Rank-362 over GF(32)

January 15, 2021

The equation

The equation of the surface is :

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

(1, 1, 1, 1, 1, 0, 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0)
The point rank of the equation over GF(32) is -2111764402

General information

Number of lines	15
Number of points	1185
Number of singular points	0
Number of Eckardt points	15
Number of double points	0
Number of single points	450
Number of points off lines	720
Number of Hesse planes	0
Number of axes	0
Type of points on lines	33^{15}
Type of lines on points	$3^{15}, 1^{450}, 0^{720}$

Singular Points

The surface has 0 singular points:

The 15 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & \eta^{26} & \eta^{14} \\ 0 & 1 & \eta^9 & \eta^{22} \end{bmatrix}_{1005905} = \begin{bmatrix} 1 & 0 & 23 & 29 \\ 0 & 1 & 26 & 21 \end{bmatrix}_{1005905} = \mathbf{Pl}(28, 3, 14, 6, 11, 1)_{412240}$$

$$\ell_1 = \begin{bmatrix} 1 & 0 & \eta^8 & \eta^{17} \\ 0 & 1 & \eta^{16} & \eta^{20} \end{bmatrix}_{656808} = \begin{bmatrix} 1 & 0 & 13 & 19 \\ 0 & 1 & 27 & 12 \end{bmatrix}_{656808} = \mathbf{Pl}(26, 21, 21, 26, 14, 1)_{516801}$$

$$\ell_2 = \begin{bmatrix} 1 & 0 & \eta^{21} & \eta^{28} \\ 0 & 1 & \eta^{18} & \eta^{13} \end{bmatrix}_{770395} = \begin{bmatrix} 1 & 0 & 24 & 22 \\ 0 & 1 & 3 & 28 \end{bmatrix}_{770395} = \mathbf{Pl}(23, 5, 30, 20, 15, 1)_{558183}$$

$$\ell_3 = \begin{bmatrix} 1 & 0 & \eta^{16} & \eta^{3} \\ 0 & 1 & \eta & \eta^{9} \end{bmatrix}_{299965} = \begin{bmatrix} 1 & 0 & 27 & 8 \\ 0 & 1 & 2 & 26 \end{bmatrix}_{299965} = \mathbf{Pl}(3, 28, 28, 3, 30, 1)_{1047436}$$

$$\ell_4 = \begin{bmatrix} 1 & 0 & \eta^{10} & \eta^{8} \\ 0 & 1 & \eta^{21} & \eta^{26} \end{bmatrix}_{458441} = \begin{bmatrix} 1 & 0 & 17 & 13 \\ 0 & 1 & 24 & 23 \end{bmatrix}_{458441} = \mathbf{Pl}(24, 17, 4, 9, 27, 1)_{927332}$$

$$\ell_5 = \begin{bmatrix} 1 & 0 & \eta^{2} & \eta^{12} \\ 0 & 1 & \eta^{4} & \eta^{5} \end{bmatrix}_{477940} = \begin{bmatrix} 1 & 0 & 4 & 14 \\ 0 & 1 & 16 & 5 \end{bmatrix}_{477940} = \mathbf{Pl}(17, 24, 24, 17, 8, 1)_{323817}$$

$$\ell_6 = \begin{bmatrix} 1 & 0 & \eta^{22} & \eta^{19} \\ 0 & 1 & \eta^{10} & \eta^{21} \end{bmatrix}_{225926} = \begin{bmatrix} 1 & 0 & 21 & 6 \\ 0 & 1 & 17 & 24 \end{bmatrix}_{225926} = \mathbf{Pl}(7, 12, 8, 22, 18, 1)_{636070}$$

$$\ell_7 = \begin{bmatrix} 1 & 0 & \eta^{11} & \eta^{25} \\ 0 & 1 & \eta^{5} & \eta^{26} \end{bmatrix}_{853740} = \begin{bmatrix} 1 & 0 & 7 & 25 \\ 0 & 1 & 5 & 23 \end{bmatrix}_{853740} = \mathbf{Pl}(24, 17, 19, 29, 31, 1)_{1072226}$$

$$\ell_8 = \begin{bmatrix} 1 & 0 & \eta & \eta^{6} \\ 0 & 1 & \eta^{2} & \eta^{18} \end{bmatrix}_{340454} = \begin{bmatrix} 1 & 0 & 2 & 10 \\ 0 & 1 & 4 & 3 \end{bmatrix}_{340454} = \mathbf{Pl}(5, 23, 23, 5, 19, 1)_{682537}$$

$$\ell_9 = \begin{bmatrix} 1 & 0 & \eta^{20} & \eta^{16} \\ 0 & 1 & \eta^{11} & \eta^{21} \end{bmatrix}_{926707} = \begin{bmatrix} 1 & 0 & 12 & 27 \\ 0 & 1 & 7 & 24 \end{bmatrix}_{926707} = \mathbf{Pl}(7, 12, 16, 11, 2, 1)_{119734}$$

$$\ell_{10} = \begin{bmatrix} 1 & 0 & \eta^{18} & \eta^{2} \\ 0 & 1 & \eta^{13} & \eta^{22} \end{bmatrix}_{139167} = \begin{bmatrix} 1 & 0 & 3 & 4 \\ 0 & 1 & 28 & 21 \end{bmatrix}_{139167} = \mathbf{Pl}(28, 3, 27, 31, 16, 1)_{588010}$$

$$\ell_{11} = \begin{bmatrix} 1 & 0 & \eta^{5} & \eta^{4} \\ 0 & 1 & \eta^{26} & \eta^{13} \end{bmatrix}_{547388} = \begin{bmatrix} 1 & 0 & 5 & 16 \\ 0 & 1 & 23 & 28 \end{bmatrix}_{547388} = \mathbf{Pl}(23, 5, 2, 18, 13, 1)_{466671}$$

$$\ell_{12} = \begin{bmatrix} 1 & 0 & \eta^{4} & \eta^{24} \\ 0 & 1 & \eta^{8} & \eta^{10} \end{bmatrix}_{1032189} = \begin{bmatrix} 1 & 0 & 16 & 30 \\ 0 & 1 & 13 & 17 \end{bmatrix}_{1032189} = \mathbf{Pl}(12, 7, 7, 12, 10, 1)_{372761}$$

$$\ell_{13} = \begin{bmatrix} 1 & 0 & \eta^{13} & \eta^{7} \\ 0 & 1 & \eta^{20} & \eta^{11} \end{bmatrix}_{706312} = \begin{bmatrix} 1 & 0 & 28 & 20 \\ 0 & 1 & 12 & 7 \end{bmatrix}_{706312} = \mathbf{Pl}(21, 26, 10, 25, 9, 1)_{342979}$$

$$\ell_{14} = \begin{bmatrix} 1 & 0 & \eta^{9} & \eta \\ 0 & 1 & \eta^{22} & \eta^{11} \end{bmatrix}_{95375} = \begin{bmatrix} 1 & 0 & 26 & 2 \\ 0 & 1 & 21 & 7 \end{bmatrix}_{95375} = \mathbf{Pl}(21, 26, 13, 15, 4, 1)_{182089}$$

Rank of lines: (1005905, 656808, 770395, 299965, 458441, 477940, 225926, 853740, 340454, 926707, 139167, 547388, 1032189, 706312, 95375)
Rank of points on Klein quadric: (412240, 516801, 558183, 1047436, 927332, 323817, 636070, 1072226, 682537, 119734, 588010, 466671, 372761, 342979, 182089)

Eckardt Points

The surface has 15 Eckardt points:
$0 : P_{4054} = \mathbf{P}(\eta^{22}, \eta^{14}, \eta, 1) = \mathbf{P}(21, 29, 2, 1)$,
$1 : P_{5885} = \mathbf{P}(\eta^{13}, \eta^{28}, \eta^{2}, 1) = \mathbf{P}(28, 22, 4, 1)$,
$2 : P_{7612} = \mathbf{P}(\eta^{16}, \eta^{20}, \eta^{19}, 1) = \mathbf{P}(27, 12, 6, 1)$,
$3 : P_{10643} = \mathbf{P}(\eta^{30}, \eta^{27}, \eta^{29}, 1) = \mathbf{P}(18, 11, 9, 1)$,
$4 : P_{12810} = \mathbf{P}(\eta^{29}, \eta^{23}, \eta^{27}, 1) = \mathbf{P}(9, 15, 11, 1)$,
$5 : P_{14585} = \mathbf{P}(\eta^{21}, \eta^{19}, \eta^{8}, 1) = \mathbf{P}(24, 6, 13, 1)$,
$6 : P_{17420} = \mathbf{P}(\eta^{27}, \eta^{15}, \eta^{23}, 1) = \mathbf{P}(11, 31, 15, 1)$,
$7 : P_{18264} = \mathbf{P}(\eta^{26}, \eta^{25}, \eta^{4}, 1) = \mathbf{P}(23, 25, 16, 1)$,
$8 : P_{19808} = \mathbf{P}(\eta^{15}, \eta^{29}, \eta^{30}, 1) = \mathbf{P}(31, 9, 18, 1)$,
$9 : P_{22371} = \mathbf{P}(\eta, \eta^{9}, \eta^{7}, 1) = \mathbf{P}(2, 26, 20, 1)$,
$10 : P_{23761} = \mathbf{P}(\eta^{4}, \eta^{5}, \eta^{28}, 1) = \mathbf{P}(16, 5, 22, 1)$,
$11 : P_{27214} = \mathbf{P}(\eta^{8}, \eta^{10}, \eta^{25}, 1) = \mathbf{P}(13, 17, 25, 1)$,

$12 : P_{29352} = \mathbf{P}(\eta^{11}, \eta^7, \eta^{16}, 1) = \mathbf{P}(7, 20, 27, 1),$
$13 : P_{30853} = \mathbf{P}(\eta^2, \eta^{18}, \eta^{14}, 1) = \mathbf{P}(4, 3, 29, 1),$
$14 : P_{33392} = \mathbf{P}(\eta^{23}, \eta^{30}, \eta^{15}, 1) = \mathbf{P}(15, 18, 31, 1).$

Double Points

The surface has 0 Double points:
The double points on the surface are:

Single Points

The surface has 450 single points:
The single points on the surface are:

