ℓ_6
$36 : P_{11211} = (10, 46, 1, 1)$ lies on line ℓ_7
$37 : P_{11841} = (0, 56, 1, 1)$ lies on line ℓ_4
$38 : P_{11905} = (0, 57, 1, 1)$ lies on line ℓ_5
$39 : P_{12363} = (10, 0, 2, 1)$ lies on line ℓ_0
$40 : P_{12390} = (37, 0, 2, 1)$ lies on line ℓ_1
$41 : P_{12399} = (46, 0, 2, 1)$ lies on line ℓ_2
$42 : P_{12417} = (0, 1, 2, 1)$ lies on line ℓ_3
$43 : P_{12839} = (38, 7, 2, 1)$ lies on line ℓ_{11}
$44 : P_{13181} = (60, 12, 2, 1)$ lies on line ℓ_{10}
$45 : P_{13401} = (24, 16, 2, 1)$ lies on line ℓ_8
$46 : P_{14582} = (53, 34, 2, 1)$ lies on line ℓ_{13}
$47 : P_{14619} = (26, 35, 2, 1)$ lies on line ℓ_6
$48 : P_{14776} = (55, 37, 2, 1)$ lies on line ℓ_9
$49 : P_{15626} = (9, 51, 2, 1)$ lies on line ℓ_7
$50 : P_{15790} = (45, 53, 2, 1)$ lies on line ℓ_{12}
$51 : P_{15937} = (0, 56, 2, 1)$ lies on line ℓ_4
$52 : P_{16001} = (0, 57, 2, 1)$ lies on line ℓ_5
$53 : P_{16063} = (62, 57, 2, 1)$ lies on line ℓ_{14}
$54 : P_{16459} = (10, 0, 3, 1)$ lies on line ℓ_0
$55 : P_{16486} = (37, 0, 3, 1)$ lies on line ℓ_1

