Rank-73731 over GF(8)

January 15, 2021

The equation

The equation of the surface is :

$$X_0X_3^2 + X_0X_1X_2 = 0$$

(0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(8) is 1227133517

General information

Number of lines	82
Number of points	137
Number of singular points	10
Number of Eckardt points	0
Number of double points	0
Number of single points	63
Number of points off lines	0
Number of Hesse planes	0
Number of axes	0
Type of points on lines	9^{82}
Type of lines on points	10^9, 9^{65}, 1^{63}

Singular Points

The surface has 10 singular points:

0 : $P_0 = \mathbf{P}(1,0,0,0) = \mathbf{P}(1,0,0,0)$
1 : $P_1 = \mathbf{P}(0,1,0,0) = \mathbf{P}(0,1,0,0)$
2 : $P_2 = \mathbf{P}(0,0,1,0) = \mathbf{P}(0,0,1,0)$
3 : $P_{146} = \mathbf{P}(0,1,1,1) = \mathbf{P}(0,1,1,1)$
4 : $P_{249} = \mathbf{P}(0,\gamma^6,\gamma,1) = \mathbf{P}(0,6,2,1)$
5 : $P_{297} = \mathbf{P}(0,\gamma^2,\gamma^5,1) = \mathbf{P}(0,4,3,1)$
6 : $P_{353} = \mathbf{P}(0,\gamma^5,\gamma^2,1) = \mathbf{P}(0,3,4,1)$
7 : $P_{449} = \mathbf{P}(0,\gamma^4,\gamma^3,1) = \mathbf{P}(0,7,5,1)$
8 : $P_{473} = \mathbf{P}(0,\gamma,\gamma^6,1) = \mathbf{P}(0,2,6,1)$
9 : $P_{561} = \mathbf{P}(0,\gamma^3,\gamma^4,1) = \mathbf{P}(0,5,7,1)$

The 82 Lines

The lines and their Pluecker coordinates are:

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

$$\ell_1 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{64} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{64} = \mathbf{Pl}(0,0,1,0,0,0)_2$$

$$\ell_2 = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4672} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4672} = \mathbf{Pl}(0,0,0,0,0,1)_{649}$$

$$\ell_3 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_9 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_9 = \mathbf{Pl}(1,0,1,0,1,0)_{97}$$

$$\ell_4 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \gamma^2 & \gamma \end{bmatrix}_{20} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 4 & 2 \end{bmatrix}_{20} = \mathbf{Pl}(6,0,2,0,1,0)_{117}$$

$$\ell_5 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \gamma^3 & \gamma^5 \end{bmatrix}_{29} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 5 & 3 \end{bmatrix}_{29} = \mathbf{Pl}(4,0,3,0,1,0)_{130}$$

$$\ell_6 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \gamma^4 & \gamma^2 \end{bmatrix}_{39} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 7 & 4 \end{bmatrix}_{39} = \mathbf{Pl}(3,0,4,0,1,0)_{144}$$

$$\ell_7 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \gamma^6 & \gamma^3 \end{bmatrix}_{46} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 6 & 5 \end{bmatrix}_{46} = \mathbf{Pl}(7,0,5,0,1,0)_{163}$$

$$\ell_8 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \gamma^5 & \gamma^6 \end{bmatrix}_{51} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 3 & 6 \end{bmatrix}_{51} = \mathbf{Pl}(2,0,6,0,1,0)_{173}$$

$$\ell_9 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \gamma & \gamma^4 \end{bmatrix}_{58} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 2 & 7 \end{bmatrix}_{58} = \mathbf{Pl}(5,0,7,0,1,0)_{191}$$

$$\ell_{10} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4680} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4680} = \mathbf{Pl}(0,0,0,1,0,0)_{17}$$

$$\ell_{11} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4673} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4673} = \mathbf{Pl}(0,0,0,1,0,1)_{769}$$

$$\ell_{12} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4678} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4678} = \mathbf{Pl}(0,0,0,6,0,1)_{844}$$

$$\ell_{13} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4676} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4676} = \mathbf{Pl}(0,0,0,4,0,1)_{814}$$

$$\ell_{14} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4675} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4675} = \mathbf{Pl}(0,0,0,3,0,1)_{799}$$

$$\ell_{15} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4679} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4679} = \mathbf{Pl}(0,0,0,7,0,1)_{859}$$

$$\ell_{16} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4674} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4674} = \mathbf{Pl}(0,0,0,2,0,1)_{784}$$

$$\ell_{17} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4677} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4677} = \mathbf{Pl}(0,0,0,5,0,1)_{829}$$

$$\ell_{18} = \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4744} = \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4744} = \mathbf{Pl}(0,1,0,0,0,0)_1$$

$$\ell_{19} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4681} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4681} = \mathbf{Pl}(0,1,0,0,0,1)_{657}$$

$$\ell_{20} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4726} = \left[\begin{array}{cccc} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4726} = \mathbf{Pl}(0,6,0,0,0,1)_{662}$$

$$\ell_{21} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4708} = \left[\begin{array}{cccc} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4708} = \mathbf{Pl}(0,4,0,0,0,1)_{660}$$

$$\ell_{22} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4699} = \left[\begin{array}{cccc} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4699} = \mathbf{Pl}(0,3,0,0,0,1)_{659}$$

$$\ell_{23} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4735} = \left[\begin{array}{cccc} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4735} = \mathbf{Pl}(0,7,0,0,0,1)_{663}$$