$0 : P_{125} = (26, 2, 1, 0)$ lies on line ℓ_0

$1 : P_{155} = (24, 3, 1, 0)$ lies on line ℓ_1

$2 : P_{166} = (3, 4, 1, 0)$ lies on line ℓ_2

$3 : P_{202} = (7, 5, 1, 0)$ lies on line ℓ_3

$4 : P_{237} = (10, 6, 1, 0)$ lies on line ℓ_4

$5 : P_{447} = (28, 12, 1, 0)$ lies on line ℓ_5

$6 : P_{468} = (17, 13, 1, 0)$ lies on line ℓ_6

$7 : P_{552} = (5, 16, 1, 0)$ lies on line ℓ_7

$8 : P_{600} = (21, 17, 1, 0)$ lies on line ℓ_8

$9 : P_{689} = (14, 20, 1, 0)$ lies on line ℓ_9

$10 : P_{758} = (19, 22, 1, 0)$ lies on line ℓ_{10}

$11 : P_{843} = (8, 25, 1, 0)$ lies on line ℓ_{11}

$12 : P_{890} = (23, 26, 1, 0)$ lies on line ℓ_{12}

$13 : P_{911} = (12, 27, 1, 0)$ lies on line ℓ_{13}

$14 : P_{993} = (30, 29, 1, 0)$ lies on line ℓ_{14}

$15 : P_{1162} = (8, 3, 0, 1)$ lies on line ℓ_3

$16 : P_{1228} = (10, 5, 0, 1)$ lies on line ℓ_8

$17 : P_{1286} = (4, 7, 0, 1)$ lies on line ℓ_9

$18 : P_{1300} = (18, 7, 0, 1)$ lies on line ℓ_6

$19 : P_{1472} = (30, 12, 0, 1)$ lies on line ℓ_{12}

$20 : P_{1616} = (14, 17, 0, 1)$ lies on line ℓ_5

$21 : P_{1739} = (9, 21, 0, 1)$ lies on line ℓ_{13}

$22 : P_{1746} = (16, 21, 0, 1)$ lies on line ℓ_{14}

$23 : P_{1809} = (15, 23, 0, 1)$ lies on line ℓ_2

$24 : P_{1821} = (27, 23, 0, 1)$ lies on line ℓ_{11}

$25 : P_{1828} = (2, 24, 0, 1)$ lies on line ℓ_4

$26 : P_{1857} = (31, 24, 0, 1)$ lies on line ℓ_7

$27 : P_{1909} = (19, 26, 0, 1)$ lies on line ℓ_1

$28 : P_{1965} = (11, 28, 0, 1)$ lies on line ℓ_0

$29 : P_{1967} = (13, 28, 0, 1)$ lies on line ℓ_{10}

$30 : P_{2288} = (15, 6, 1, 1)$ lies on line ℓ_3

$31 : P_{2351} = (14, 8, 1, 1)$ lies on line ℓ_{14}

$32 : P_{2363} = (26, 8, 1, 1)$ lies on line ℓ_7

$33 : P_{2404} = (3, 10, 1, 1)$ lies on line ℓ_6

$34 : P_{2431} = (30, 10, 1, 1)$ lies on line ℓ_{10}

$35 : P_{2534} = (5, 14, 1, 1)$ lies on line ℓ_{13}

$36 : P_{2548} = (19, 14, 1, 1)$ lies on line ℓ_{11}

$37 : P_{2699} = (10, 19, 1, 1)$ lies on line ℓ_9

$38 : P_{2701} = (12, 19, 1, 1)$ lies on line ℓ_2

$39 : P_{2752} = (31, 20, 1, 1)$ lies on line ℓ_8

$40 : P_{2794} = (9, 22, 1, 1)$ lies on line ℓ_{12}

$41 : P_{2892} = (11, 25, 1, 1)$ lies on line ℓ_1

$42 : P_{3027} = (18, 29, 1, 1)$ lies on line ℓ_5

$43 : P_{3049} = (8, 30, 1, 1)$ lies on line ℓ_4

$44 : P_{3058} = (17, 30, 1, 1)$ lies on line ℓ_0

$45 : P_{3116} = (11, 0, 2, 1)$ lies on line ℓ_{11}

$46 : P_{3174} = (5, 2, 2, 1)$ lies on line ℓ_8

$47 : P_{3314} = (17, 6, 2, 1)$ lies on line ℓ_{13}

$48 : P_{3399} = (6, 9, 2, 1)$ lies on line ℓ_3

$49 : P_{3412} = (19, 9, 2, 1)$ lies on line ℓ_5

$50 : P_{3434} = (9, 10, 2, 1)$ lies on line ℓ_{14}

$51 : P_{3449} = (24, 10, 2, 1)$ lies on line ℓ_9

$52 : P_{3767} = (22, 20, 2, 1)$ lies on line ℓ_4

$53 : P_{3791} = (14, 21, 2, 1)$ lies on line ℓ_{10}

$54 : P_{3899} = (26, 24, 2, 1)$ lies on line ℓ_0

$55 : P_{4007} = (6, 28, 2, 1)$ lies on line ℓ_1

$56 : P_{4106} = (9, 31, 2, 1)$ lies on line ℓ_2

$57 : P_{4254} = (29, 3, 3, 1)$ lies on line ℓ_{10}

$58 : P_{4304} = (15, 5, 3, 1)$ lies on line ℓ_5

$59 : P_{4355} = (2, 7, 3, 1)$ lies on line ℓ_{12}

$60 : P_{4514} = (1, 12, 3, 1)$ lies on line ℓ_3

$61 : P_{4561} = (16, 13, 3, 1)$ lies on line ℓ_7

$62 : P_{4645} = (4, 16, 3, 1)$ lies on line ℓ_6

$63 : P_{4733} = (28, 18, 3, 1)$ lies on line ℓ_4

$64 : P_{4753} = (16, 19, 3, 1)$ lies on line ℓ_8

$65 : P_{4888} = (23, 23, 3, 1)$ lies on line ℓ_{14}

$66 : P_{4932} = (3, 25, 3, 1)$ lies on line ℓ_{11}

$67 : P_{4961} = (0, 26, 3, 1)$ lies on line ℓ_0

$68 : P_{5003} = (10, 27, 3, 1)$ lies on line ℓ_2

$69 : P_{5086} = (29, 29, 3, 1)$ lies on line ℓ_{13}

$70 : P_{5111} = (22, 30, 3, 1)$ lies on line ℓ_9

$71 : P_{5151} = (30, 31, 3, 1)$ lies on line ℓ_1

$72: P_{5168} = (15, 0, 4, 1)$ lies on line ℓ_4

$73: P_{5298} = (17, 4, 4, 1)$ lies on line ℓ_5

$74: P_{5380} = (3, 7, 4, 1)$ lies on line ℓ_2

$75: P_{5513} = (8, 11, 4, 1)$ lies on line ℓ_{12}

$76: P_{5525} = (20, 11, 4, 1)$ lies on line ℓ_8

$77: P_{5608} = (7, 14, 4, 1)$ lies on line ℓ_{14}

$78: P_{5612} = (11, 14, 4, 1)$ lies on line ℓ_{10}

$79: P_{5740} = (11, 18, 4, 1)$ lies on line ℓ_7

$80: P_{5805} = (12, 20, 4, 1)$ lies on line ℓ_0

$81: P_{5909} = (20, 23, 4, 1)$ lies on line ℓ_3

$82: P_{6079} = (30, 28, 4, 1)$ lies on line ℓ_{11}

$83: P_{6106} = (25, 29, 4, 1)$ lies on line ℓ_9

$84: P_{6255} = (14, 2, 5, 1)$ lies on line ℓ_7

$85: P_{6273} = (0, 3, 5, 1)$ lies on line ℓ_2

$86: P_{6359} = (22, 5, 5, 1)$ lies on line ℓ_{11}

$87: P_{6374} = (5, 6, 5, 1)$ lies on line ℓ_4

$88: P_{6446} = (13, 8, 5, 1)$ lies on line ℓ_5

$89: P_{6488} = (23, 9, 5, 1)$ lies on line ℓ_9

$90: P_{6609} = (16, 13, 5, 1)$ lies on line ℓ_{13}

$91: P_{6752} = (31, 17, 5, 1)$ lies on line ℓ_{12}

$92: P_{6772} = (19, 18, 5, 1)$ lies on line ℓ_3

$93: P_{6810} = (25, 19, 5, 1)$ lies on line ℓ_{14}

$94: P_{6853} = (4, 21, 5, 1)$ lies on line ℓ_1

$95: P_{6903} = (22, 22, 5, 1)$ lies on line ℓ_0

$96: P_{6969} = (24, 24, 5, 1)$ lies on line ℓ_{10}

$97: P_{7010} = (1, 26, 5, 1)$ lies on line ℓ_8

$98: P_{7054} = (13, 27, 5, 1)$ lies on line ℓ_6

$99: P_{7365} = (4, 5, 6, 1)$ lies on line ℓ_{13}

$100: P_{7433} = (8, 7, 6, 1)$ lies on line ℓ_{10}

$101: P_{7567} = (14, 11, 6, 1)$ lies on line ℓ_{11}

$102: P_{7686} = (5, 15, 6, 1)$ lies on line ℓ_2

$103: P_{7718} = (5, 16, 6, 1)$ lies on line ℓ_9

$104: P_{7722} = (9, 16, 6, 1)$ lies on line ℓ_1

$105: P_{7742} = (29, 16, 6, 1)$ lies on line ℓ_0

$106: P_{7775} = (30, 17, 6, 1)$ lies on line ℓ_{14}

$107: P_{7938} = (1, 23, 6, 1)$ lies on line ℓ_7

$108: P_{8036} = (3, 26, 6, 1)$ lies on line ℓ_{12}

$109: P_{8109} = (12, 28, 6, 1)$ lies on line ℓ_5

$110: P_{8155} = (26, 29, 6, 1)$ lies on line ℓ_3

$111: P_{8245} = (20, 0, 7, 1)$ lies on line ℓ_{12}

$112: P_{8267} = (10, 1, 7, 1)$ lies on line ℓ_6

$113: P_{8364} = (11, 4, 7, 1)$ lies on line ℓ_9

$114: P_{8453} = (4, 7, 7, 1)$ lies on line ℓ_7

$115: P_{8562} = (17, 10, 7, 1)$ lies on line ℓ_4

$116: P_{8583} = (6, 11, 7, 1)$ lies on line ℓ_2

$117: P_{8609} = (0, 12, 7, 1)$ lies on line ℓ_{14}

$118: P_{8753} = (16, 16, 7, 1)$ lies on line ℓ_5

$119: P_{8796} = (27, 17, 7, 1)$ lies on line ℓ_{10}

$120: P_{8807} = (6, 18, 7, 1)$ lies on line ℓ_{11}

$121: P_{8808} = (7, 18, 7, 1)$ lies on line ℓ_0