$56: P_{16495} = (46, 0, 3, 1)$ lies on line ℓ_2

$57: P_{16513} = (0, 1, 3, 1)$ lies on line ℓ_3

$58: P_{17415} = (6, 15, 3, 1)$ lies on line ℓ_{14}

$59: P_{17678} = (13, 19, 3, 1)$ lies on line ℓ_{13}

$60: P_{17798} = (5, 21, 3, 1)$ lies on line ℓ_{10}

$61: P_{18157} = (44, 26, 3, 1)$ lies on line ℓ_{12}

$62: P_{18274} = (33, 28, 3, 1)$ lies on line ℓ_8

$63: P_{18728} = (39, 35, 3, 1)$ lies on line ℓ_{11}

$64: P_{18787} = (34, 36, 3, 1)$ lies on line ℓ_6

$65: P_{19535} = (14, 48, 3, 1)$ lies on line ℓ_9

$66: P_{20033} = (0, 56, 3, 1)$ lies on line ℓ_4

$67: P_{20041} = (8, 56, 3, 1)$ lies on line ℓ_7

$68: P_{20097} = (0, 57, 3, 1)$ lies on line ℓ_5

$69: P_{20555} = (10, 0, 4, 1)$ lies on line ℓ_0

$70: P_{20582} = (37, 0, 4, 1)$ lies on line ℓ_1

$71: P_{20591} = (46, 0, 4, 1)$ lies on line ℓ_2

$72: P_{20609} = (0, 1, 4, 1)$ lies on line ℓ_3

$73: P_{21136} = (15, 9, 4, 1)$ lies on line ℓ_7

$74: P_{21932} = (43, 21, 4, 1)$ lies on line ℓ_{12}

$75: P_{22433} = (32, 29, 4, 1)$ lies on line ℓ_{11}

$76: P_{23047} = (6, 39, 4, 1)$ lies on line ℓ_{13}

$77: P_{23502} = (13, 46, 4, 1)$ lies on line ℓ_{14}

$78: P_{23722} = (41, 49, 4, 1)$ lies on line ℓ_6

$79: P_{24129} = (0, 56, 4, 1)$ lies on line ℓ_4

$80: P_{24174} = (45, 56, 4, 1)$ lies on line ℓ_8

$81: P_{24193} = (0, 57, 4, 1)$ lies on line ℓ_5

$82: P_{24259} = (2, 58, 4, 1)$ lies on line ℓ_9

$83: P_{24330} = (9, 59, 4, 1)$ lies on line ℓ_{10}

$84: P_{24651} = (10, 0, 5, 1)$ lies on line ℓ_0

$85: P_{24678} = (37, 0, 5, 1)$ lies on line ℓ_1

$86: P_{24687} = (46, 0, 5, 1)$ lies on line ℓ_2

$87: P_{24705} = (0, 1, 5, 1)$ lies on line ℓ_3

$88: P_{24783} = (14, 2, 5, 1)$ lies on line ℓ_7

$89: P_{26111} = (62, 22, 5, 1)$ lies on line ℓ_{13}

$90: P_{26230} = (53, 24, 5, 1)$ lies on line ℓ_{14}

$91: P_{26865} = (48, 34, 5, 1)$ lies on line ℓ_{10}

$92: P_{27708} = (59, 47, 5, 1)$ lies on line ℓ_9

$93: P_{27989} = (20, 52, 5, 1)$ lies on line ℓ_8

$94: P_{28114} = (17, 54, 5, 1)$ lies on line ℓ_6

$95: P_{28225} = (0, 56, 5, 1)$ lies on line ℓ_4

$96: P_{28289} = (0, 57, 5, 1)$ lies on line ℓ_5

$97: P_{28322} = (33, 57, 5, 1)$ lies on line ℓ_{11}

$98: P_{28395} = (42, 58, 5, 1)$ lies on line ℓ_{12}

$99: P_{28747} = (10, 0, 6, 1)$ lies on line ℓ_0

$100: P_{28774} = (37, 0, 6, 1)$ lies on line ℓ_1

$101: P_{28783} = (46, 0, 6, 1)$ lies on line ℓ_2

$102: P_{28801} = (0, 1, 6, 1)$ lies on line ℓ_3

$103: P_{29339} = (26, 9, 6, 1)$ lies on line ℓ_{10}

$104: P_{29778} = (17, 16, 6, 1)$ lies on line ℓ_9

$105: P_{30734} = (13, 31, 6, 1)$ lies on line ℓ_7

$106: P_{30847} = (62, 32, 6, 1)$ lies on line ℓ_8

$107: P_{31005} = (28, 35, 6, 1)$ lies on line ℓ_{14}

$108: P_{31064} = (23, 36, 6, 1)$ lies on line ℓ_{13}

$109: P_{31466} = (41, 42, 6, 1)$ lies on line ℓ_{12}

$110: P_{32099} = (34, 52, 6, 1)$ lies on line ℓ_{11}

$111: P_{32321} = (0, 56, 6, 1)$ lies on line ℓ_4

$112: P_{32385} = (0, 57, 6, 1)$ lies on line ℓ_5

$113: P_{32825} = (56, 63, 6, 1)$ lies on line ℓ_6

$114: P_{32843} = (10, 0, 7, 1)$ lies on line ℓ_0

$115: P_{32870} = (37, 0, 7, 1)$ lies on line ℓ_1

$116: P_{32879} = (46, 0, 7, 1)$ lies on line ℓ_2

$117: P_{32897} = (0, 1, 7, 1)$ lies on line ℓ_3

$118: P_{34125} = (12, 20, 7, 1)$ lies on line ℓ_7

$119: P_{34213} = (36, 21, 7, 1)$ lies on line ℓ_{14}

$120: P_{34224} = (47, 21, 7, 1)$ lies on line ℓ_{13}

$121: P_{35656} = (7, 44, 7, 1)$ lies on line ℓ_8

$122: P_{36481} = (0, 57, 7, 1)$ lies on line ℓ_5

$123: P_{36966} = (37, 0, 8, 1)$ lies on line ℓ_1

$124: P_{36975} = (46, 0, 8, 1)$ lies on line ℓ_2

$125: P_{36993} = (0, 1, 8, 1)$ lies on line ℓ_3

$126: P_{37194} = (9, 4, 8, 1)$ lies on line ℓ_9

$127: P_{37543} = (38, 9, 8, 1)$ lies on line ℓ_8

$128: P_{38319} = (46, 21, 8, 1)$ lies on line ℓ_6

$129: P_{38724} = (3, 28, 8, 1)$ lies on line ℓ_7

$130: P_{39597} = (44, 41, 8, 1)$ lies on line ℓ_{11}

$131: P_{39810} = (1, 45, 8, 1)$ lies on line ℓ_{13}

$132: P_{40259} = (2, 52, 8, 1)$ lies on line ℓ_{10}

$133: P_{40296} = (39, 52, 8, 1)$ lies on line ℓ_{12}

$134: P_{40513} = (0, 56, 8, 1)$ lies on line ℓ_4

$135: P_{40577} = (0, 57, 8, 1)$ lies on line ℓ_5

$136: P_{41035} = (10, 0, 9, 1)$ lies on line ℓ_0

$137: P_{41062} = (37, 0, 9, 1)$ lies on line ℓ_1

$138: P_{41071} = (46, 0, 9, 1)$ lies on line ℓ_2

$139: P_{41089} = (0, 1, 9, 1)$ lies on line ℓ_3

$140: P_{41376} = (31, 5, 9, 1)$ lies on line ℓ_8

$141: P_{41902} = (45, 13, 9, 1)$ lies on line ℓ_{11}

$142: P_{42161} = (48, 17, 9, 1)$ lies on line ℓ_9

$143: P_{42199} = (22, 18, 9, 1)$ lies on line ℓ_6

$144: P_{42499} = (2, 23, 9, 1)$ lies on line ℓ_7

$145: P_{42791} = (38, 27, 9, 1)$ lies on line ℓ_{12}

$146: P_{42874} = (57, 28, 9, 1)$ lies on line ℓ_{13}

$147: P_{43964} = (59, 45, 9, 1)$ lies on line ℓ_{10}

$148: P_{44531} = (50, 54, 9, 1)$ lies on line ℓ_{14}

$149: P_{44609} = (0, 56, 9, 1)$ lies on line ℓ_4

$150: P_{44673} = (0, 57, 9, 1)$ lies on line ℓ_5

$151: P_{45131} = (10, 0, 10, 1)$ lies on line ℓ_0

$152: P_{45158} = (37, 0, 10, 1)$ lies on line ℓ_1

$153: P_{45185} = (0, 1, 10, 1)$ lies on line ℓ_3

$154: P_{45522} = (17, 6, 10, 1)$ lies on line ℓ_{10}

$155: P_{45762} = (1, 10, 10, 1)$ lies on line ℓ_7

$156: P_{45862} = (37, 11, 10, 1)$ lies on line ℓ_{12}

$157: P_{45980} = (27, 13, 10, 1)$ lies on line ℓ_{14}

$158: P_{46262} = (53, 17, 10, 1)$ lies on line ℓ_8

$159: P_{46912} = (63, 27, 10, 1)$ lies on line ℓ_6

$160: P_{48081} = (16, 46, 10, 1)$ lies on line ℓ_{13}

$161: P_{48091} = (26, 46, 10, 1)$ lies on line ℓ_9

$162: P_{48705} = (0, 56, 10, 1)$ lies on line ℓ_4

$163: P_{48769} = (0, 57, 10, 1)$ lies on line ℓ_5

$164 : P_{49227} = (10, 0, 11, 1)$ lies on line ℓ_0
$165 : P_{49254} = (37, 0, 11, 1)$ lies on line ℓ_1
$166 : P_{49263} = (46, 0, 11, 1)$ lies on line ℓ_2
$167 : P_{51016} = (7, 28, 11, 1)$ lies on line ℓ_6
$168 : P_{51085} = (12, 29, 11, 1)$ lies on line ℓ_8
$169 : P_{51557} = (36, 36, 11, 1)$ lies on line ℓ_{12}
$170 : P_{51568} = (47, 36, 11, 1)$ lies on line ℓ_{11}
$171 : P_{52801} = (0, 56, 11, 1)$ lies on line ℓ_4
$172 : P_{52865} = (0, 57, 11, 1)$ lies on line ℓ_5
$173 : P_{53323} = (10, 0, 12, 1)$ lies on line ℓ_0
$174 : P_{53350} = (37, 0, 12, 1)$ lies on line ℓ_1
$175 : P_{53359} = (46, 0, 12, 1)$ lies on line ℓ_2
$176 : P_{53377} = (0, 1, 12, 1)$ lies on line ℓ_3
$177 : P_{53901} = (12, 9, 12, 1)$ lies on line ℓ_6
$178 : P_{56392} = (7, 48, 12, 1)$ lies on line ℓ_7
$179 : P_{56485} = (36, 49, 12, 1)$ lies on line ℓ_{10}
$180 : P_{56496} = (47, 49, 12, 1)$ lies on line ℓ_9
$181 : P_{56897} = (0, 56, 12, 1)$ lies on line ℓ_4
$182 : P_{57419} = (10, 0, 13, 1)$ lies on line ℓ_0
$183 : P_{57446} = (37, 0, 13, 1)$ lies on line ℓ_1
$184 : P_{57455} = (46, 0, 13, 1)$ lies on line ℓ_2
$185 : P_{57473} = (0, 1, 13, 1)$ lies on line ℓ_3
$186 : P_{57699} = (34, 4, 13, 1)$ lies on line ℓ_{12}
$187 : P_{58357} = (52, 14, 13, 1)$ lies on line ℓ_6
$188 : P_{59100} = (27, 26, 13, 1)$ lies on line ℓ_{13}
$189 : P_{59735} = (22, 36, 13, 1)$ lies on line ℓ_9
$190 : P_{59998} = (29, 40, 13, 1)$ lies on line ℓ_{10}
$191 : P_{60241} = (16, 44, 13, 1)$ lies on line ℓ_{14}
$192 : P_{60858} = (57, 53, 13, 1)$ lies on line ℓ_8
$193 : P_{60993} = (0, 56, 13, 1)$ lies on line ℓ_4
$194 : P_{61057} = (0, 57, 13, 1)$ lies on line ℓ_5
$195 : P_{61191} = (6, 59, 13, 1)$ lies on line ℓ_7
$196 : P_{61418} = (41, 62, 13, 1)$ lies on line ℓ_{11}
$197 : P_{61515} = (10, 0, 14, 1)$ lies on line ℓ_0
$198 : P_{61542} = (37, 0, 14, 1)$ lies on line ℓ_1
$199 : P_{61551} = (46, 0, 14, 1)$ lies on line ℓ_2
$200 : P_{61569} = (0, 1, 14, 1)$ lies on line ℓ_3
$201 : P_{61752} = (55, 3, 14, 1)$ lies on line ℓ_{10}
$202 : P_{61982} = (29, 7, 14, 1)$ lies on line ℓ_6
$203 : P_{62818} = (33, 20, 14, 1)$ lies on line ℓ_{12}
$204 : P_{63034} = (57, 23, 14, 1)$ lies on line ℓ_{14}
$205 : P_{63293} = (60, 27, 14, 1)$ lies on line ℓ_9
$206 : P_{63636} = (19, 33, 14, 1)$ lies on line ℓ_8
$207 : P_{63942} = (5, 38, 14, 1)$ lies on line ℓ_7
$208 : P_{64115} = (50, 40, 14, 1)$ lies on line ℓ_{13}
$209 : P_{64811} = (42, 51, 14, 1)$ lies on line ℓ_{11}
$210 : P_{65089} = (0, 56, 14, 1)$ lies on line ℓ_4
$211 : P_{65153} = (0, 57, 14, 1)$ lies on line ℓ_5
$212 : P_{65611} = (10, 0, 15, 1)$ lies on line ℓ_0
$213 : P_{65647} = (46, 0, 15, 1)$ lies on line ℓ_2
$214 : P_{65665} = (0, 1, 15, 1)$ lies on line ℓ_3
$215 : P_{66502} = (5, 14, 15, 1)$ lies on line ℓ_9
$216 : P_{67116} = (43, 23, 15, 1)$ lies on line ℓ_{11}
$217 : P_{67211} = (10, 25, 15, 1)$ lies on line ℓ_{13}
$218 : P_{67279} = (14, 26, 15, 1)$ lies on line ℓ_{10}
$219 : P_{67714} = (1, 33, 15, 1)$ lies on line ℓ_{14}
$220 : P_{68485} = (4, 45, 15, 1)$ lies on line ℓ_7
$221 : P_{68523} = (42, 45, 15, 1)$ lies on line ℓ_8
$222 : P_{69185} = (0, 56, 15, 1)$ lies on line ℓ_4
$223 : P_{69249} = (0, 57, 15, 1)$ lies on line ℓ_5
$224 : P_{69409} = (32, 59, 15, 1)$ lies on line ℓ_{12}
$225 : P_{69707} = (10, 0, 16, 1)$ lies on line ℓ_0
$226 : P_{69734} = (37, 0, 16, 1)$ lies on line ℓ_1
$227 : P_{69743} = (46, 0, 16, 1)$ lies on line ℓ_2
$228 : P_{69761} = (0, 1, 16, 1)$ lies on line ℓ_3
$229 : P_{70385} = (48, 10, 16, 1)$ lies on line ℓ_8
$230 : P_{71232} = (63, 23, 16, 1)$ lies on line ℓ_{12}
$231 : P_{71328} = (31, 25, 16, 1)$ lies on line ℓ_9
$232 : P_{71797} = (52, 32, 16, 1)$ lies on line ℓ_{11}
$233 : P_{72405} = (20, 42, 16, 1)$ lies on line ℓ_{10}
$234 : P_{73180} = (27, 54, 16, 1)$ lies on line ℓ_7
$235 : P_{73281} = (0, 56, 16, 1)$ lies on line ℓ_4
$236 : P_{73345} = (0, 57, 16, 1)$ lies on line ℓ_5
$237 : P_{73360} = (15, 57, 16, 1)$ lies on line ℓ_{13}
$238 : P_{73569} = (32, 60, 16, 1)$ lies on line ℓ_6
$239 : P_{73605} = (4, 61, 16, 1)$ lies on line ℓ_{14}
$240 : P_{73803} = (10, 0, 17, 1)$ lies on line ℓ_0
$241 : P_{73830} = (37, 0, 17, 1)$ lies on line ℓ_1
$242 : P_{73839} = (46, 0, 17, 1)$ lies on line ℓ_2
$243 : P_{73857} = (0, 1, 17, 1)$ lies on line ℓ_3
$244 : P_{74102} = (53, 4, 17, 1)$ lies on line ℓ_{11}
$245 : P_{74186} = (9, 6, 17, 1)$ lies on line ℓ_8
$246 : P_{74360} = (55, 8, 17, 1)$ lies on line ℓ_{13}
$247 : P_{74557} = (60, 11, 17, 1)$ lies on line ℓ_{14}
$248 : P_{74599} = (38, 12, 17, 1)$ lies on line ℓ_9
$249 : P_{77102} = (45, 51, 17, 1)$ lies on line ℓ_{10}
$250 : P_{77377} = (0, 56, 17, 1)$ lies on line ℓ_4
$251 : P_{77439} = (62, 56, 17, 1)$ lies on line ℓ_{12}
$252 : P_{77441} = (0, 57, 17, 1)$ lies on line ℓ_5
$253 : P_{77593} = (24, 59, 17, 1)$ lies on line ℓ_6
$254 : P_{77723} = (26, 61, 17, 1)$ lies on line ℓ_7
$255 : P_{77899} = (10, 0, 18, 1)$ lies on line ℓ_0
$256 : P_{77926} = (37, 0, 18, 1)$ lies on line ℓ_1
$257 : P_{77935} = (46, 0, 18, 1)$ lies on line ℓ_2
$258 : P_{77953} = (0, 1, 18, 1)$ lies on line ℓ_3
$259 : P_{78519} = (54, 9, 18, 1)$ lies on line ℓ_{11}
$260 : P_{79076} = (35, 18, 18, 1)$ lies on line ℓ_8
$261 : P_{79432} = (7, 24, 18, 1)$ lies on line ℓ_{10}
$262 : P_{79962} = (25, 32, 18, 1)$ lies on line ℓ_7
$263 : P_{80510} = (61, 40, 18, 1)$ lies on line ℓ_{12}
$264 : P_{80982} = (21, 48, 18, 1)$ lies on line ℓ_{14}
$265 : P_{81138} = (49, 50, 18, 1)$ lies on line ℓ_6
$266 : P_{81165} = (12, 51, 18, 1)$ lies on line ℓ_9
$267 : P_{81473} = (0, 56, 18, 1)$ lies on line ℓ_4
$268 : P_{81537} = (0, 57, 18, 1)$ lies on line ℓ_5
$269 : P_{81631} = (30, 58, 18, 1)$ lies on line ℓ_{13}
$270 : P_{81995} = (10, 0, 19, 1)$ lies on line ℓ_0
$271 : P_{82022} = (37, 0, 19, 1)$ lies on line ℓ_1