$122: P_{8850} = (17, 19, 7, 1)$ lies on line ℓ_1

$123: P_{9022} = (29, 24, 7, 1)$ lies on line ℓ_3

$124: P_{9167} = (14, 29, 7, 1)$ lies on line ℓ_8

$125: P_{9193} = (8, 30, 7, 1)$ lies on line ℓ_{13}

$126: P_{9263} = (14, 0, 8, 1)$ lies on line ℓ_6

$127: P_{9298} = (17, 1, 8, 1)$ lies on line ℓ_{11}

$128: P_{9326} = (13, 2, 8, 1)$ lies on line ℓ_1

$129: P_{9336} = (23, 2, 8, 1)$ lies on line ℓ_{12}

$130: P_{9468} = (27, 6, 8, 1)$ lies on line ℓ_{14}

$131: P_{9638} = (5, 12, 8, 1)$ lies on line ℓ_0

$132: P_{9651} = (18, 12, 8, 1)$ lies on line ℓ_7

$133: P_{9689} = (24, 13, 8, 1)$ lies on line ℓ_4

$134: P_{9718} = (21, 14, 8, 1)$ lies on line ℓ_3

$135: P_{9848} = (23, 18, 8, 1)$ lies on line ℓ_2

$136: P_{9863} = (6, 19, 8, 1)$ lies on line ℓ_{13}

$137: P_{9980} = (27, 22, 8, 1)$ lies on line ℓ_9

$138: P_{10068} = (19, 25, 8, 1)$ lies on line ℓ_8

$139: P_{10178} = (1, 29, 8, 1)$ lies on line ℓ_{10}

$140: P_{10230} = (21, 30, 8, 1)$ lies on line ℓ_5

$141: P_{10326} = (21, 1, 9, 1)$ lies on line ℓ_1

$142: P_{10358} = (21, 2, 9, 1)$ lies on line ℓ_9

$143: P_{10535} = (6, 8, 9, 1)$ lies on line ℓ_8

$144: P_{10539} = (10, 8, 9, 1)$ lies on line ℓ_{13}

$145: P_{10720} = (31, 13, 9, 1)$ lies on line ℓ_6

$146: P_{10752} = (31, 14, 9, 1)$ lies on line ℓ_0

$147: P_{10858} = (9, 18, 9, 1)$ lies on line ℓ_5

$148: P_{10997} = (20, 22, 9, 1)$ lies on line ℓ_2

$149: P_{11041} = (0, 24, 9, 1)$ lies on line ℓ_{12}

$150: P_{11066} = (25, 24, 9, 1)$ lies on line ℓ_{11}

$151: P_{11142} = (5, 27, 9, 1)$ lies on line ℓ_{14}

$152: P_{11192} = (23, 28, 9, 1)$ lies on line ℓ_7

$153: P_{11327} = (30, 0, 10, 1)$ lies on line ℓ_{13}

$154: P_{11341} = (12, 1, 10, 1)$ lies on line ℓ_4

$155: P_{11449} = (24, 4, 10, 1)$ lies on line ℓ_1

$156: P_{11452} = (27, 4, 10, 1)$ lies on line ℓ_3

$157: P_{11497} = (8, 6, 10, 1)$ lies on line ℓ_5

$158: P_{11573} = (20, 8, 10, 1)$ lies on line ℓ_0

$159: P_{11609} = (24, 9, 10, 1)$ lies on line ℓ_7

$160: P_{11933} = (28, 19, 10, 1)$ lies on line ℓ_{12}

$161: P_{11939} = (2, 20, 10, 1)$ lies on line ℓ_{10}

$162: P_{12002} = (1, 22, 10, 1)$ lies on line ℓ_{11}

$163: P_{12099} = (2, 25, 10, 1)$ lies on line ℓ_{14}

$164: P_{12138} = (9, 26, 10, 1)$ lies on line ℓ_6

$165: P_{12146} = (17, 26, 10, 1)$ lies on line ℓ_2

$166: P_{12168} = (7, 27, 10, 1)$ lies on line ℓ_9

$167: P_{12285} = (28, 30, 10, 1)$ lies on line ℓ_8

$168: P_{12381} = (28, 1, 11, 1)$ lies on line ℓ_3

$169: P_{12402} = (17, 2, 11, 1)$ lies on line ℓ_{10}

$170: P_{12477} = (28, 4, 11, 1)$ lies on line ℓ_{14}

$171: P_{12545} = (0, 7, 11, 1)$ lies on line ℓ_1

$172: P_{12551} = (6, 7, 11, 1)$ lies on line ℓ_4

$173: P_{12620} = (11, 9, 11, 1)$ lies on line ℓ_{12}

$174: P_{12655} = (14, 10, 11, 1)$ lies on line ℓ_0

$175: P_{12661} = (20, 10, 11, 1)$ lies on line ℓ_5

$176: P_{13081} = (24, 23, 11, 1)$ lies on line ℓ_6

$177: P_{13150} = (29, 25, 11, 1)$ lies on line ℓ_7

$178: P_{13203} = (18, 27, 11, 1)$ lies on line ℓ_{13}

$179: P_{13299} = (18, 30, 11, 1)$ lies on line ℓ_2

$180 : P_{13436} = (27, 2, 12, 1)$ lies on line ℓ_2

$181 : P_{13475} = (2, 4, 12, 1)$ lies on line ℓ_0

$182 : P_{13506} = (1, 5, 12, 1)$ lies on line ℓ_{12}

$183 : P_{13543} = (6, 6, 12, 1)$ lies on line ℓ_7

$184 : P_{13685} = (20, 10, 12, 1)$ lies on line ℓ_{11}

$185 : P_{13707} = (10, 11, 12, 1)$ lies on line ℓ_5

$186 : P_{13735} = (6, 12, 12, 1)$ lies on line ℓ_9

$187 : P_{13795} = (2, 14, 12, 1)$ lies on line ℓ_1

$188 : P_{13832} = (7, 15, 12, 1)$ lies on line ℓ_{10}

$189 : P_{13876} = (19, 16, 12, 1)$ lies on line ℓ_{13}

$190 : P_{13889} = (0, 17, 12, 1)$ lies on line ℓ_6

$191 : P_{14038} = (21, 21, 12, 1)$ lies on line ℓ_4

$192 : P_{14094} = (13, 23, 12, 1)$ lies on line ℓ_8

$193 : P_{14186} = (9, 26, 12, 1)$ lies on line ℓ_3

$194 : P_{14285} = (12, 29, 12, 1)$ lies on line ℓ_{14}

$195 : P_{14387} = (18, 0, 13, 1)$ lies on line ℓ_{14}

$196 : P_{14615} = (22, 7, 13, 1)$ lies on line ℓ_5

$197 : P_{14752} = (31, 11, 13, 1)$ lies on line ℓ_{13}

$198 : P_{14811} = (26, 13, 13, 1)$ lies on line ℓ_1

$199 : P_{15005} = (28, 19, 13, 1)$ lies on line ℓ_{11}

$200 : P_{15008} = (31, 19, 13, 1)$ lies on line ℓ_4

$201 : P_{15076} = (3, 22, 13, 1)$ lies on line ℓ_7

$202 : P_{15145} = (8, 24, 13, 1)$ lies on line ℓ_9

$203 : P_{15189} = (20, 25, 13, 1)$ lies on line ℓ_{10}

$204 : P_{15282} = (17, 28, 13, 1)$ lies on line ℓ_6

$205 : P_{15375} = (14, 31, 13, 1)$ lies on line ℓ_3

$206 : P_{15383} = (22, 31, 13, 1)$ lies on line ℓ_{12}

$207 : P_{15412} = (19, 0, 14, 1)$ lies on line ℓ_0

$208 : P_{15451} = (26, 1, 14, 1)$ lies on line ℓ_9

$209 : P_{15478} = (21, 2, 14, 1)$ lies on line ℓ_{14}

$210 : P_{15500} = (11, 3, 14, 1)$ lies on line ℓ_{13}

$211 : P_{15501} = (12, 3, 14, 1)$ lies on line ℓ_7

$212 : P_{15589} = (4, 6, 14, 1)$ lies on line ℓ_{10}

$213 : P_{15672} = (23, 8, 14, 1)$ lies on line ℓ_1

$214 : P_{15742} = (29, 10, 14, 1)$ lies on line ℓ_2

$215 : P_{15752} = (7, 11, 14, 1)$ lies on line ℓ_6

$216 : P_{15907} = (2, 16, 14, 1)$ lies on line ℓ_8

$217 : P_{15912} = (7, 16, 14, 1)$ lies on line ℓ_3

$218 : P_{16024} = (23, 19, 14, 1)$ lies on line ℓ_5

$219 : P_{16043} = (10, 20, 14, 1)$ lies on line ℓ_{12}

$220 : P_{16194} = (1, 25, 14, 1)$ lies on line ℓ_4

$221 : P_{16325} = (4, 29, 14, 1)$ lies on line ℓ_{11}

$222 : P_{16472} = (23, 1, 15, 1)$ lies on line ℓ_8

$223 : P_{16490} = (9, 2, 15, 1)$ lies on line ℓ_0

$224 : P_{16557} = (12, 4, 15, 1)$ lies on line ℓ_{11}

$225 : P_{16631} = (22, 6, 15, 1)$ lies on line ℓ_6

$226 : P_{16784} = (15, 11, 15, 1)$ lies on line ℓ_1

$227 : P_{16894} = (29, 14, 15, 1)$ lies on line ℓ_{12}

$228 : P_{16895} = (30, 14, 15, 1)$ lies on line ℓ_2

$229 : P_{16952} = (23, 16, 15, 1)$ lies on line ℓ_{10}

$230 : P_{17034} = (9, 19, 15, 1)$ lies on line ℓ_7

$231 : P_{17089} = (0, 21, 15, 1)$ lies on line ℓ_3

$232 : P_{17109} = (20, 21, 15, 1)$ lies on line ℓ_9

$233 : P_{17192} = (7, 24, 15, 1)$ lies on line ℓ_{13}

$234 : P_{17472} = (31, 0, 16, 1)$ lies on line ℓ_9

$235 : P_{17744} = (15, 9, 16, 1)$ lies on line ℓ_6

$236 : P_{17931} = (10, 15, 16, 1)$ lies on line ℓ_1

$237 : P_{17950} = (29, 15, 16, 1)$ lies on line ℓ_5

$238 : P_{17965} = (12, 16, 16, 1)$ lies on line ℓ_{12}

$239 : P_{18118} = (5, 21, 16, 1)$ lies on line ℓ_7

$240 : P_{18151} = (6, 22, 16, 1)$ lies on line ℓ_{14}

$241 : P_{18196} = (19, 23, 16, 1)$ lies on line ℓ_4

$242 : P_{18238} = (29, 24, 16, 1)$ lies on line ℓ_8

$243 : P_{18395} = (26, 29, 16, 1)$ lies on line ℓ_2

$244 : P_{18416} = (15, 30, 16, 1)$ lies on line ℓ_{11}

$245 : P_{18422} = (21, 30, 16, 1)$ lies on line ℓ_{10}

$246 : P_{18556} = (27, 2, 17, 1)$ lies on line ℓ_{13}

$247 : P_{18562} = (1, 3, 17, 1)$ lies on line ℓ_5

$248 : P_{18623} = (30, 4, 17, 1)$ lies on line ℓ_6

$249 : P_{18625} = (0, 5, 17, 1)$ lies on line ℓ_7

$250 : P_{18696} = (7, 7, 17, 1)$ lies on line ℓ_{11}

$251 : P_{18727} = (6, 8, 17, 1)$ lies on line ℓ_{10}

$252 : P_{18761} = (8, 9, 17, 1)$ lies on line ℓ_8

$253 : P_{18812} = (27, 10, 17, 1)$ lies on line ℓ_{12}

$254 : P_{18841} = (24, 11, 17, 1)$ lies on line ℓ_{14}

$255 : P_{18867} = (18, 12, 17, 1)$ lies on line ℓ_1

$256 : P_{19034} = (25, 17, 17, 1)$ lies on line ℓ_4

$257 : P_{19122} = (17, 20, 17, 1)$ lies on line ℓ_9

$258 : P_{19290} = (25, 25, 17, 1)$ lies on line ℓ_2

$259 : P_{19342} = (13, 27, 17, 1)$ lies on line ℓ_0

$260 : P_{19377} = (16, 28, 17, 1)$ lies on line ℓ_3

$261 : P_{19528} = (7, 1, 18, 1)$ lies on line ℓ_{12}

$262 : P_{19824} = (15, 10, 18, 1)$ lies on line ℓ_{13}

$263 : P_{19908} = (3, 13, 18, 1)$ lies on line ℓ_9

$264 : P_{20016} = (15, 16, 18, 1)$ lies on line ℓ_7

$265 : P_{20105} = (8, 19, 18, 1)$ lies on line ℓ_6

$266 : P_{20122} = (25, 19, 18, 1)$ lies on line ℓ_3

$267 : P_{20189} = (28, 21, 18, 1)$ lies on line ℓ_2

$268 : P_{20225} = (0, 23, 18, 1)$ lies on line ℓ_5

$269 : P_{20247} = (22, 23, 18, 1)$ lies on line ℓ_{10}

$270 : P_{20360} = (7, 27, 18, 1)$ lies on line ℓ_4

$271 : P_{20423} = (6, 29, 18, 1)$ lies on line ℓ_0

$272 : P_{20499} = (18, 31, 18, 1)$ lies on line ℓ_8

$273 : P_{20523} = (10, 0, 19, 1)$ lies on line ℓ_7

$274 : P_{20550} = (5, 1, 19, 1)$ lies on line ℓ_{10}

$275 : P_{20840} = (7, 10, 19, 1)$ lies on line ℓ_1

$276 : P_{20968} = (7, 14, 19, 1)$ lies on line ℓ_8

$277 : P_{21048} = (23, 16, 19, 1)$ lies on line ℓ_{11}

$278 : P_{21060} = (3, 17, 19, 1)$ lies on line ℓ_{13}

$279 : P_{21088} = (31, 17, 19, 1)$ lies on line ℓ_2

$280 : P_{21154} = (1, 20, 19, 1)$ lies on line ℓ_{14}

$281 : P_{21247} = (30, 22, 19, 1)$ lies on line ℓ_3

$282 : P_{21326} = (13, 25, 19, 1)$ lies on line ℓ_9

$283 : P_{21393} = (16, 27, 19, 1)$ lies on line ℓ_{12}

$284 : P_{21405} = (28, 27, 19, 1)$ lies on line ℓ_5

$285 : P_{21454} = (13, 29, 19, 1)$ lies on line ℓ_4

$286 : P_{21498} = (25, 30, 19, 1)$ lies on line ℓ_6

$287 : P_{21533} = (28, 31, 19, 1)$ lies on line ℓ_0

$288: P_{21638} = (5, 3, 20, 1)$ lies on line ℓ_1

$289: P_{21940} = (19, 12, 20, 1)$ lies on line ℓ_{10}

$290: P_{21964} = (11, 13, 20, 1)$ lies on line ℓ_3

$291: P_{21970} = (17, 13, 20, 1)$ lies on line ℓ_{14}

$292: P_{21975} = (22, 13, 20, 1)$ lies on line ℓ_2

$293: P_{22047} = (30, 15, 20, 1)$ lies on line ℓ_4

$294: P_{22097} = (16, 17, 20, 1)$ lies on line ℓ_0

$295: P_{22219} = (10, 21, 20, 1)$ lies on line ℓ_{11}

$296: P_{22244} = (3, 22, 20, 1)$ lies on line ℓ_8

$297: P_{22299} = (26, 23, 20, 1)$ lies on line ℓ_{12}

$298: P_{22306} = (1, 24, 20, 1)$ lies on line ℓ_6

$299: P_{22546} = (17, 31, 20, 1)$ lies on line ℓ_7

$300: P_{22590} = (29, 0, 21, 1)$ lies on line ℓ_1

$301: P_{22607} = (14, 1, 21, 1)$ lies on line ℓ_{13}

$302: P_{22807} = (22, 7, 21, 1)$ lies on line ℓ_8

$303: P_{22829} = (12, 8, 21, 1)$ lies on line ℓ_3

$304: P_{22869} = (20, 9, 21, 1)$ lies on line ℓ_4

$305: P_{22870} = (21, 9, 21, 1)$ lies on line ℓ_2

$306: P_{22947} = (2, 12, 21, 1)$ lies on line ℓ_{11}

$307: P_{22990} = (13, 13, 21, 1)$ lies on line ℓ_{12}

$308: P_{23021} = (12, 14, 21, 1)$ lies on line ℓ_9

$309: P_{23061} = (20, 15, 21, 1)$ lies on line ℓ_7

$310: P_{23088} = (15, 16, 21, 1)$ lies on line ℓ_{14}

$311: P_{23179} = (10, 19, 21, 1)$ lies on line ℓ_0

$312: P_{23249} = (16, 21, 21, 1)$ lies on line ℓ_6

$313: P_{23295} = (30, 22, 21, 1)$ lies on line ℓ_5

$314: P_{23393} = (0, 26, 21, 1)$ lies on line ℓ_{10}

$315: P_{23655} = (6, 2, 22, 1)$ lies on line ℓ_6

$316: P_{23675} = (26, 2, 22, 1)$ lies on line ℓ_{11}

$317: P_{23680} = (31, 2, 22, 1)$ lies on line ℓ_5

$318: P_{23691} = (10, 3, 22, 1)$ lies on line ℓ_4

$319: P_{23794} = (17, 6, 22, 1)$ lies on line ℓ_{12}

$320: P_{23814} = (5, 7, 22, 1)$ lies on line ℓ_3

$321: P_{23899} = (26, 9, 22, 1)$ lies on line ℓ_{13}

$322: P_{24141} = (12, 17, 22, 1)$ lies on line ℓ_8

$323: P_{24169} = (8, 18, 22, 1)$ lies on line ℓ_{14}

$324: P_{24258} = (1, 21, 22, 1)$ lies on line ℓ_0

$325: P_{24351} = (30, 23, 22, 1)$ lies on line ℓ_9

$326: P_{24444} = (27, 26, 22, 1)$ lies on line ℓ_7

$327: P_{24634} = (25, 0, 23, 1)$ lies on line ℓ_8

$328: P_{24660} = (19, 1, 23, 1)$ lies on line ℓ_2

$329: P_{24675} = (2, 2, 23, 1)$ lies on line ℓ_3

$330: P_{24721} = (16, 3, 23, 1)$ lies on line ℓ_9

$331: P_{24769} = (0, 5, 23, 1)$ lies on line ℓ_4

$332: P_{24809} = (8, 6, 23, 1)$ lies on line ℓ_1

$333: P_{24959} = (30, 10, 23, 1)$ lies on line ℓ_7

$334: P_{25060} = (3, 14, 23, 1)$ lies on line ℓ_5

$335: P_{25111} = (22, 15, 23, 1)$ lies on line ℓ_{14}

$336: P_{25112} = (23, 15, 23, 1)$ lies on line ℓ_6

$337: P_{25207} = (22, 18, 23, 1)$ lies on line ℓ_{13}

$338: P_{25220} = (3, 19, 23, 1)$ lies on line ℓ_{10}

$339: P_{25372} = (27, 23, 23, 1)$ lies on line ℓ_0

$340: P_{25491} = (18, 27, 23, 1)$ lies on line ℓ_{11}

$341: P_{25511} = (6, 28, 23, 1)$ lies on line ℓ_{12}

$342: P_{25639} = (6, 0, 24, 1)$ lies on line ℓ_5

$343: P_{25673} = (8, 1, 24, 1)$ lies on line ℓ_7

$344: P_{25706} = (9, 2, 24, 1)$ lies on line ℓ_4

$345: P_{25765} = (4, 4, 24, 1)$ lies on line ℓ_8

$346: P_{25806} = (13, 5, 24, 1)$ lies on line ℓ_{14}

$347: P_{25894} = (5, 8, 24, 1)$ lies on line ℓ_{11}

$348: P_{25946} = (25, 9, 24, 1)$ lies on line ℓ_0

$349: P_{26100} = (19, 14, 24, 1)$ lies on line ℓ_6

$350: P_{26177} = (0, 17, 24, 1)$ lies on line ℓ_9

$351: P_{26283} = (10, 20, 24, 1)$ lies on line ℓ_3

$352: P_{26389} = (20, 23, 24, 1)$ lies on line ℓ_1

$353: P_{26403} = (2, 24, 24, 1)$ lies on line ℓ_2

$354: P_{26598} = (5, 30, 24, 1)$ lies on line ℓ_{12}