$272: P_{82031} = (46, 0, 19, 1)$ lies on line ℓ_2

$273: P_{82049} = (0, 1, 19, 1)$ lies on line ℓ_3

$274: P_{82111} = (62, 1, 19, 1)$ lies on line ℓ_{10}

$275: P_{82414} = (45, 6, 19, 1)$ lies on line ℓ_{14}

$276: P_{82493} = (60, 7, 19, 1)$ lies on line ℓ_{12}

$277: P_{82727} = (38, 11, 19, 1)$ lies on line ℓ_{13}

$278: P_{83931} = (26, 30, 19, 1)$ lies on line ℓ_8

$279: P_{84470} = (53, 38, 19, 1)$ lies on line ℓ_9

$280: P_{84761} = (24, 43, 19, 1)$ lies on line ℓ_7

$281: P_{84920} = (55, 45, 19, 1)$ lies on line ℓ_{11}

$282: P_{85386} = (9, 53, 19, 1)$ lies on line ℓ_6

$283: P_{85569} = (0, 56, 19, 1)$ lies on line ℓ_4

$284: P_{85633} = (0, 57, 19, 1)$ lies on line ℓ_5

$285: P_{86091} = (10, 0, 20, 1)$ lies on line ℓ_0

$286: P_{86118} = (37, 0, 20, 1)$ lies on line ℓ_1

$287: P_{86127} = (46, 0, 20, 1)$ lies on line ℓ_2

$288: P_{86145} = (0, 1, 20, 1)$ lies on line ℓ_3

$289: P_{86652} = (59, 8, 20, 1)$ lies on line ℓ_{12}

$290: P_{87345} = (48, 19, 20, 1)$ lies on line ℓ_{11}

$291: P_{87776} = (31, 26, 20, 1)$ lies on line ℓ_7

$292: P_{88131} = (2, 32, 20, 1)$ lies on line ℓ_6

$293: P_{88615} = (38, 39, 20, 1)$ lies on line ℓ_{14}

$294: P_{88954} = (57, 44, 20, 1)$ lies on line ℓ_9

$295: P_{89139} = (50, 47, 20, 1)$ lies on line ℓ_{10}

$296: P_{89665} = (0, 56, 20, 1)$ lies on line ℓ_4

$297: P_{89729} = (0, 57, 20, 1)$ lies on line ℓ_5

$298: P_{89815} = (22, 58, 20, 1)$ lies on line ℓ_8

$299: P_{90158} = (45, 63, 20, 1)$ lies on line ℓ_{13}

$300: P_{90187} = (10, 0, 21, 1)$ lies on line ℓ_0

$301: P_{90214} = (37, 0, 21, 1)$ lies on line ℓ_1

$302: P_{90223} = (46, 0, 21, 1)$ lies on line ℓ_2

$303: P_{90241} = (0, 1, 21, 1)$ lies on line ℓ_3

$304: P_{91094} = (21, 14, 21, 1)$ lies on line ℓ_{13}

$305: P_{93644} = (11, 54, 21, 1)$ lies on line ℓ_{10}

$306: P_{93680} = (47, 54, 21, 1)$ lies on line ℓ_8

$307: P_{93746} = (49, 55, 21, 1)$ lies on line ℓ_{11}

$308: P_{93761} = (0, 56, 21, 1)$ lies on line ℓ_4

$309: P_{94283} = (10, 0, 22, 1)$ lies on line ℓ_0

$310: P_{94310} = (37, 0, 22, 1)$ lies on line ℓ_1

$311: P_{94319} = (46, 0, 22, 1)$ lies on line ℓ_2

$312: P_{94337} = (0, 1, 22, 1)$ lies on line ℓ_3

$313: P_{94699} = (42, 6, 22, 1)$ lies on line ℓ_9

$314: P_{95070} = (29, 12, 22, 1)$ lies on line ℓ_7

$315: P_{96162} = (33, 29, 22, 1)$ lies on line ℓ_{10}

$316: P_{96454} = (5, 34, 22, 1)$ lies on line ℓ_8

$317: P_{97016} = (55, 42, 22, 1)$ lies on line ℓ_{14}

$318: P_{97236} = (19, 46, 22, 1)$ lies on line ℓ_6

$319: P_{97850} = (57, 55, 22, 1)$ lies on line ℓ_{12}

$320: P_{97857} = (0, 56, 22, 1)$ lies on line ℓ_4

$321: P_{97921} = (0, 57, 22, 1)$ lies on line ℓ_5

$322: P_{98035} = (50, 58, 22, 1)$ lies on line ℓ_{11}

$323: P_{98173} = (60, 60, 22, 1)$ lies on line ℓ_{13}

$324: P_{98379} = (10, 0, 23, 1)$ lies on line ℓ_0

$325: P_{98406} = (37, 0, 23, 1)$ lies on line ℓ_1

$326: P_{98415} = (46, 0, 23, 1)$ lies on line ℓ_2

$327: P_{98433} = (0, 1, 23, 1)$ lies on line ℓ_3

$328: P_{98649} = (24, 4, 23, 1)$ lies on line ℓ_{10}

$329: P_{98845} = (28, 7, 23, 1)$ lies on line ℓ_7

$330: P_{99205} = (4, 13, 23, 1)$ lies on line ℓ_{13}

$331: P_{99604} = (19, 19, 23, 1)$ lies on line ℓ_9

$332: P_{99961} = (56, 24, 23, 1)$ lies on line ℓ_{12}

$333: P_{100176} = (15, 28, 23, 1)$ lies on line ℓ_{14}

$334: P_{100340} = (51, 30, 23, 1)$ lies on line ℓ_{11}

$335: P_{101036} = (43, 41, 23, 1)$ lies on line ℓ_6

$336: P_{101373} = (60, 46, 23, 1)$ lies on line ℓ_8

$337: P_{101953} = (0, 56, 23, 1)$ lies on line ℓ_4

$338: P_{102017} = (0, 57, 23, 1)$ lies on line ℓ_5

$339: P_{102475} = (10, 0, 24, 1)$ lies on line ℓ_0

$340: P_{102502} = (37, 0, 24, 1)$ lies on line ℓ_1

$341: P_{102511} = (46, 0, 24, 1)$ lies on line ℓ_2

$342: P_{102529} = (0, 1, 24, 1)$ lies on line ℓ_3

$343: P_{102726} = (5, 4, 24, 1)$ lies on line ℓ_6

$344: P_{103074} = (33, 9, 24, 1)$ lies on line ℓ_{14}

$345: P_{103198} = (29, 11, 24, 1)$ lies on line ℓ_8

$346: P_{103444} = (19, 15, 24, 1)$ lies on line ℓ_7

$347: P_{103667} = (50, 18, 24, 1)$ lies on line ℓ_9

$348: P_{104570} = (57, 32, 24, 1)$ lies on line ℓ_{10}

$349: P_{105021} = (60, 39, 24, 1)$ lies on line ℓ_{11}

$350: P_{105144} = (55, 41, 24, 1)$ lies on line ℓ_{12}

$351: P_{105899} = (42, 53, 24, 1)$ lies on line ℓ_{13}

$352: P_{106049} = (0, 56, 24, 1)$ lies on line ℓ_4

$353: P_{106113} = (0, 57, 24, 1)$ lies on line ℓ_5

$354: P_{106571} = (10, 0, 25, 1)$ lies on line ℓ_0

$355: P_{106598} = (37, 0, 25, 1)$ lies on line ℓ_1

$356: P_{106607} = (46, 0, 25, 1)$ lies on line ℓ_2

$357: P_{106625} = (0, 1, 25, 1)$ lies on line ℓ_3

$358: P_{106999} = (54, 6, 25, 1)$ lies on line ℓ_{12}

$359: P_{107020} = (11, 7, 25, 1)$ lies on line ℓ_9

$360: P_{107045} = (36, 7, 25, 1)$ lies on line ℓ_8

$361: P_{110145} = (0, 56, 25, 1)$ lies on line ℓ_4

$362: P_{110618} = (25, 63, 25, 1)$ lies on line ℓ_{14}

$363: P_{110667} = (10, 0, 26, 1)$ lies on line ℓ_0

$364: P_{110694} = (37, 0, 26, 1)$ lies on line ℓ_1

$365: P_{110703} = (46, 0, 26, 1)$ lies on line ℓ_2

$366: P_{110721} = (0, 1, 26, 1)$ lies on line ℓ_3

$367: P_{110961} = (48, 4, 26, 1)$ lies on line ℓ_{14}

$368: P_{111317} = (20, 10, 26, 1)$ lies on line ℓ_6

$369: P_{111615} = (62, 14, 26, 1)$ lies on line ℓ_{11}

$370: P_{111851} = (42, 18, 26, 1)$ lies on line ℓ_{10}

$371: P_{111887} = (14, 19, 26, 1)$ lies on line ℓ_8

$372: P_{112118} = (53, 22, 26, 1)$ lies on line ℓ_{12}

$373: P_{112274} = (17, 25, 26, 1)$ lies on line ℓ_7

$374: P_{114172} = (59, 54, 26, 1)$ lies on line ℓ_{13}

$375: P_{114241} = (0, 56, 26, 1)$ lies on line ℓ_4

$376: P_{114274} = (33, 56, 26, 1)$ lies on line ℓ_9

$377: P_{114305} = (0, 57, 26, 1)$ lies on line ℓ_5

$378: P_{114763} = (10, 0, 27, 1)$ lies on line ℓ_0

$379: P_{114790} = (37, 0, 27, 1)$ lies on line ℓ_1

$380 : P_{114799} = (46, 0, 27, 1)$ lies on line ℓ_2