$355: P_{26649} = (24, 31, 24, 1)$ lies on line ℓ_{13}

$356: P_{26650} = (25, 31, 24, 1)$ lies on line ℓ_{10}

$357: P_{26755} = (2, 3, 25, 1)$ lies on line ℓ_6

$358: P_{26788} = (3, 4, 25, 1)$ lies on line ℓ_4

$359: P_{26803} = (18, 4, 25, 1)$ lies on line ℓ_{12}

$360: P_{26805} = (20, 4, 25, 1)$ lies on line ℓ_{13}

$361: P_{26831} = (14, 5, 25, 1)$ lies on line ℓ_9

$362: P_{26955} = (10, 9, 25, 1)$ lies on line ℓ_{10}

$363: P_{27012} = (3, 11, 25, 1)$ lies on line ℓ_0

$364: P_{27067} = (26, 12, 25, 1)$ lies on line ℓ_5

$365: P_{27309} = (12, 20, 25, 1)$ lies on line ℓ_1

$366: P_{27346} = (17, 21, 25, 1)$ lies on line ℓ_8

$367: P_{27444} = (19, 24, 25, 1)$ lies on line ℓ_{14}

$368: P_{27554} = (1, 28, 25, 1)$ lies on line ℓ_2

$369: P_{27788} = (11, 3, 26, 1)$ lies on line ℓ_8

$370: P_{27811} = (2, 4, 26, 1)$ lies on line ℓ_7

$371: P_{28065} = (0, 12, 26, 1)$ lies on line ℓ_{13}

$372: P_{28105} = (8, 13, 26, 1)$ lies on line ℓ_0

$373: P_{28158} = (29, 14, 26, 1)$ lies on line ℓ_4

$374: P_{28175} = (14, 15, 26, 1)$ lies on line ℓ_{12}

$375: P_{28197} = (4, 16, 26, 1)$ lies on line ℓ_2

$376: P_{28226} = (1, 17, 26, 1)$ lies on line ℓ_1

$377: P_{28341} = (20, 20, 26, 1)$ lies on line ℓ_6

$378: P_{28411} = (26, 22, 26, 1)$ lies on line ℓ_{10}

$379: P_{28476} = (27, 24, 26, 1)$ lies on line ℓ_5

$380: P_{28533} = (20, 26, 26, 1)$ lies on line ℓ_{14}

$381: P_{28605} = (28, 28, 26, 1)$ lies on line ℓ_9

$382: P_{28645} = (4, 30, 26, 1)$ lies on line ℓ_3

$383: P_{28694} = (21, 31, 26, 1)$ lies on line ℓ_{11}

$384: P_{28714} = (9, 0, 27, 1)$ lies on line ℓ_{10}

$385: P_{28926} = (29, 6, 27, 1)$ lies on line ℓ_{11}

$386: P_{28939} = (10, 7, 27, 1)$ lies on line ℓ_{14}

$387: P_{28979} = (18, 8, 27, 1)$ lies on line ℓ_9

$388: P_{28984} = (23, 8, 27, 1)$ lies on line ℓ_4

$389: P_{29203} = (18, 15, 27, 1)$ lies on line ℓ_0

$390: P_{29306} = (25, 18, 27, 1)$ lies on line ℓ_1

$391: P_{29311} = (30, 18, 27, 1)$ lies on line ℓ_8

$392: P_{29402} = (25, 21, 27, 1)$ lies on line ℓ_{12}

$393: P_{29453} = (12, 23, 27, 1)$ lies on line ℓ_{13}

$394: P_{29510} = (5, 25, 27, 1)$ lies on line ℓ_6

$395: P_{29572} = (3, 27, 27, 1)$ lies on line ℓ_3

396 : $P_{29751} = (22, 0, 28, 1)$ lies on line ℓ_3
397 : $P_{29791} = (30, 1, 28, 1)$ lies on line ℓ_0
398 : $P_{29825} = (0, 3, 28, 1)$ lies on line ℓ_{11}
399 : $P_{29999} = (14, 8, 28, 1)$ lies on line ℓ_2
400 : $P_{30075} = (26, 10, 28, 1)$ lies on line ℓ_8
401 : $P_{30109} = (28, 11, 28, 1)$ lies on line ℓ_7
402 : $P_{30110} = (29, 11, 28, 1)$ lies on line ℓ_9
403 : $P_{30176} = (31, 13, 28, 1)$ lies on line ℓ_{10}
404 : $P_{30426} = (25, 21, 28, 1)$ lies on line ℓ_5
405 : $P_{30548} = (19, 25, 28, 1)$ lies on line ℓ_{12}
406 : $P_{30565} = (4, 26, 28, 1)$ lies on line ℓ_4
407 : $P_{30620} = (27, 27, 28, 1)$ lies on line ℓ_1
408 : $P_{30638} = (13, 28, 28, 1)$ lies on line ℓ_{13}
409 : $P_{30715} = (26, 30, 28, 1)$ lies on line ℓ_{14}
410 : $P_{30750} = (29, 31, 28, 1)$ lies on line ℓ_6
411 : $P_{30930} = (17, 5, 29, 1)$ lies on line ℓ_3
412 : $P_{30978} = (1, 7, 29, 1)$ lies on line ℓ_{13}
413 : $P_{31150} = (13, 12, 29, 1)$ lies on line ℓ_2
414 : $P_{31341} = (12, 18, 29, 1)$ lies on line ℓ_6
415 : $P_{31524} = (3, 24, 29, 1)$ lies on line ℓ_1
416 : $P_{31558} = (5, 25, 29, 1)$ lies on line ℓ_5
417 : $P_{31593} = (8, 26, 29, 1)$ lies on line ℓ_{11}
418 : $P_{31629} = (12, 27, 29, 1)$ lies on line ℓ_{10}
419 : $P_{31632} = (15, 27, 29, 1)$ lies on line ℓ_8
420 : $P_{31642} = (25, 27, 29, 1)$ lies on line ℓ_7
421 : $P_{31663} = (14, 28, 29, 1)$ lies on line ℓ_4
422 : $P_{31764} = (19, 31, 29, 1)$ lies on line ℓ_9
423 : $P_{31785} = (8, 0, 30, 1)$ lies on line ℓ_2

424 : $P_{31812} = (3, 1, 30, 1)$ lies on line ℓ_{14}
425 : $P_{31933} = (28, 4, 30, 1)$ lies on line ℓ_{10}
426 : $P_{31952} = (15, 5, 30, 1)$ lies on line ℓ_0
427 : $P_{31963} = (26, 5, 30, 1)$ lies on line ℓ_6
428 : $P_{31970} = (1, 6, 30, 1)$ lies on line ℓ_9
429 : $P_{32057} = (24, 8, 30, 1)$ lies on line ℓ_{12}
430 : $P_{32121} = (24, 10, 30, 1)$ lies on line ℓ_3
431 : $P_{32197} = (4, 13, 30, 1)$ lies on line ℓ_5
432 : $P_{32214} = (21, 13, 30, 1)$ lies on line ℓ_8
433 : $P_{32247} = (22, 14, 30, 1)$ lies on line ℓ_7
434 : $P_{32278} = (21, 15, 30, 1)$ lies on line ℓ_{13}
435 : $P_{32433} = (16, 20, 30, 1)$ lies on line ℓ_{11}
436 : $P_{32497} = (16, 22, 30, 1)$ lies on line ℓ_4
437 : $P_{32719} = (14, 29, 30, 1)$ lies on line ℓ_1
438 : $P_{32857} = (24, 1, 31, 1)$ lies on line ℓ_5
439 : $P_{32940} = (11, 4, 31, 1)$ lies on line ℓ_2
440 : $P_{33046} = (21, 7, 31, 1)$ lies on line ℓ_0
441 : $P_{33068} = (11, 8, 31, 1)$ lies on line ℓ_6
442 : $P_{33241} = (24, 13, 31, 1)$ lies on line ℓ_{11}
443 : $P_{33312} = (31, 15, 31, 1)$ lies on line ℓ_3
444 : $P_{33339} = (26, 16, 31, 1)$ lies on line ℓ_4
445 : $P_{33466} = (25, 20, 31, 1)$ lies on line ℓ_{13}
446 : $P_{33697} = (0, 28, 31, 1)$ lies on line ℓ_8
447 : $P_{33726} = (29, 28, 31, 1)$ lies on line ℓ_{14}
448 : $P_{33780} = (19, 30, 31, 1)$ lies on line ℓ_7
449 : $P_{33783} = (22, 30, 31, 1)$ lies on line ℓ_1

The single points on the surface are:

Points on surface but on no line

The surface has 720 points not on any line:
The points on the surface but not on lines are:

0 : $P_{36} = (1, 0, 1, 0)$
1 : $P_{112} = (13, 2, 1, 0)$
2 : $P_{120} = (21, 2, 1, 0)$
3 : $P_{190} = (27, 4, 1, 0)$
4 : $P_{191} = (28, 4, 1, 0)$
5 : $P_{281} = (22, 7, 1, 0)$
6 : $P_{302} = (11, 8, 1, 0)$
7 : $P_{351} = (28, 9, 1, 0)$
8 : $P_{370} = (15, 10, 1, 0)$
9 : $P_{410} = (23, 11, 1, 0)$
10 : $P_{455} = (4, 13, 1, 0)$
11 : $P_{475} = (24, 13, 1, 0)$
12 : $P_{514} = (31, 14, 1, 0)$
13 : $P_{539} = (24, 15, 1, 0)$
14 : $P_{549} = (2, 16, 1, 0)$
15 : $P_{570} = (23, 16, 1, 0)$

16 : $P_{632} = (21, 18, 1, 0)$
17 : $P_{652} = (9, 19, 1, 0)$
18 : $P_{732} = (25, 21, 1, 0)$
19 : $P_{791} = (20, 23, 1, 0)$
20 : $P_{832} = (29, 24, 1, 0)$
21 : $P_{906} = (7, 27, 1, 0)$
22 : $P_{915} = (16, 27, 1, 0)$
23 : $P_{937} = (6, 28, 1, 0)$
24 : $P_{1013} = (18, 30, 1, 0)$
25 : $P_{1034} = (7, 31, 1, 0)$
26 : $P_{1090} = (0, 1, 0, 1)$
27 : $P_{1127} = (5, 2, 0, 1)$
28 : $P_{1177} = (23, 3, 0, 1)$
29 : $P_{1183} = (29, 3, 0, 1)$
30 : $P_{1203} = (17, 4, 0, 1)$
31 : $P_{1240} = (22, 5, 0, 1)$