$381 : P_{114817} = (0, 1, 27, 1)$ lies on line ℓ_3
$382 : P_{115204} = (3, 7, 27, 1)$ lies on line ℓ_{13}
$383 : P_{115476} = (19, 11, 27, 1)$ lies on line ℓ_{10}
$384 : P_{115629} = (44, 13, 27, 1)$ lies on line ℓ_6
$385 : P_{115921} = (16, 18, 27, 1)$ lies on line ℓ_7
$386 : P_{116792} = (55, 31, 27, 1)$ lies on line ℓ_8
$387 : P_{117504} = (63, 42, 27, 1)$ lies on line ℓ_{11}
$388 : P_{117657} = (24, 45, 27, 1)$ lies on line ℓ_9
$389 : P_{117961} = (8, 50, 27, 1)$ lies on line ℓ_{14}
$390 : P_{118337} = (0, 56, 27, 1)$ lies on line ℓ_4
$391 : P_{118401} = (0, 57, 27, 1)$ lies on line ℓ_5
$392 : P_{118453} = (52, 57, 27, 1)$ lies on line ℓ_{12}
$393 : P_{118859} = (10, 0, 28, 1)$ lies on line ℓ_0
$394 : P_{118886} = (37, 0, 28, 1)$ lies on line ℓ_1
$395 : P_{118895} = (46, 0, 28, 1)$ lies on line ℓ_2
$396 : P_{118913} = (0, 1, 28, 1)$ lies on line ℓ_3
$397 : P_{120068} = (3, 19, 28, 1)$ lies on line ℓ_{14}
$398 : P_{120185} = (56, 20, 28, 1)$ lies on line ℓ_{11}
$399 : P_{120424} = (39, 24, 28, 1)$ lies on line ℓ_6
$400 : P_{121112} = (23, 35, 28, 1)$ lies on line ℓ_7
$401 : P_{121248} = (31, 37, 28, 1)$ lies on line ℓ_{10}
$402 : P_{121365} = (20, 39, 28, 1)$ lies on line ℓ_9
$403 : P_{122121} = (8, 51, 28, 1)$ lies on line ℓ_{13}
$404 : P_{122356} = (51, 54, 28, 1)$ lies on line ℓ_{12}
$405 : P_{122433} = (0, 56, 28, 1)$ lies on line ℓ_4
$406 : P_{122497} = (0, 57, 28, 1)$ lies on line ℓ_5
$407 : P_{122684} = (59, 59, 28, 1)$ lies on line ℓ_8
$408 : P_{122955} = (10, 0, 29, 1)$ lies on line ℓ_0
$409 : P_{122982} = (37, 0, 29, 1)$ lies on line ℓ_1
$410 : P_{122991} = (46, 0, 29, 1)$ lies on line ℓ_2
$411 : P_{123009} = (0, 1, 29, 1)$ lies on line ℓ_3
$412 : P_{123121} = (48, 2, 29, 1)$ lies on line ℓ_{13}
$413 : P_{124595} = (50, 25, 29, 1)$ lies on line ℓ_{12}
$414 : P_{124960} = (31, 31, 29, 1)$ lies on line ℓ_6
$415 : P_{125372} = (59, 37, 29, 1)$ lies on line ℓ_{14}
$416 : P_{125527} = (22, 40, 29, 1)$ lies on line ℓ_7
$417 : P_{126074} = (57, 48, 29, 1)$ lies on line ℓ_{11}
$418 : P_{126190} = (45, 50, 29, 1)$ lies on line ℓ_9
$419 : P_{126467} = (2, 55, 29, 1)$ lies on line ℓ_8
$420 : P_{126529} = (0, 56, 29, 1)$ lies on line ℓ_4
$421 : P_{126593} = (0, 57, 29, 1)$ lies on line ℓ_5
$422 : P_{126823} = (38, 60, 29, 1)$ lies on line ℓ_{10}
$423 : P_{127051} = (10, 0, 30, 1)$ lies on line ℓ_0
$424 : P_{127078} = (37, 0, 30, 1)$ lies on line ℓ_1
$425 : P_{127087} = (46, 0, 30, 1)$ lies on line ℓ_2
$426 : P_{127105} = (0, 1, 30, 1)$ lies on line ℓ_3
$427 : P_{127666} = (49, 9, 30, 1)$ lies on line ℓ_{12}
$428 : P_{127880} = (7, 13, 30, 1)$ lies on line ℓ_9
$429 : P_{128503} = (54, 22, 30, 1)$ lies on line ℓ_6
$430 : P_{128525} = (12, 23, 30, 1)$ lies on line ℓ_{10}
$431 : P_{128979} = (18, 30, 30, 1)$ lies on line ℓ_{14}
$432 : P_{129321} = (40, 35, 30, 1)$ lies on line ℓ_8
$433 : P_{130138} = (25, 48, 30, 1)$ lies on line ℓ_{13}

$434 : P_{130454} = (21, 53, 30, 1)$ lies on line ℓ_7
$435 : P_{130625} = (0, 56, 30, 1)$ lies on line ℓ_4
$436 : P_{130689} = (0, 57, 30, 1)$ lies on line ℓ_5
$437 : P_{131003} = (58, 61, 30, 1)$ lies on line ℓ_{11}
$438 : P_{131147} = (10, 0, 31, 1)$ lies on line ℓ_0
$439 : P_{131174} = (37, 0, 31, 1)$ lies on line ℓ_1
$440 : P_{131183} = (46, 0, 31, 1)$ lies on line ℓ_2
$441 : P_{131201} = (0, 1, 31, 1)$ lies on line ℓ_3
$442 : P_{131234} = (33, 1, 31, 1)$ lies on line ℓ_{13}
$443 : P_{132086} = (53, 14, 31, 1)$ lies on line ℓ_{10}
$444 : P_{132239} = (14, 17, 31, 1)$ lies on line ℓ_6
$445 : P_{132735} = (62, 24, 31, 1)$ lies on line ℓ_9
$446 : P_{132796} = (59, 25, 31, 1)$ lies on line ℓ_{11}
$447 : P_{133617} = (48, 38, 31, 1)$ lies on line ℓ_{12}
$448 : P_{133739} = (42, 40, 31, 1)$ lies on line ℓ_{14}
$449 : P_{134162} = (17, 47, 31, 1)$ lies on line ℓ_8
$450 : P_{134721} = (0, 56, 31, 1)$ lies on line ℓ_4
$451 : P_{134785} = (0, 57, 31, 1)$ lies on line ℓ_5
$452 : P_{135125} = (20, 62, 31, 1)$ lies on line ℓ_7
$453 : P_{135243} = (10, 0, 32, 1)$ lies on line ℓ_0
$454 : P_{135270} = (37, 0, 32, 1)$ lies on line ℓ_1
$455 : P_{135279} = (46, 0, 32, 1)$ lies on line ℓ_2
$456 : P_{135297} = (0, 1, 32, 1)$ lies on line ℓ_3
$457 : P_{135468} = (43, 3, 32, 1)$ lies on line ℓ_7
$458 : P_{136029} = (28, 12, 32, 1)$ lies on line ℓ_8
$459 : P_{136253} = (60, 15, 32, 1)$ lies on line ℓ_6
$460 : P_{136340} = (19, 17, 32, 1)$ lies on line ℓ_{13}
$461 : P_{136697} = (56, 22, 32, 1)$ lies on line ℓ_{10}
$462 : P_{137524} = (51, 35, 32, 1)$ lies on line ℓ_9
$463 : P_{137689} = (24, 38, 32, 1)$ lies on line ℓ_{14}
$464 : P_{138320} = (15, 48, 32, 1)$ lies on line ℓ_{12}
$465 : P_{138437} = (4, 50, 32, 1)$ lies on line ℓ_{11}
$466 : P_{138817} = (0, 56, 32, 1)$ lies on line ℓ_4
$467 : P_{138881} = (0, 57, 32, 1)$ lies on line ℓ_5
$468 : P_{139339} = (10, 0, 33, 1)$ lies on line ℓ_0
$469 : P_{139375} = (46, 0, 33, 1)$ lies on line ℓ_2
$470 : P_{139393} = (0, 1, 33, 1)$ lies on line ℓ_3
$471 : P_{139845} = (4, 8, 33, 1)$ lies on line ℓ_6
$472 : P_{139883} = (42, 8, 33, 1)$ lies on line ℓ_7
$473 : P_{140290} = (1, 15, 33, 1)$ lies on line ℓ_{10}
$474 : P_{140385} = (32, 16, 33, 1)$ lies on line ℓ_{14}
$475 : P_{140742} = (5, 22, 33, 1)$ lies on line ℓ_{11}
$476 : P_{141327} = (14, 31, 33, 1)$ lies on line ℓ_{12}
$477 : P_{141420} = (43, 32, 33, 1)$ lies on line ℓ_{13}
$478 : P_{142795} = (10, 54, 33, 1)$ lies on line ℓ_9
$479 : P_{142913} = (0, 56, 33, 1)$ lies on line ℓ_4
$480 : P_{142977} = (0, 57, 33, 1)$ lies on line ℓ_5
$481 : P_{143435} = (10, 0, 34, 1)$ lies on line ℓ_0
$482 : P_{143462} = (37, 0, 34, 1)$ lies on line ℓ_1
$483 : P_{143471} = (46, 0, 34, 1)$ lies on line ℓ_2
$484 : P_{143489} = (0, 1, 34, 1)$ lies on line ℓ_3
$485 : P_{143534} = (45, 1, 34, 1)$ lies on line ℓ_6
$486 : P_{144033} = (32, 9, 34, 1)$ lies on line ℓ_9
$487 : P_{144398} = (13, 15, 34, 1)$ lies on line ℓ_{12}

$488 : P_{144579} = (2, 18, 34, 1)$ lies on line ℓ_{13}

$489 : P_{144720} = (15, 20, 34, 1)$ lies on line ℓ_8

$490 : P_{144810} = (41, 21, 34, 1)$ lies on line ℓ_7

$491 : P_{145159} = (6, 27, 34, 1)$ lies on line ℓ_{11}

$492 : P_{145772} = (43, 36, 34, 1)$ lies on line ℓ_{10}

$493 : P_{146186} = (9, 43, 34, 1)$ lies on line ℓ_{14}

$494 : P_{147009} = (0, 56, 34, 1)$ lies on line ℓ_4

$495 : P_{147073} = (0, 57, 34, 1)$ lies on line ℓ_5

$496 : P_{147531} = (10, 0, 35, 1)$ lies on line ℓ_0

$497 : P_{147558} = (37, 0, 35, 1)$ lies on line ℓ_1

$498 : P_{147567} = (46, 0, 35, 1)$ lies on line ℓ_2

$499 : P_{147585} = (0, 1, 35, 1)$ lies on line ℓ_3

$500 : P_{147926} = (21, 6, 35, 1)$ lies on line ℓ_6

$501 : P_{149111} = (54, 24, 35, 1)$ lies on line ℓ_8

$502 : P_{149338} = (25, 28, 35, 1)$ lies on line ℓ_9

$503 : P_{149426} = (49, 29, 35, 1)$ lies on line ℓ_{14}

$504 : P_{149481} = (40, 30, 35, 1)$ lies on line ℓ_7

$505 : P_{149581} = (12, 32, 35, 1)$ lies on line ℓ_{12}

$506 : P_{149819} = (58, 35, 35, 1)$ lies on line ℓ_{13}

$507 : P_{151105} = (0, 56, 35, 1)$ lies on line ℓ_4

$508 : P_{151169} = (0, 57, 35, 1)$ lies on line ℓ_5

$509 : P_{151443} = (18, 61, 35, 1)$ lies on line ℓ_{10}

$510 : P_{151560} = (7, 63, 35, 1)$ lies on line ℓ_{11}

$511 : P_{151627} = (10, 0, 36, 1)$ lies on line ℓ_0

$512 : P_{151654} = (37, 0, 36, 1)$ lies on line ℓ_1

$513 : P_{151663} = (46, 0, 36, 1)$ lies on line ℓ_2

$514 : P_{153046} = (21, 22, 36, 1)$ lies on line ℓ_9

$515 : P_{153138} = (49, 23, 36, 1)$ lies on line ℓ_{13}

$516 : P_{154636} = (11, 47, 36, 1)$ lies on line ℓ_{12}

$517 : P_{154672} = (47, 47, 36, 1)$ lies on line ℓ_7

$518 : P_{155201} = (0, 56, 36, 1)$ lies on line ℓ_4

$519 : P_{155265} = (0, 57, 36, 1)$ lies on line ℓ_5

$520 : P_{155750} = (37, 0, 37, 1)$ lies on line ℓ_1

$521 : P_{155759} = (46, 0, 37, 1)$ lies on line ℓ_2

$522 : P_{155777} = (0, 1, 37, 1)$ lies on line ℓ_3

$523 : P_{155949} = (44, 3, 37, 1)$ lies on line ℓ_9

$524 : P_{156355} = (2, 10, 37, 1)$ lies on line ℓ_{14}

$525 : P_{156392} = (39, 10, 37, 1)$ lies on line ℓ_{10}

$526 : P_{157031} = (38, 20, 37, 1)$ lies on line ℓ_6

$527 : P_{158063} = (46, 36, 37, 1)$ lies on line ℓ_7

$528 : P_{158082} = (1, 37, 37, 1)$ lies on line ℓ_{11}

$529 : P_{158154} = (9, 38, 37, 1)$ lies on line ℓ_{13}

$530 : P_{158788} = (3, 48, 37, 1)$ lies on line ℓ_8

$531 : P_{159297} = (0, 56, 37, 1)$ lies on line ℓ_4

$532 : P_{159361} = (0, 57, 37, 1)$ lies on line ℓ_5

$533 : P_{159819} = (10, 0, 38, 1)$ lies on line ℓ_0

$534 : P_{159846} = (37, 0, 38, 1)$ lies on line ℓ_1

$535 : P_{159855} = (46, 0, 38, 1)$ lies on line ℓ_2

$536 : P_{159873} = (0, 1, 38, 1)$ lies on line ℓ_3

$537 : P_{160842} = (9, 16, 38, 1)$ lies on line ℓ_{12}

$538 : P_{161121} = (32, 20, 38, 1)$ lies on line ℓ_{13}

$539 : P_{161680} = (15, 29, 38, 1)$ lies on line ℓ_6

$540 : P_{161934} = (13, 33, 38, 1)$ lies on line ℓ_{10}

$541 : P_{162154} = (41, 36, 38, 1)$ lies on line ℓ_8

$542 : P_{162371} = (2, 40, 38, 1)$ lies on line ℓ_{11}

$543 : P_{162988} = (43, 49, 38, 1)$ lies on line ℓ_{14}

$544 : P_{163393} = (0, 56, 38, 1)$ lies on line ℓ_4

$545 : P_{163457} = (0, 57, 38, 1)$ lies on line ℓ_5

$546 : P_{163502} = (45, 57, 38, 1)$ lies on line ℓ_7

$547 : P_{163655} = (6, 60, 38, 1)$ lies on line ℓ_9

$548 : P_{163915} = (10, 0, 39, 1)$ lies on line ℓ_0

$549 : P_{163942} = (37, 0, 39, 1)$ lies on line ℓ_1

$550 : P_{163951} = (46, 0, 39, 1)$ lies on line ℓ_2

$551 : P_{163969} = (0, 1, 39, 1)$ lies on line ℓ_3

$552 : P_{164372} = (19, 7, 39, 1)$ lies on line ℓ_{14}

$553 : P_{164676} = (3, 12, 39, 1)$ lies on line ℓ_{11}

$554 : P_{165624} = (55, 26, 39, 1)$ lies on line ℓ_6

$555 : P_{166297} = (24, 37, 39, 1)$ lies on line ℓ_{13}

$556 : P_{166481} = (16, 40, 39, 1)$ lies on line ℓ_8

$557 : P_{166592} = (63, 41, 39, 1)$ lies on line ℓ_9

$558 : P_{167149} = (44, 50, 39, 1)$ lies on line ℓ_7

$559 : P_{167489} = (0, 56, 39, 1)$ lies on line ℓ_4

$560 : P_{167541} = (52, 56, 39, 1)$ lies on line ℓ_{10}

$561 : P_{167553} = (0, 57, 39, 1)$ lies on line ℓ_5

$562 : P_{167945} = (8, 63, 39, 1)$ lies on line ℓ_{12}

$563 : P_{168011} = (10, 0, 40, 1)$ lies on line ℓ_0

$564 : P_{168038} = (37, 0, 40, 1)$ lies on line ℓ_1

$565 : P_{168047} = (46, 0, 40, 1)$ lies on line ℓ_2

$566 : P_{168065} = (0, 1, 40, 1)$ lies on line ℓ_3

$567 : P_{168882} = (49, 13, 40, 1)$ lies on line ℓ_8

$568 : P_{168904} = (7, 14, 40, 1)$ lies on line ℓ_{12}

$569 : P_{169214} = (61, 18, 40, 1)$ lies on line ℓ_{14}

$570 : P_{169814} = (21, 28, 40, 1)$ lies on line ℓ_{10}

$571 : P_{169911} = (54, 29, 40, 1)$ lies on line ℓ_{13}

$572 : P_{170591} = (30, 40, 40, 1)$ lies on line ℓ_9

$573 : P_{171405} = (12, 53, 40, 1)$ lies on line ℓ_{11}

$574 : P_{171546} = (25, 55, 40, 1)$ lies on line ℓ_6

$575 : P_{171585} = (0, 56, 40, 1)$ lies on line ℓ_4

$576 : P_{171649} = (0, 57, 40, 1)$ lies on line ℓ_5

$577 : P_{171748} = (35, 58, 40, 1)$ lies on line ℓ_7

$578 : P_{172107} = (10, 0, 41, 1)$ lies on line ℓ_0

$579 : P_{172134} = (37, 0, 41, 1)$ lies on line ℓ_1

$580 : P_{172143} = (46, 0, 41, 1)$ lies on line ℓ_2

$581 : P_{172161} = (0, 1, 41, 1)$ lies on line ℓ_3

$582 : P_{172169} = (8, 1, 41, 1)$ lies on line ℓ_8

$583 : P_{172461} = (44, 5, 41, 1)$ lies on line ℓ_{10}

$584 : P_{173198} = (13, 17, 41, 1)$ lies on line ℓ_{11}

$585 : P_{174215} = (6, 33, 41, 1)$ lies on line ℓ_{12}

$586 : P_{174406} = (5, 36, 41, 1)$ lies on line ℓ_{14}

$587 : P_{174927} = (14, 44, 41, 1)$ lies on line ℓ_{13}

$588 : P_{175202} = (33, 48, 41, 1)$ lies on line ℓ_6

$589 : P_{175267} = (34, 49, 41, 1)$ lies on line ℓ_7

$590 : P_{175681} = (0, 56, 41, 1)$ lies on line ℓ_4

$591 : P_{175745} = (0, 57, 41, 1)$ lies on line ℓ_5

$592 : P_{176040} = (39, 61, 41, 1)$ lies on line ℓ_9

$593 : P_{176203} = (10, 0, 42, 1)$ lies on line ℓ_0

$594 : P_{176230} = (37, 0, 42, 1)$ lies on line ℓ_1

$595 : P_{176239} = (46, 0, 42, 1)$ lies on line ℓ_2

$596: P_{176257} = (0, 1, 42, 1)$ lies on line ℓ_3

$597: P_{176334} = (13, 2, 42, 1)$ lies on line ℓ_9

$598: P_{177571} = (34, 21, 42, 1)$ lies on line ℓ_8

$599: P_{177999} = (14, 28, 42, 1)$ lies on line ℓ_{11}

$600: P_{178152} = (39, 30, 42, 1)$ lies on line ℓ_{13}

$601: P_{178221} = (44, 31, 42, 1)$ lies on line ℓ_{14}