$32 : P_{1242} = (24, 5, 0, 1)$

$33 : P_{1298} = (16, 7, 0, 1)$

$34 : P_{1359} = (13, 9, 0, 1)$

$35 : P_{1437} = (27, 11, 0, 1)$

$36 : P_{1448} = (6, 12, 0, 1)$

$37 : P_{1463} = (21, 12, 0, 1)$

$38 : P_{1500} = (26, 13, 0, 1)$

$39 : P_{1540} = (2, 15, 0, 1)$

$40 : P_{1582} = (12, 16, 0, 1)$

$41 : P_{1609} = (7, 17, 0, 1)$

$42 : P_{1627} = (25, 17, 0, 1)$

$43 : P_{1650} = (16, 18, 0, 1)$

$44 : P_{1743} = (13, 21, 0, 1)$

$45 : P_{1796} = (2, 23, 0, 1)$

$46 : P_{1830} = (4, 24, 0, 1)$

$47 : P_{1910} = (20, 26, 0, 1)$

$48 : P_{1918} = (28, 26, 0, 1)$

$49 : P_{1925} = (3, 27, 0, 1)$

$50 : P_{1981} = (27, 28, 0, 1)$

$51 : P_{2054} = (4, 31, 0, 1)$

$52 : P_{2082} = (0, 0, 1, 1)$

$53 : P_{2083} = (1, 0, 1, 1)$

$54 : P_{2114} = (0, 1, 1, 1)$

$55 : P_{2194} = (17, 3, 1, 1)$

$56 : P_{2253} = (12, 5, 1, 1)$

$57 : P_{2308} = (3, 7, 1, 1)$

$58 : P_{2366} = (29, 8, 1, 1)$

$59 : P_{2423} = (22, 10, 1, 1)$

$60 : P_{2468} = (3, 12, 1, 1)$

$61 : P_{2554} = (25, 14, 1, 1)$

$62 : P_{2651} = (26, 17, 1, 1)$

$63 : P_{2709} = (20, 19, 1, 1)$

$64 : P_{2758} = (5, 21, 1, 1)$

$65 : P_{2829} = (12, 23, 1, 1)$

$66 : P_{2875} = (26, 24, 1, 1)$

$67 : P_{2918} = (5, 26, 1, 1)$

$68 : P_{2994} = (17, 28, 1, 1)$

$69 : P_{3047} = (6, 30, 1, 1)$

$70 : P_{3141} = (4, 1, 2, 1)$

$71 : P_{3225} = (24, 3, 2, 1)$

$72 : P_{3246} = (13, 4, 2, 1)$

$73 : P_{3270} = (5, 5, 2, 1)$

$74 : P_{3339} = (10, 7, 2, 1)$

$75 : P_{3364} = (3, 8, 2, 1)$

$76 : P_{3422} = (29, 9, 2, 1)$

$77 : P_{3451} = (26, 10, 2, 1)$

$78 : P_{3481} = (24, 11, 2, 1)$

$79 : P_{3511} = (22, 12, 2, 1)$

$80 : P_{3536} = (15, 13, 2, 1)$

$81 : P_{3574} = (21, 14, 2, 1)$

$82 : P_{3643} = (26, 16, 2, 1)$

$83 : P_{3670} = (21, 17, 2, 1)$

$84 : P_{3847} = (6, 23, 2, 1)$

$85 : P_{3850} = (9, 23, 2, 1)$

$86 : P_{3866} = (25, 23, 2, 1)$

$87 : P_{3906} = (1, 25, 2, 1)$

$88 : P_{3959} = (22, 26, 2, 1)$

$89 : P_{4067} = (2, 30, 2, 1)$

$90 : P_{4134} = (5, 0, 3, 1)$

$91 : P_{4180} = (19, 1, 3, 1)$

$92 : P_{4233} = (8, 3, 3, 1)$

$93 : P_{4248} = (23, 3, 3, 1)$

$94 : P_{4306} = (17, 5, 3, 1)$

$95 : P_{4315} = (26, 5, 3, 1)$

$96 : P_{4321} = (0, 6, 3, 1)$

$97 : P_{4328} = (7, 6, 3, 1)$

$98 : P_{4377} = (24, 7, 3, 1)$

$99 : P_{4381} = (28, 7, 3, 1)$

$100 : P_{4393} = (8, 8, 3, 1)$

$101 : P_{4455} = (6, 10, 3, 1)$

$102 : P_{4770} = (1, 20, 3, 1)$

$103 : P_{4861} = (28, 22, 3, 1)$

$104 : P_{4923} = (26, 24, 3, 1)$

$105 : P_{4943} = (14, 25, 3, 1)$

$106 : P_{4950} = (21, 25, 3, 1)$

$107 : P_{4988} = (27, 26, 3, 1)$

$108 : P_{4994} = (1, 27, 3, 1)$

$109 : P_{5010} = (17, 27, 3, 1)$

$110 : P_{5044} = (19, 28, 3, 1)$

$111 : P_{5073} = (16, 29, 3, 1)$

$112 : P_{5074} = (17, 29, 3, 1)$

$113 : P_{5108} = (19, 30, 3, 1)$

$114 : P_{5115} = (26, 30, 3, 1)$

$115 : P_{5121} = (0, 31, 3, 1)$

$116 : P_{5201} = (16, 1, 4, 1)$

$117 : P_{5274} = (25, 3, 4, 1)$

$118 : P_{5320} = (7, 5, 4, 1)$

$119 : P_{5346} = (1, 6, 4, 1)$

$120 : P_{5478} = (5, 10, 4, 1)$

$121 : P_{5527} = (22, 11, 4, 1)$

$122 : P_{5565} = (28, 12, 4, 1)$

$123 : P_{5572} = (3, 13, 4, 1)$

$124 : P_{5604} = (3, 14, 4, 1)$

$125 : P_{5640} = (7, 15, 4, 1)$

$126 : P_{5692} = (27, 16, 4, 1)$

$127 : P_{5714} = (17, 17, 4, 1)$

$128 : P_{5765} = (4, 19, 4, 1)$

$129 : P_{5839} = (14, 21, 4, 1)$

$130 : P_{5927} = (6, 24, 4, 1)$

$131 : P_{5932} = (11, 24, 4, 1)$

$132 : P_{5941} = (20, 24, 4, 1)$

$133 : P_{6010} = (25, 26, 4, 1)$

$134 : P_{6048} = (31, 27, 4, 1)$

$135 : P_{6141} = (28, 30, 4, 1)$

$136 : P_{6194} = (17, 0, 5, 1)$

$137 : P_{6217} = (8, 1, 5, 1)$

$138 : P_{6242} = (1, 2, 5, 1)$

$139 : P_{6253} = (12, 2, 5, 1)$

$140 : P_{6275} = (2, 3, 5, 1)$
$141 : P_{6347} = (10, 5, 5, 1)$
$142 : P_{6361} = (24, 5, 5, 1)$
$143 : P_{6397} = (28, 6, 5, 1)$
$144 : P_{6399} = (30, 6, 5, 1)$
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$146 : P_{6507} = (10, 10, 5, 1)$
$147 : P_{6645} = (20, 14, 5, 1)$
$148 : P_{6724} = (3, 17, 5, 1)$
$149 : P_{6733} = (12, 17, 5, 1)$
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$151 : P_{6788} = (3, 19, 5, 1)$
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$153 : P_{6817} = (0, 20, 5, 1)$
$154 : P_{6838} = (21, 20, 5, 1)$
$155 : P_{6856} = (7, 21, 5, 1)$
$156 : P_{6872} = (23, 21, 5, 1)$
$157 : P_{6893} = (12, 22, 5, 1)$
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$159 : P_{6921} = (8, 23, 5, 1)$
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$163 : P_{7282} = (17, 2, 6, 1)$
$164 : P_{7317} = (20, 3, 6, 1)$
$165 : P_{7350} = (21, 4, 6, 1)$
$166 : P_{7361} = (0, 5, 6, 1)$
$167 : P_{7594} = (9, 12, 6, 1)$
$168 : P_{7616} = (31, 12, 6, 1)$
$169 : P_{7633} = (16, 13, 6, 1)$
$170 : P_{7854} = (13, 20, 6, 1)$
$171 : P_{7887} = (14, 21, 6, 1)$
$172 : P_{7935} = (30, 22, 6, 1)$
$173 : P_{7983} = (14, 24, 6, 1)$
$174 : P_{8006} = (5, 25, 6, 1)$
$175 : P_{8042} = (9, 26, 6, 1)$
$176 : P_{8050} = (17, 26, 6, 1)$
$177 : P_{8088} = (23, 27, 6, 1)$
$178 : P_{8167} = (6, 30, 6, 1)$
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$184 : P_{8299} = (10, 2, 7, 1)$
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$190 : P_{8465} = (16, 7, 7, 1)$
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$192 : P_{8559} = (14, 10, 7, 1)$
$193 : P_{8565} = (20, 10, 7, 1)$

$194 : P_{8578} = (1, 11, 7, 1)$
$195 : P_{8590} = (13, 11, 7, 1)$
$196 : P_{8622} = (13, 12, 7, 1)$
$197 : P_{8661} = (20, 13, 7, 1)$
$198 : P_{8751} = (14, 16, 7, 1)$
$199 : P_{8752} = (15, 16, 7, 1)$
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$201 : P_{8861} = (28, 19, 7, 1)$
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$207 : P_{9202} = (17, 30, 7, 1)$
$208 : P_{9338} = (25, 2, 8, 1)$
$209 : P_{9411} = (2, 5, 8, 1)$
$210 : P_{9482} = (9, 7, 8, 1)$
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$215 : P_{9736} = (7, 15, 8, 1)$
$216 : P_{9957} = (4, 22, 8, 1)$
$217 : P_{9961} = (8, 22, 8, 1)$
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$222 : P_{10086} = (5, 26, 8, 1)$
$223 : P_{10164} = (19, 28, 8, 1)$
$224 : P_{10214} = (5, 30, 8, 1)$
$225 : P_{10224} = (15, 30, 8, 1)$
$226 : P_{10347} = (10, 2, 9, 1)$
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$234 : P_{10574} = (13, 9, 9, 1)$
$235 : P_{10594} = (1, 10, 9, 1)$
$236 : P_{10614} = (21, 10, 9, 1)$
$237 : P_{10624} = (31, 10, 9, 1)$
$238 : P_{10685} = (28, 12, 9, 1)$
$239 : P_{10702} = (13, 13, 9, 1)$
$240 : P_{10719} = (30, 13, 9, 1)$
$241 : P_{10770} = (17, 15, 9, 1)$
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$243 : P_{10935} = (22, 20, 9, 1)$
$244 : P_{10975} = (30, 21, 9, 1)$
$245 : P_{11110} = (5, 26, 9, 1)$
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$247 : P_{11431} = (6, 4, 10, 1)$

$248 : P_{11523} = (2, 7, 10, 1)$
$249 : P_{11545} = (24, 7, 10, 1)$
$250 : P_{11549} = (28, 7, 10, 1)$
$251 : P_{11766} = (21, 14, 10, 1)$
$252 : P_{11845} = (4, 17, 10, 1)$
$253 : P_{11922} = (17, 19, 10, 1)$
$254 : P_{11936} = (31, 19, 10, 1)$
$255 : P_{11980} = (11, 21, 10, 1)$
$256 : P_{12041} = (8, 23, 10, 1)$
$257 : P_{12087} = (22, 24, 10, 1)$
$258 : P_{12107} = (10, 25, 10, 1)$
$259 : P_{12113} = (16, 25, 10, 1)$
$260 : P_{12132} = (3, 26, 10, 1)$
$261 : P_{12169} = (8, 27, 10, 1)$
$262 : P_{12182} = (21, 27, 10, 1)$
$263 : P_{12310} = (21, 31, 10, 1)$
$264 : P_{12434} = (17, 3, 11, 1)$
$265 : P_{12463} = (14, 4, 11, 1)$
$266 : P_{12472} = (23, 4, 11, 1)$
$267 : P_{12495} = (14, 5, 11, 1)$
$268 : P_{12658} = (17, 10, 11, 1)$
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$270 : P_{12724} = (19, 12, 11, 1)$
$271 : P_{12770} = (1, 14, 11, 1)$
$272 : P_{12787} = (18, 14, 11, 1)$
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$276 : P_{13000} = (7, 21, 11, 1)$
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$278 : P_{13176} = (23, 26, 11, 1)$
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$304 : P_{14180} = (3, 26, 12, 1)$
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$306 : P_{14258} = (17, 28, 12, 1)$
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$337 : P_{15661} = (12, 8, 14, 1)$
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$448: P_{21399} = (22, 27, 19, 1)$
$449: P_{21429} = (20, 28, 19, 1)$
$450: P_{21443} = (2, 29, 19, 1)$
$451: P_{21460} = (19, 29, 19, 1)$
$452: P_{21588} = (19, 1, 20, 1)$
$453: P_{21625} = (24, 2, 20, 1)$
$454: P_{21644} = (11, 3, 20, 1)$
$455: P_{21645} = (12, 3, 20, 1)$
$456: P_{21677} = (12, 4, 20, 1)$
$457: P_{21726} = (29, 5, 20, 1)$
$458: P_{21746} = (17, 6, 20, 1)$
$459: P_{21791} = (30, 7, 20, 1)$
$460: P_{22077} = (28, 16, 20, 1)$
$461: P_{22081} = (0, 17, 20, 1)$
$462: P_{22123} = (10, 18, 20, 1)$
$463: P_{22155} = (10, 19, 20, 1)$