$602: P_{179042} = (33, 44, 42, 1)$ lies on line ℓ_7

$603: P_{179143} = (6, 46, 42, 1)$ lies on line ℓ_{10}

$604: P_{179334} = (5, 49, 42, 1)$ lies on line ℓ_{12}

$605: P_{179777} = (0, 56, 42, 1)$ lies on line ℓ_4

$606: P_{179841} = (0, 57, 42, 1)$ lies on line ℓ_5

$607: P_{179849} = (8, 57, 42, 1)$ lies on line ℓ_6

$608: P_{180299} = (10, 0, 43, 1)$ lies on line ℓ_0

$609: P_{180326} = (37, 0, 43, 1)$ lies on line ℓ_1

$610: P_{180335} = (46, 0, 43, 1)$ lies on line ℓ_2

$611: P_{180353} = (0, 1, 43, 1)$ lies on line ℓ_3

$612: P_{181813} = (52, 23, 43, 1)$ lies on line ℓ_9

$613: P_{181916} = (27, 25, 43, 1)$ lies on line ℓ_8

$614: P_{182213} = (4, 30, 43, 1)$ lies on line ℓ_{12}

$615: P_{182817} = (32, 39, 43, 1)$ lies on line ℓ_7

$616: P_{182933} = (20, 41, 43, 1)$ lies on line ℓ_{14}

$617: P_{183328} = (31, 47, 43, 1)$ lies on line ℓ_{13}

$618: P_{183872} = (63, 55, 43, 1)$ lies on line ℓ_{10}

$619: P_{183873} = (0, 56, 43, 1)$ lies on line ℓ_4

$620: P_{183888} = (15, 56, 43, 1)$ lies on line ℓ_{11}

$621: P_{183937} = (0, 57, 43, 1)$ lies on line ℓ_5

$622: P_{184305} = (48, 62, 43, 1)$ lies on line ℓ_6

$623: P_{184395} = (10, 0, 44, 1)$ lies on line ℓ_0

$624: P_{184422} = (37, 0, 44, 1)$ lies on line ℓ_1

$625: P_{184431} = (46, 0, 44, 1)$ lies on line ℓ_2

$626: P_{184449} = (0, 1, 44, 1)$ lies on line ℓ_3

$627: P_{184777} = (8, 6, 44, 1)$ lies on line ℓ_{11}

$628: P_{184928} = (31, 8, 44, 1)$ lies on line ℓ_{14}

$629: P_{185476} = (3, 17, 44, 1)$ lies on line ℓ_{12}

$630: P_{185832} = (39, 22, 44, 1)$ lies on line ℓ_7

$631: P_{186036} = (51, 25, 44, 1)$ lies on line ℓ_{10}

$632: P_{186133} = (20, 27, 44, 1)$ lies on line ℓ_{13}

$633: P_{186297} = (56, 29, 44, 1)$ lies on line ℓ_9

$634: P_{187196} = (59, 43, 44, 1)$ lies on line ℓ_6

$635: P_{187969} = (0, 56, 44, 1)$ lies on line ℓ_4

$636: P_{188033} = (0, 57, 44, 1)$ lies on line ℓ_5

$637: P_{188312} = (23, 61, 44, 1)$ lies on line ℓ_8

$638: P_{188518} = (37, 0, 45, 1)$ lies on line ℓ_1

$639: P_{188527} = (46, 0, 45, 1)$ lies on line ℓ_2

$640: P_{188545} = (0, 1, 45, 1)$ lies on line ℓ_3

$641: P_{188994} = (1, 8, 45, 1)$ lies on line ℓ_9

$642: P_{190375} = (38, 29, 45, 1)$ lies on line ℓ_7

$643: P_{190666} = (9, 34, 45, 1)$ lies on line ℓ_{11}

$644: P_{191213} = (44, 42, 45, 1)$ lies on line ℓ_{13}

$645: P_{191300} = (3, 44, 45, 1)$ lies on line ℓ_6

$646: P_{191663} = (46, 49, 45, 1)$ lies on line ℓ_8

$647: P_{192065} = (0, 56, 45, 1)$ lies on line ℓ_4

$648: P_{192129} = (0, 57, 45, 1)$ lies on line ℓ_5

$649: P_{192451} = (2, 62, 45, 1)$ lies on line ℓ_{12}

$650: P_{192488} = (39, 62, 45, 1)$ lies on line ℓ_{14}

$651: P_{192587} = (10, 0, 46, 1)$ lies on line ℓ_0

$652: P_{192623} = (46, 0, 46, 1)$ lies on line ℓ_2

$653: P_{192641} = (0, 1, 46, 1)$ lies on line ℓ_3

$654: P_{192911} = (14, 5, 46, 1)$ lies on line ℓ_{14}

$655: P_{194118} = (5, 24, 46, 1)$ lies on line ℓ_{13}

$656: P_{194949} = (4, 37, 46, 1)$ lies on line ℓ_8

$657: P_{194987} = (42, 37, 46, 1)$ lies on line ℓ_6

$658: P_{195361} = (32, 43, 46, 1)$ lies on line ℓ_{10}

$659: P_{195522} = (1, 46, 46, 1)$ lies on line ℓ_{12}

$660: P_{195595} = (10, 47, 46, 1)$ lies on line ℓ_{11}

$661: P_{196140} = (43, 55, 46, 1)$ lies on line ℓ_9

$662: P_{196161} = (0, 56, 46, 1)$ lies on line ℓ_4

$663: P_{196225} = (0, 57, 46, 1)$ lies on line ℓ_5

$664: P_{196683} = (10, 0, 47, 1)$ lies on line ℓ_0

$665: P_{196710} = (37, 0, 47, 1)$ lies on line ℓ_1

$666: P_{196719} = (46, 0, 47, 1)$ lies on line ℓ_2

$667: P_{197388} = (11, 11, 47, 1)$ lies on line ℓ_{11}

$668: P_{197413} = (36, 11, 47, 1)$ lies on line ℓ_7

$669: P_{199898} = (25, 50, 47, 1)$ lies on line ℓ_{10}

$670: P_{199991} = (54, 51, 47, 1)$ lies on line ℓ_{14}

$671: P_{200257} = (0, 56, 47, 1)$ lies on line ℓ_4

$672: P_{200321} = (0, 57, 47, 1)$ lies on line ℓ_5

$673: P_{200779} = (10, 0, 48, 1)$ lies on line ℓ_0

$674: P_{200806} = (37, 0, 48, 1)$ lies on line ℓ_1

$675: P_{200815} = (46, 0, 48, 1)$ lies on line ℓ_2

$676: P_{200833} = (0, 1, 48, 1)$ lies on line ℓ_3

$677: P_{200900} = (3, 2, 48, 1)$ lies on line ℓ_{10}

$678: P_{201401} = (56, 9, 48, 1)$ lies on line ℓ_{13}

$679: P_{201704} = (39, 14, 48, 1)$ lies on line ℓ_8

$680: P_{201852} = (59, 16, 48, 1)$ lies on line ℓ_7

$681: P_{202712} = (23, 30, 48, 1)$ lies on line ℓ_6

$682: P_{203680} = (31, 45, 48, 1)$ lies on line ℓ_{12}

$683: P_{203828} = (51, 47, 48, 1)$ lies on line ℓ_{14}

$684: P_{204169} = (8, 53, 48, 1)$ lies on line ℓ_9

$685: P_{204353} = (0, 56, 48, 1)$ lies on line ℓ_4

$686: P_{204417} = (0, 57, 48, 1)$ lies on line ℓ_5

$687: P_{204629} = (20, 60, 48, 1)$ lies on line ℓ_{11}

$688: P_{204875} = (10, 0, 49, 1)$ lies on line ℓ_0

$689: P_{204902} = (37, 0, 49, 1)$ lies on line ℓ_1

$690: P_{204911} = (46, 0, 49, 1)$ lies on line ℓ_2

$691: P_{204929} = (0, 1, 49, 1)$ lies on line ℓ_3

$692: P_{206422} = (21, 24, 49, 1)$ lies on line ℓ_{11}

$693: P_{206476} = (11, 25, 49, 1)$ lies on line ℓ_{14}

$694: P_{206512} = (47, 25, 49, 1)$ lies on line ℓ_6

$695: P_{206962} = (49, 32, 49, 1)$ lies on line ℓ_9

$696: P_{208513} = (0, 57, 49, 1)$ lies on line ℓ_5

$697: P_{208971} = (10, 0, 50, 1)$ lies on line ℓ_0

$698: P_{208998} = (37, 0, 50, 1)$ lies on line ℓ_1

$699: P_{209007} = (46, 0, 50, 1)$ lies on line ℓ_2

$700: P_{209025} = (0, 1, 50, 1)$ lies on line ℓ_3

$701: P_{209402} = (57, 6, 50, 1)$ lies on line ℓ_7

$702: P_{209642} = (41, 10, 50, 1)$ lies on line ℓ_{13}

$703: P_{209991} = (6, 16, 50, 1)$ lies on line ℓ_6

$704: P_{210142} = (29, 18, 50, 1)$ lies on line ℓ_{12}

$705: P_{210327} = (22, 21, 50, 1)$ lies on line ℓ_{11}

$706: P_{210421} = (52, 22, 50, 1)$ lies on line ℓ_8

$707: P_{210972} = (27, 31, 50, 1)$ lies on line ℓ_9

$708: P_{211171} = (34, 34, 50, 1)$ lies on line ℓ_{14}

$709: P_{212049} = (16, 48, 50, 1)$ lies on line ℓ_{10}

$710: P_{212545} = (0, 56, 50, 1)$ lies on line ℓ_4

$711: P_{212609} = (0, 57, 50, 1)$ lies on line ℓ_5

$712: P_{213067} = (10, 0, 51, 1)$ lies on line ℓ_0

$713: P_{213094} = (37, 0, 51, 1)$ lies on line ℓ_1

$714: P_{213103} = (46, 0, 51, 1)$ lies on line ℓ_2

$715: P_{213121} = (0, 1, 51, 1)$ lies on line ℓ_3

$716: P_{213731} = (34, 10, 51, 1)$ lies on line ℓ_9

$717: P_{213945} = (56, 13, 51, 1)$ lies on line ℓ_7

$718: P_{214363} = (26, 20, 51, 1)$ lies on line ℓ_{14}

$719: P_{214591} = (62, 23, 51, 1)$ lies on line ℓ_6

$720: P_{214734} = (13, 26, 51, 1)$ lies on line ℓ_8

$721: P_{215722} = (41, 41, 51, 1)$ lies on line ℓ_{10}

$722: P_{216216} = (23, 49, 51, 1)$ lies on line ℓ_{11}

$723: P_{216641} = (0, 56, 51, 1)$ lies on line ℓ_4

$724: P_{216705} = (0, 57, 51, 1)$ lies on line ℓ_5

$725: P_{216850} = (17, 59, 51, 1)$ lies on line ℓ_{13}

$726: P_{216989} = (28, 61, 51, 1)$ lies on line ℓ_{12}

$727: P_{217163} = (10, 0, 52, 1)$ lies on line ℓ_0

$728: P_{217190} = (37, 0, 52, 1)$ lies on line ℓ_1

$729: P_{217217} = (0, 1, 52, 1)$ lies on line ℓ_3

$730: P_{217334} = (53, 2, 52, 1)$ lies on line ℓ_6

$731: P_{217638} = (37, 7, 52, 1)$ lies on line ℓ_{10}

$732: P_{218129} = (16, 15, 52, 1)$ lies on line ℓ_{11}

$733: P_{218139} = (26, 15, 52, 1)$ lies on line ℓ_{13}

$734: P_{220380} = (27, 50, 52, 1)$ lies on line ℓ_{12}

$735: P_{220562} = (17, 53, 52, 1)$ lies on line ℓ_{14}

$736: P_{220737} = (0, 56, 52, 1)$ lies on line ℓ_4

$737: P_{220801} = (0, 57, 52, 1)$ lies on line ℓ_5

$738: P_{221056} = (63, 60, 52, 1)$ lies on line ℓ_7

$739: P_{221122} = (1, 62, 52, 1)$ lies on line ℓ_8

$740: P_{221259} = (10, 0, 53, 1)$ lies on line ℓ_0

$741: P_{221286} = (37, 0, 53, 1)$ lies on line ℓ_1

$742: P_{221295} = (46, 0, 53, 1)$ lies on line ℓ_2

$743: P_{221313} = (0, 1, 53, 1)$ lies on line ℓ_3

$744: P_{221482} = (41, 3, 53, 1)$ lies on line ℓ_{14}

$745: P_{221582} = (13, 5, 53, 1)$ lies on line ℓ_6

$746: P_{222616} = (23, 21, 53, 1)$ lies on line ℓ_9

$747: P_{223131} = (26, 29, 53, 1)$ lies on line ℓ_{12}

$748: P_{223197} = (28, 30, 53, 1)$ lies on line ℓ_{10}

$749: P_{224018} = (17, 43, 53, 1)$ lies on line ℓ_{11}

$750: P_{224505} = (56, 50, 53, 1)$ lies on line ℓ_8

$751: P_{224831} = (62, 55, 53, 1)$ lies on line ℓ_7

$752: P_{224833} = (0, 56, 53, 1)$ lies on line ℓ_4

$753: P_{224897} = (0, 57, 53, 1)$ lies on line ℓ_5

$754: P_{225251} = (34, 62, 53, 1)$ lies on line ℓ_{13}

$755: P_{225355} = (10, 0, 54, 1)$ lies on line ℓ_0

$756: P_{225382} = (37, 0, 54, 1)$ lies on line ℓ_1

$757: P_{225391} = (46, 0, 54, 1)$ lies on line ℓ_2

$758: P_{225409} = (0, 1, 54, 1)$ lies on line ℓ_3

$759: P_{226124} = (11, 12, 54, 1)$ lies on line ℓ_{13}

$760: P_{226149} = (36, 12, 54, 1)$ lies on line ℓ_6

$761: P_{226202} = (25, 13, 54, 1)$ lies on line ℓ_{12}

$762: P_{228791} = (54, 53, 54, 1)$ lies on line ℓ_{10}

$763: P_{228993} = (0, 57, 54, 1)$ lies on line ℓ_5

$764: P_{229451} = (10, 0, 55, 1)$ lies on line ℓ_0

$765: P_{229478} = (37, 0, 55, 1)$ lies on line ℓ_1

$766: P_{229487} = (46, 0, 55, 1)$ lies on line ℓ_2

$767: P_{229505} = (0, 1, 55, 1)$ lies on line ℓ_3

$768: P_{229588} = (19, 2, 55, 1)$ lies on line ℓ_{11}

$769: P_{230173} = (28, 11, 55, 1)$ lies on line ℓ_6

$770: P_{230393} = (56, 14, 55, 1)$ lies on line ℓ_{14}

$771: P_{231613} = (60, 33, 55, 1)$ lies on line ℓ_7

$772: P_{231641} = (24, 34, 55, 1)$ lies on line ℓ_{12}

$773: P_{232172} = (43, 42, 55, 1)$ lies on line ℓ_8

$774: P_{232272} = (15, 44, 55, 1)$ lies on line ℓ_{10}

$775: P_{233025} = (0, 56, 55, 1)$ lies on line ℓ_4

$776: P_{233089} = (0, 57, 55, 1)$ lies on line ℓ_5

$777: P_{233396} = (51, 61, 55, 1)$ lies on line ℓ_{13}

$778: P_{233477} = (4, 63, 55, 1)$ lies on line ℓ_9

$779: P_{233547} = (10, 0, 56, 1)$ lies on line ℓ_0

$780: P_{233574} = (37, 0, 56, 1)$ lies on line ℓ_1

$781: P_{233583} = (46, 0, 56, 1)$ lies on line ℓ_2

$782: P_{233601} = (0, 1, 56, 1)$ lies on line ℓ_3

$783: P_{233886} = (29, 5, 56, 1)$ lies on line ℓ_{13}

$784: P_{234095} = (46, 8, 56, 1)$ lies on line ℓ_{10}

$785: P_{234507} = (10, 15, 56, 1)$ lies on line ℓ_8

$786: P_{234776} = (23, 19, 56, 1)$ lies on line ℓ_{12}

$787: P_{235287} = (22, 27, 56, 1)$ lies on line ℓ_{14}

$788: P_{236019} = (50, 38, 56, 1)$ lies on line ℓ_6

$789: P_{236212} = (51, 41, 56, 1)$ lies on line ℓ_7

$790: P_{237121} = (0, 56, 56, 1)$ lies on line ℓ_4

$791: P_{237185} = (0, 57, 56, 1)$ lies on line ℓ_5

$792: P_{237341} = (28, 59, 56, 1)$ lies on line ℓ_{11}

$793: P_{237542} = (37, 62, 56, 1)$ lies on line ℓ_9

$794: P_{237643} = (10, 0, 57, 1)$ lies on line ℓ_0

$795: P_{237670} = (37, 0, 57, 1)$ lies on line ℓ_1

$796: P_{237679} = (46, 0, 57, 1)$ lies on line ℓ_2

$797: P_{237697} = (0, 1, 57, 1)$ lies on line ℓ_3

$798: P_{237876} = (51, 3, 57, 1)$ lies on line ℓ_8

$799: P_{238744} = (23, 17, 57, 1)$ lies on line ℓ_{10}

$800: P_{239646} = (29, 31, 57, 1)$ lies on line ℓ_{11}

$801: P_{239755} = (10, 33, 57, 1)$ lies on line ℓ_6

$802: P_{239859} = (50, 34, 57, 1)$ lies on line ℓ_7

$803: P_{240413} = (28, 43, 57, 1)$ lies on line ℓ_9

$804: P_{240559} = (46, 45, 57, 1)$ lies on line ℓ_{14}

$805: P_{240998} = (37, 52, 57, 1)$ lies on line ℓ_{13}

$806: P_{241217} = (0, 56, 57, 1)$ lies on line ℓ_4

$807: P_{241281} = (0, 57, 57, 1)$ lies on line ℓ_5

$808: P_{241495} = (22, 60, 57, 1)$ lies on line ℓ_{12}

$809: P_{241739} = (10, 0, 58, 1)$ lies on line ℓ_0

$810: P_{241766} = (37, 0, 58, 1)$ lies on line ℓ_1

$811: P_{241775} = (46, 0, 58, 1)$ lies on line ℓ_2

$812: P_{241793} = (0, 1, 58, 1)$ lies on line ℓ_3

$813: P_{242125} = (12, 6, 58, 1)$ lies on line ℓ_{13}

$814: P_{242911} = (30, 18, 58, 1)$ lies on line ℓ_{11}

$815: P_{243063} = (54, 20, 58, 1)$ lies on line ℓ_9

$816: P_{243144} = (7, 22, 58, 1)$ lies on line ℓ_{14}

$817: P_{243226} = (25, 23, 58, 1)$ lies on line ℓ_8

$818: P_{244324} = (35, 40, 58, 1)$ lies on line ℓ_6

$819: P_{244566} = (21, 44, 58, 1)$ lies on line ℓ_{12}

$820: P_{245313} = (0, 56, 58, 1)$ lies on line ℓ_4

$821: P_{245377} = (0, 57, 58, 1)$ lies on line ℓ_5

$822: P_{245502} = (61, 58, 58, 1)$ lies on line ℓ_{10}

$823: P_{245810} = (49, 63, 58, 1)$ lies on line ℓ_7

$824: P_{245835} = (10, 0, 59, 1)$ lies on line ℓ_0

$825: P_{245862} = (37, 0, 59, 1)$ lies on line ℓ_1

$826: P_{245871} = (46, 0, 59, 1)$ lies on line ℓ_2

$827: P_{245889} = (0, 1, 59, 1)$ lies on line ℓ_3

$828: P_{245904} = (15, 1, 59, 1)$ lies on line ℓ_9

$829: P_{246037} = (20, 3, 59, 1)$ lies on line ℓ_{12}

$830: P_{247585} = (32, 27, 59, 1)$ lies on line ℓ_8

$831: P_{247936} = (63, 32, 59, 1)$ lies on line ℓ_{14}

$832: P_{248069} = (4, 35, 59, 1)$ lies on line ℓ_{10}

$833: P_{248860} = (27, 47, 59, 1)$ lies on line ℓ_6