$464: P_{22157} = (12, 19, 20, 1)$

$465: P_{22165} = (20, 19, 20, 1)$

$466: P_{22356} = (19, 25, 20, 1)$

$467: P_{22380} = (11, 26, 20, 1)$

$468: P_{22387} = (18, 26, 20, 1)$

$469: P_{22414} = (13, 27, 20, 1)$

$470: P_{22463} = (30, 28, 20, 1)$

$471: P_{22492} = (27, 29, 20, 1)$

$472: P_{22568} = (7, 0, 21, 1)$

$473: P_{22588} = (27, 0, 21, 1)$

$474: P_{22703} = (14, 4, 21, 1)$

$475: P_{22712} = (23, 4, 21, 1)$

$476: P_{22717} = (28, 4, 21, 1)$

$477: P_{22835} = (18, 8, 21, 1)$

$478: P_{22840} = (23, 8, 21, 1)$

$479: P_{22858} = (9, 9, 21, 1)$

$480: P_{23007} = (30, 13, 21, 1)$

$481: P_{23008} = (31, 13, 21, 1)$

$482: P_{23038} = (29, 14, 21, 1)$

$483: P_{23039} = (30, 14, 21, 1)$

$484: P_{23042} = (1, 15, 21, 1)$

$485: P_{23068} = (27, 15, 21, 1)$

$486: P_{23087} = (14, 16, 21, 1)$

$487: P_{23089} = (16, 16, 21, 1)$

$488: P_{23181} = (12, 19, 21, 1)$

$489: P_{23189} = (20, 19, 21, 1)$

$490: P_{23209} = (8, 20, 21, 1)$

$491: P_{23242} = (9, 21, 21, 1)$

$492: P_{23246} = (13, 21, 21, 1)$

$493: P_{23384} = (23, 25, 21, 1)$

$494: P_{23420} = (27, 26, 21, 1)$

$495: P_{23454} = (29, 27, 21, 1)$

$496: P_{23463} = (6, 28, 21, 1)$

$497: P_{23494} = (5, 29, 21, 1)$

$498: P_{23627} = (10, 1, 22, 1)$

$499: P_{23715} = (2, 4, 22, 1)$

$500: P_{23756} = (11, 5, 22, 1)$

$501: P_{23776} = (31, 5, 22, 1)$

$502: P_{23908} = (3, 10, 22, 1)$

$503: P_{23927} = (22, 10, 22, 1)$

$504: P_{23935} = (30, 10, 22, 1)$

$505: P_{23967} = (30, 11, 22, 1)$

$506: P_{23994} = (25, 12, 22, 1)$

$507: P_{24004} = (3, 13, 22, 1)$

$508: P_{24118} = (21, 16, 22, 1)$

$509: P_{24132} = (3, 17, 22, 1)$

$510: P_{24160} = (31, 17, 22, 1)$

$511: P_{24235} = (10, 20, 22, 1)$

$512: P_{24361} = (8, 24, 22, 1)$

$513: P_{24389} = (4, 25, 22, 1)$

$514: P_{24417} = (0, 26, 22, 1)$

$515: P_{24473} = (24, 27, 22, 1)$

$516: P_{24489} = (8, 28, 22, 1)$

$517: P_{24539} = (26, 29, 22, 1)$

$518: P_{24613} = (4, 0, 23, 1)$

$519: P_{24637} = (28, 0, 23, 1)$

$520: P_{24681} = (8, 2, 23, 1)$

$521: P_{24682} = (9, 2, 23, 1)$

$522: P_{24762} = (25, 4, 23, 1)$

$523: P_{24773} = (4, 5, 23, 1)$

$524: P_{24932} = (3, 10, 23, 1)$

$525: P_{24951} = (22, 10, 23, 1)$

$526: P_{25032} = (7, 13, 23, 1)$

$527: P_{25044} = (19, 13, 23, 1)$

$528: P_{25049} = (24, 13, 23, 1)$

$529: P_{25064} = (7, 14, 23, 1)$

$530: P_{25068} = (11, 14, 23, 1)$

$531: P_{25104} = (15, 15, 23, 1)$

$532: P_{25186} = (1, 18, 23, 1)$

$533: P_{25189} = (4, 18, 23, 1)$

$534: P_{25225} = (8, 19, 23, 1)$

$535: P_{25242} = (25, 19, 23, 1)$

$536: P_{25256} = (7, 20, 23, 1)$

$537: P_{25327} = (14, 22, 23, 1)$

$538: P_{25347} = (2, 23, 23, 1)$

$539: P_{25360} = (15, 23, 23, 1)$

$540: P_{25406} = (29, 24, 23, 1)$

$541: P_{25421} = (12, 25, 23, 1)$

$542: P_{25492} = (19, 27, 23, 1)$

$543: P_{25500} = (27, 27, 23, 1)$

$544: P_{25649} = (16, 0, 24, 1)$

$545: P_{25656} = (23, 0, 24, 1)$

$546: P_{25699} = (2, 2, 24, 1)$

$547: P_{25705} = (8, 2, 24, 1)$

$548: P_{25771} = (10, 4, 24, 1)$

$549: P_{25772} = (11, 4, 24, 1)$

$550: P_{25851} = (26, 6, 24, 1)$

$551: P_{25879} = (22, 7, 24, 1)$

$552: P_{25895} = (6, 8, 24, 1)$

$553: P_{25899} = (10, 8, 24, 1)$

$554: P_{25922} = (1, 9, 24, 1)$

$555: P_{25937} = (16, 9, 24, 1)$

$556: P_{26086} = (5, 14, 24, 1)$

$557: P_{26106} = (25, 14, 24, 1)$

$558: P_{26151} = (6, 16, 24, 1)$

$559: P_{26193} = (16, 17, 24, 1)$

$560: P_{26405} = (4, 24, 24, 1)$

$561: P_{26432} = (31, 24, 24, 1)$

$562: P_{26463} = (30, 25, 24, 1)$

$563: P_{26504} = (7, 27, 24, 1)$

$564: P_{26505} = (8, 27, 24, 1)$

$565: P_{26518} = (21, 27, 24, 1)$

$566: P_{26582} = (21, 29, 24, 1)$

$567: P_{26608} = (15, 30, 24, 1)$

$568: P_{26614} = (21, 30, 24, 1)$

$569: P_{26656} = (31, 31, 24, 1)$

$570: P_{26703} = (14, 1, 25, 1)$

$571: P_{26728} = (7, 2, 25, 1)$

$572: P_{26753} = (0, 3, 25, 1)$

$573: P_{26865} = (16, 6, 25, 1)$

$574: P_{26891} = (10, 7, 25, 1)$

$575: P_{27046} = (5, 12, 25, 1)$

$576: P_{27059} = (18, 12, 25, 1)$

$577: P_{27101} = (28, 13, 25, 1)$

$578: P_{27110} = (5, 14, 25, 1)$

$579: P_{27124} = (19, 14, 25, 1)$

$580: P_{27130} = (25, 14, 25, 1)$

$581: P_{27156} = (19, 15, 25, 1)$

$582: P_{27173} = (4, 16, 25, 1)$

$583: P_{27216} = (15, 17, 25, 1)$

$584: P_{27219} = (18, 17, 25, 1)$

$585: P_{27364} = (3, 22, 25, 1)$

$586: P_{27403} = (10, 23, 25, 1)$

$587: P_{27495} = (6, 26, 25, 1)$

$588: P_{27526} = (5, 27, 25, 1)$

$589: P_{27599} = (14, 29, 25, 1)$

$590: P_{27684} = (3, 0, 26, 1)$

$591: P_{27743} = (30, 1, 26, 1)$

$592: P_{27782} = (5, 3, 26, 1)$

$593: P_{27789} = (12, 3, 26, 1)$

$594: P_{27874} = (1, 6, 26, 1)$

$595: P_{27962} = (25, 8, 26, 1)$

$596: P_{28078} = (13, 12, 26, 1)$

$597: P_{28098} = (1, 13, 26, 1)$

$598: P_{28102} = (5, 13, 26, 1)$

$599: P_{28141} = (12, 14, 26, 1)$

$600: P_{28159} = (30, 14, 26, 1)$

$601: P_{28161} = (0, 15, 26, 1)$

$602: P_{28308} = (19, 19, 26, 1)$

$603: P_{28325} = (4, 20, 26, 1)$

$604: P_{28326} = (5, 20, 26, 1)$

$605: P_{28383} = (30, 21, 26, 1)$

$606: P_{28392} = (7, 22, 26, 1)$

$607: P_{28395} = (10, 22, 26, 1)$

$608: P_{28429} = (12, 23, 26, 1)$

$609: P_{28470} = (21, 24, 26, 1)$

$610: P_{28472} = (23, 24, 26, 1)$

$611: P_{28481} = (0, 25, 26, 1)$

$612: P_{28505} = (24, 25, 26, 1)$

$613: P_{28532} = (19, 26, 26, 1)$

$614: P_{28541} = (28, 26, 26, 1)$

$615: P_{28630} = (21, 29, 26, 1)$

$616: P_{28739} = (2, 1, 27, 1)$

$617: P_{28785} = (16, 2, 27, 1)$

$618: P_{28804} = (3, 3, 27, 1)$

$619: P_{28845} = (12, 4, 27, 1)$

$620: P_{28872} = (7, 5, 27, 1)$

$621: P_{28973} = (12, 8, 27, 1)$

$622: P_{29016} = (23, 9, 27, 1)$

$623: P_{29032} = (7, 10, 27, 1)$

$624: P_{29118} = (29, 12, 27, 1)$

$625: P_{29180} = (27, 14, 27, 1)$

$626: P_{29228} = (11, 16, 27, 1)$

$627: P_{29278} = (29, 17, 27, 1)$

$628: P_{29301} = (20, 18, 27, 1)$

$629: P_{29339} = (26, 19, 27, 1)$

$630: P_{29410} = (1, 22, 27, 1)$

$631: P_{29481} = (8, 24, 27, 1)$

$632: P_{29560} = (23, 26, 27, 1)$

$633: P_{29619} = (18, 28, 27, 1)$

$634: P_{29623} = (22, 28, 27, 1)$

$635: P_{29626} = (25, 28, 27, 1)$

$636: P_{29731} = (2, 0, 28, 1)$

$637: P_{29750} = (21, 0, 28, 1)$

$638: P_{29815} = (22, 2, 28, 1)$

$639: P_{29827} = (2, 3, 28, 1)$

$640: P_{29945} = (24, 6, 28, 1)$

$641: P_{30011} = (26, 8, 28, 1)$

$642: P_{30014} = (29, 8, 28, 1)$

$643: P_{30058} = (9, 10, 28, 1)$

$644: P_{30073} = (24, 10, 28, 1)$

$645: P_{30092} = (11, 11, 28, 1)$

$646: P_{30158} = (13, 13, 28, 1)$

$647: P_{30175} = (30, 13, 28, 1)$

$648: P_{30264} = (23, 16, 28, 1)$

$649: P_{30265} = (24, 16, 28, 1)$

$650: P_{30271} = (30, 16, 28, 1)$

$651: P_{30450} = (17, 22, 28, 1)$

$652: P_{30485} = (20, 23, 28, 1)$

$653: P_{30611} = (18, 27, 28, 1)$

$654: P_{30612} = (19, 27, 28, 1)$

$655: P_{30636} = (11, 28, 28, 1)$

$656: P_{30652} = (27, 28, 28, 1)$

$657: P_{30667} = (10, 29, 28, 1)$

$658: P_{30708} = (19, 30, 28, 1)$

$659: P_{30711} = (22, 30, 28, 1)$

$660: P_{30722} = (1, 31, 28, 1)$

$661: P_{30723} = (2, 31, 28, 1)$

$662: P_{30793} = (8, 1, 29, 1)$

$663: P_{30844} = (27, 2, 29, 1)$

$664: P_{30858} = (9, 3, 29, 1)$

$665: P_{30864} = (15, 3, 29, 1)$

$666: P_{30888} = (7, 4, 29, 1)$

$667: P_{30928} = (15, 5, 29, 1)$

$668: P_{30939} = (26, 5, 29, 1)$

$669: P_{30953} = (8, 6, 29, 1)$

$670: P_{31023} = (14, 8, 29, 1)$

$671: P_{31035} = (26, 8, 29, 1)$

$672: P_{31038} = (29, 8, 29, 1)$

$673: P_{31055} = (14, 9, 29, 1)$

$674: P_{31137} = (0, 12, 29, 1)$

$675: P_{31192} = (23, 13, 29, 1)$

$676: P_{31291} = (26, 16, 29, 1)$

$677: P_{31319} = (22, 17, 29, 1)$

$678: P_{31405} = (12, 20, 29, 1)$

$679: P_{31444} = (19, 21, 29, 1)$

680 : $P_{31459} = (2, 22, 29, 1)$
681 : $P_{31508} = (19, 23, 29, 1)$
682 : $P_{31919} = (14, 4, 30, 1)$
683 : $P_{31928} = (23, 4, 30, 1)$
684 : $P_{31954} = (17, 5, 30, 1)$
685 : $P_{32015} = (14, 7, 30, 1)$
686 : $P_{32088} = (23, 9, 30, 1)$
687 : $P_{32106} = (9, 10, 30, 1)$
688 : $P_{32123} = (26, 10, 30, 1)$
689 : $P_{32222} = (29, 13, 30, 1)$
690 : $P_{32347} = (26, 17, 30, 1)$
691 : $P_{32408} = (23, 19, 30, 1)$
692 : $P_{32444} = (27, 20, 30, 1)$
693 : $P_{32447} = (30, 20, 30, 1)$
694 : $P_{32455} = (6, 21, 30, 1)$
695 : $P_{32544} = (31, 23, 30, 1)$
696 : $P_{32622} = (13, 26, 30, 1)$
697 : $P_{32689} = (16, 28, 30, 1)$
698 : $P_{32694} = (21, 28, 30, 1)$
699 : $P_{32697} = (24, 28, 30, 1)$
700 : $P_{32907} = (10, 3, 31, 1)$

701 : $P_{32933} = (4, 4, 31, 1)$
702 : $P_{32939} = (10, 4, 31, 1)$
703 : $P_{32968} = (7, 5, 31, 1)$
704 : $P_{33092} = (3, 9, 31, 1)$
705 : $P_{33204} = (19, 12, 31, 1)$
706 : $P_{33224} = (7, 13, 31, 1)$
707 : $P_{33236} = (19, 13, 31, 1)$
708 : $P_{33371} = (26, 17, 31, 1)$
709 : $P_{33410} = (1, 19, 31, 1)$
710 : $P_{33420} = (11, 19, 31, 1)$
711 : $P_{33433} = (24, 19, 31, 1)$
712 : $P_{33511} = (6, 22, 31, 1)$
713 : $P_{33544} = (7, 23, 31, 1)$
714 : $P_{33550} = (13, 23, 31, 1)$
715 : $P_{33565} = (28, 23, 31, 1)$
716 : $P_{33579} = (10, 24, 31, 1)$
717 : $P_{33621} = (20, 25, 31, 1)$
718 : $P_{33787} = (26, 30, 31, 1)$
719 : $P_{33797} = (4, 31, 31, 1)$

Line Intersection Graph

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

Neighbor sets in the line intersection graph:

Line 0 intersects

Line	ℓ_2	ℓ_3	ℓ_8	ℓ_{12}	ℓ_{13}	ℓ_{14}
in point	P_{14585}	P_{18264}	P_{14585}	P_{30853}	P_{18264}	P_{30853}

Line 1 intersects

Line	ℓ_2	ℓ_6	ℓ_{10}	ℓ_{11}	ℓ_{13}	ℓ_{14}
in point	P_{23761}	P_{5885}	P_{23761}	P_{19808}	P_{5885}	P_{19808}

Line 2 intersects

Line	ℓ_0	ℓ_1	ℓ_5	ℓ_7	ℓ_8	ℓ_{10}
in point	P_{14585}	P_{23761}	P_{29352}	P_{29352}	P_{14585}	P_{23761}

Line 3 intersects

Line	ℓ_0	ℓ_4	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{13}
in point	P_{18264}	P_{10643}	P_{27214}	P_{10643}	P_{27214}	P_{18264}

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Line 4 intersects

Line	ℓ_3	ℓ_5	ℓ_6	ℓ_8	ℓ_{10}	ℓ_{14}
in point	P_{10643}	P_{17420}	P_{7612}	P_{7612}	P_{10643}	P_{17420}

Line 5 intersects

Line	ℓ_2	ℓ_4	ℓ_7	ℓ_9	ℓ_{13}	ℓ_{14}
in point	P_{29352}	P_{17420}	P_{29352}	P_{22371}	P_{22371}	P_{17420}

Line 6 intersects

Line	ℓ_1	ℓ_4	ℓ_7	ℓ_8	ℓ_{12}	ℓ_{13}
in point	P_{5885}	P_{7612}	P_{4054}	P_{7612}	P_{4054}	P_{5885}

Line 7 intersects

Line	ℓ_2	ℓ_3	ℓ_5	ℓ_6	ℓ_{11}	ℓ_{12}
in point	P_{29352}	P_{27214}	P_{29352}	P_{4054}	P_{27214}	P_{4054}

Line 8 intersects

Line	ℓ_0	ℓ_2	ℓ_4	ℓ_6	ℓ_9	ℓ_{11}
in point	P_{14585}	P_{14585}	P_{7612}	P_{7612}	P_{12810}	P_{12810}

Line 9 intersects

Line	ℓ_5	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}
in point	P_{22371}	P_{12810}	P_{33392}	P_{12810}	P_{33392}	P_{22371}

Line 10 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_9	ℓ_{12}
in point	P_{23761}	P_{23761}	P_{10643}	P_{10643}	P_{33392}	P_{33392}

Line 11 intersects

Line	ℓ_1	ℓ_3	ℓ_7	ℓ_8	ℓ_9	ℓ_{14}
in point	P_{19808}	P_{27214}	P_{27214}	P_{12810}	P_{12810}	P_{19808}

Line 12 intersects

Line	ℓ_0	ℓ_6	ℓ_7	ℓ_9	ℓ_{10}	ℓ_{14}
in point	P_{30853}	P_{4054}	P_{4054}	P_{33392}	P_{33392}	P_{30853}

Line 13 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_5	ℓ_6	ℓ_9
in point	P_{18264}	P_{5885}	P_{18264}	P_{22371}	P_{5885}	P_{22371}

Line 14 intersects

Line	ℓ_0	ℓ_1	ℓ_4	ℓ_5	ℓ_{11}	ℓ_{12}
in point	P_{30853}	P_{19808}	P_{17420}	P_{17420}	P_{19808}	P_{30853}

The surface has 1185 points:
Too many to print.