$834: P_{249201} = (48, 52, 59, 1)$ lies on line ℓ_7

$835: P_{249312} = (31, 54, 59, 1)$ lies on line ℓ_{11}

$836: P_{249397} = (52, 55, 59, 1)$ lies on line ℓ_{13}

$837: P_{249409} = (0, 56, 59, 1)$ lies on line ℓ_4

$838: P_{249473} = (0, 57, 59, 1)$ lies on line ℓ_5

$839: P_{249931} = (10, 0, 60, 1)$ lies on line ℓ_0

$840: P_{249958} = (37, 0, 60, 1)$ lies on line ℓ_1

$841: P_{249967} = (46, 0, 60, 1)$ lies on line ℓ_2

$842: P_{249985} = (0, 1, 60, 1)$ lies on line ℓ_3

$843: P_{250037} = (52, 1, 60, 1)$ lies on line ℓ_{14}

$844: P_{250176} = (63, 3, 60, 1)$ lies on line ℓ_{13}

$845: P_{250296} = (55, 5, 60, 1)$ lies on line ℓ_7

$846: P_{250457} = (24, 8, 60, 1)$ lies on line ℓ_{11}

$847: P_{250628} = (3, 11, 60, 1)$ lies on line ℓ_9

$848: P_{250708} = (19, 12, 60, 1)$ lies on line ℓ_{12}

$849: P_{250761} = (8, 13, 60, 1)$ lies on line ℓ_{10}

$850: P_{253505} = (0, 56, 60, 1)$ lies on line ℓ_4

$851: P_{253569} = (0, 57, 60, 1)$ lies on line ℓ_5

$852: P_{253649} = (16, 58, 60, 1)$ lies on line ℓ_6

$853: P_{253997} = (44, 63, 60, 1)$ lies on line ℓ_8

$854: P_{254027} = (10, 0, 61, 1)$ lies on line ℓ_0

$855: P_{254054} = (37, 0, 61, 1)$ lies on line ℓ_1

$856: P_{254063} = (46, 0, 61, 1)$ lies on line ℓ_2

$857: P_{254081} = (0, 1, 61, 1)$ lies on line ℓ_3

$858: P_{254967} = (54, 14, 61, 1)$ lies on line ℓ_7

$859: P_{255346} = (49, 20, 61, 1)$ lies on line ℓ_{10}

$860: P_{255995} = (58, 30, 61, 1)$ lies on line ℓ_9

$861: P_{256275} = (18, 35, 61, 1)$ lies on line ℓ_{12}

$862: P_{256858} = (25, 44, 61, 1)$ lies on line ℓ_{11}

$863: P_{257224} = (7, 50, 61, 1)$ lies on line ℓ_{13}

$864: P_{257302} = (21, 51, 61, 1)$ lies on line ℓ_8

$865: P_{257549} = (12, 55, 61, 1)$ lies on line ℓ_{14}

$866: P_{257601} = (0, 56, 61, 1)$ lies on line ℓ_4

$867: P_{257665} = (0, 57, 61, 1)$ lies on line ℓ_5

$868: P_{257961} = (40, 61, 61, 1)$ lies on line ℓ_6

$869: P_{258123} = (10, 0, 62, 1)$ lies on line ℓ_0

$870: P_{258150} = (37, 0, 62, 1)$ lies on line ℓ_1

$871: P_{258177} = (0, 1, 62, 1)$ lies on line ℓ_3

$872: P_{258918} = (37, 12, 62, 1)$ lies on line ℓ_{14}

$873: P_{259382} = (53, 19, 62, 1)$ lies on line ℓ_7

$874: P_{260241} = (16, 33, 62, 1)$ lies on line ℓ_9

$875: P_{260251} = (26, 33, 62, 1)$ lies on line ℓ_{11}

$876: P_{260672} = (63, 39, 62, 1)$ lies on line ℓ_8

$877: P_{261394} = (17, 51, 62, 1)$ lies on line ℓ_{12}

$878: P_{261442} = (1, 52, 62, 1)$ lies on line ℓ_6

$879: P_{261697} = (0, 56, 62, 1)$ lies on line ℓ_4

$880: P_{261761} = (0, 57, 62, 1)$ lies on line ℓ_5

$881: P_{262172} = (27, 63, 62, 1)$ lies on line ℓ_{10}

$882: P_{262219} = (10, 0, 63, 1)$ lies on line ℓ_0

$883: P_{262246} = (37, 0, 63, 1)$ lies on line ℓ_1

$884: P_{262255} = (46, 0, 63, 1)$ lies on line ℓ_2

$885: P_{262273} = (0, 1, 63, 1)$ lies on line ℓ_3

$886: P_{262556} = (27, 5, 63, 1)$ lies on line ℓ_{11}

$887: P_{263797} = (52, 24, 63, 1)$ lies on line ℓ_7

$888: P_{264017} = (16, 28, 63, 1)$ lies on line ℓ_{12}

$889: P_{264675} = (34, 38, 63, 1)$ lies on line ℓ_{10}

$890: P_{264967} = (6, 43, 63, 1)$ lies on line ℓ_8

$891: P_{265367} = (22, 49, 63, 1)$ lies on line ℓ_{13}

$892: P_{265530} = (57, 51, 63, 1)$ lies on line ℓ_6

$893: P_{265578} = (41, 52, 63, 1)$ lies on line ℓ_9

$894: P_{265793} = (0, 56, 63, 1)$ lies on line ℓ_4

$895: P_{265857} = (0, 57, 63, 1)$ lies on line ℓ_5

$896: P_{265950} = (29, 58, 63, 1)$ lies on line ℓ_{14}

The single points on the surface are:

Points on surface but on no line

The surface has 3483 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
 --+----------------------------------
 0 |0 1 1 1 1 1 0 0 0 0  1  0  1  0  1
 1 |1 0 1 1 1 1 1 1 1 0  0  0  0  0  0
 2 |1 1 0 1 1 1 0 0 0 1  0  1  0  1  0
 3 |1 1 1 0 1 1 0 1 0 0  0  1  1  0  0
 4 |1 1 1 1 0 1 1 0 0 0  0  0  0  1  1
 5 |1 1 1 1 1 0 0 0 1 1  1  0  0  0  0
 6 |0 1 0 0 1 0 0 0 0 1  1  1  1  0  0
 7 |0 1 0 1 0 0 0 0 0 1  1  0  0  1  1
 8 |0 1 0 0 0 1 0 0 0 0  0  1  1  1  1
 9 |0 0 1 0 0 1 1 1 0 0  0  0  1  0  1
10 |1 0 0 0 0 1 1 1 0 0  0  1  0  1  0
11 |0 0 1 1 0 0 1 0 1 0  1  0  0  0  1
12 |1 0 0 1 0 0 1 0 1 1  0  0  0  1  0
13 |0 0 1 0 1 0 0 1 1 0  1  0  1  0  0
14 |1 0 0 0 1 0 0 1 1 1  0  1  0  0  0
```

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_{10}	ℓ_{12}	ℓ_{14}
in point	P_2	P_2	P_2	P_2	P_2	P_{188491}	P_{155723}	P_{36939}

Line 1 intersects

Line	ℓ_0	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8
in point	P_2	P_2	P_2	P_2	P_2	P_{65638}	P_{192614}	P_{139366}

Line 2 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_4	ℓ_5	ℓ_9	ℓ_{11}	ℓ_{13}
in point	P_2	P_2	P_2	P_2	P_2	P_{217199}	P_{45167}	P_{258159}

Line 3 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_4	ℓ_5	ℓ_7	ℓ_{11}	ℓ_{12}
in point	P_2	P_2	P_2	P_2	P_2	P_{49281}	P_{151681}	P_{196737}

Line 4 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_5	ℓ_6	ℓ_{13}	ℓ_{14}
in point	P_2	P_2	P_2	P_2	P_2	P_{36417}	P_{208449}	P_{228929}

Line 5 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_8	ℓ_9	ℓ_{10}
in point	P_2	P_2	P_2	P_2	P_2	P_{56961}	P_{93825}	P_{110209}

Line 6 intersects

Line	ℓ_1	ℓ_4	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}
in point	P_{65638}	P_{36417}	P_{198867}	P_{152863}	P_{106814}	P_{92731}

Line 7 intersects

Line	ℓ_1	ℓ_3	ℓ_9	ℓ_{10}	ℓ_{13}	ℓ_{14}
in point	P_{192614}	P_{49281}	P_{228094}	P_{206651}	P_{106835}	P_{91295}

Line 8 intersects

Line	ℓ_1	ℓ_5	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}
in point	P_{139366}	P_{56961}	P_{227795}	P_{205023}	P_{199358}	P_{155515}

Line 9 intersects

Line	ℓ_2	ℓ_5	ℓ_6	ℓ_7	ℓ_{12}	ℓ_{14}
in point	P_{217199}	P_{93825}	P_{198867}	P_{228094}	P_{33193}	P_{53028}

Line 10 intersects

Line	ℓ_0	ℓ_5	ℓ_6	ℓ_7	ℓ_{11}	ℓ_{13}
in point	P_{188491}	P_{110209}	P_{152863}	P_{206651}	P_{33892}	P_{51241}

Line 11 intersects

Line	ℓ_2	ℓ_3	ℓ_6	ℓ_8	ℓ_{10}	ℓ_{14}
in point	P_{45167}	P_{151681}	P_{106814}	P_{227795}	P_{33892}	P_{55017}

Line 12 intersects

Line	ℓ_0	ℓ_3	ℓ_6	ℓ_8	ℓ_9	ℓ_{13}
in point	P_{155723}	P_{196737}	P_{92731}	P_{205023}	P_{33193}	P_{56100}

Line 13 intersects

Line	ℓ_2	ℓ_4	ℓ_7	ℓ_8	ℓ_{10}	ℓ_{12}
in point	P_{258159}	P_{208449}	P_{106835}	P_{199358}	P_{51241}	P_{56100}

Line 14 intersects

Line	ℓ_0	ℓ_4	ℓ_7	ℓ_8	ℓ_9	ℓ_{11}
in point	P_{36939}	P_{228929}	P_{91295}	P_{155515}	P_{53028}	P_{55017}

The surface has 4417 points:
Too many to print.