$$\ell_{24} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & 0 \end{array}\right]_{4690} = \left[\begin{array}{cccc} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4690} = \mathbf{Pl}(0,2,0,0,0,1)_{658}$$

$$\ell_{25} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4717} = \left[\begin{array}{cccc} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 0 \end{array}\right]_{4717} = \mathbf{Pl}(0,5,0,0,0,1)_{661}$$

$$\ell_{26} = \left[\begin{array}{cccc} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4689} = \left[\begin{array}{cccc} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4689} = \mathbf{Pl}(0,1,0,1,0,0)_{25}$$

$$\ell_{27} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4682} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4682} = \mathbf{Pl}(0,1,0,1,0,1)_{777}$$

$$\ell_{28} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^6 \end{array}\right]_{4732} = \left[\begin{array}{cccc} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 6 \end{array}\right]_{4732} = \mathbf{Pl}(0,6,0,6,0,1)_{857}$$

$$\ell_{29} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^2 \end{array}\right]_{4712} = \left[\begin{array}{cccc} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 4 \end{array}\right]_{4712} = \mathbf{Pl}(0,4,0,4,0,1)_{825}$$

$$\ell_{30} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^5 \end{array}\right]_{4702} = \left[\begin{array}{cccc} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 3 \end{array}\right]_{4702} = \mathbf{Pl}(0,3,0,3,0,1)_{809}$$

$$\ell_{31} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^4 \end{array}\right]_{4742} = \left[\begin{array}{cccc} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 7 \end{array}\right]_{4742} = \mathbf{Pl}(0,7,0,7,0,1)_{873}$$

$$\ell_{32} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma \end{array}\right]_{4692} = \left[\begin{array}{cccc} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 2 \end{array}\right]_{4692} = \mathbf{Pl}(0,2,0,2,0,1)_{793}$$

$$\ell_{33} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^3 \end{array}\right]_{4722} = \left[\begin{array}{cccc} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 5 \end{array}\right]_{4722} = \mathbf{Pl}(0,5,0,5,0,1)_{841}$$

$$\ell_{34} = \left[\begin{array}{cccc} 0 & 1 & \gamma^6 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4734} = \left[\begin{array}{cccc} 0 & 1 & 6 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4734} = \mathbf{Pl}(0,6,0,1,0,0)_{30}$$

$$\ell_{35} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma \end{array}\right]_{4683} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 2 \end{array}\right]_{4683} = \mathbf{Pl}(0,1,0,2,0,1)_{792}$$

$$\ell_{36} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4727} = \left[\begin{array}{cccc} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4727} = \mathbf{Pl}(0,6,0,1,0,1)_{782}$$

$$\ell_{37} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^3 \end{array}\right]_{4713} = \left[\begin{array}{cccc} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 5 \end{array}\right]_{4713} = \mathbf{Pl}(0,4,0,5,0,1)_{840}$$

$$\ell_{38} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^6 \end{array}\right]_{4705} = \left[\begin{array}{cccc} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 6 \end{array}\right]_{4705} = \mathbf{Pl}(0,3,0,6,0,1)_{854}$$

$$\ell_{39} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^5 \end{array}\right]_{4738} = \left[\begin{array}{cccc} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 3 \end{array}\right]_{4738} = \mathbf{Pl}(0,7,0,3,0,1)_{813}$$

$$\ell_{40} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^2 \end{array}\right]_{4694} = \left[\begin{array}{cccc} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 4 \end{array}\right]_{4694} = \mathbf{Pl}(0,2,0,4,0,1)_{823}$$

$$\ell_{41} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^4 \end{array}\right]_{4724} = \left[\begin{array}{cccc} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 7 \end{array}\right]_{4724} = \mathbf{Pl}(0,5,0,7,0,1)_{871}$$

$$\ell_{42} = \left[\begin{array}{cccc} 0 & 1 & \gamma^2 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4716} = \left[\begin{array}{cccc} 0 & 1 & 4 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4716} = \mathbf{Pl}(0,4,0,1,0,0)_{28}$$

$$\ell_{43} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^5 \end{array}\right]_{4684} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 3 \end{array}\right]_{4684} = \mathbf{Pl}(0,1,0,3,0,1)_{807}$$

$$\ell_{44} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^4 \end{array}\right]_{4733} = \left[\begin{array}{cccc} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 7 \end{array}\right]_{4733} = \mathbf{Pl}(0,6,0,7,0,1)_{872}$$

$$\ell_{45} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4709} = \left[\begin{array}{cccc} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4709} = \mathbf{Pl}(0,4,0,1,0,1)_{780}$$

$$\ell_{46} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^3 \end{array}\right]_{4704} = \left[\begin{array}{cccc} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 5 \end{array}\right]_{4704} = \mathbf{Pl}(0,3,0,5,0,1)_{839}$$

$$\ell_{47} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^2 \end{array}\right]_{4739} = \left[\begin{array}{cccc} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 4 \end{array}\right]_{4739} = \mathbf{Pl}(0,7,0,4,0,1)_{828}$$

$$\ell_{48} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^6 \end{array}\right]_{4696} = \left[\begin{array}{cccc} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 6 \end{array}\right]_{4696} = \mathbf{Pl}(0,2,0,6,0,1)_{853}$$

$$\ell_{49} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma \end{array}\right]_{4719} = \left[\begin{array}{cccc} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 2 \end{array}\right]_{4719} = \mathbf{Pl}(0,5,0,2,0,1)_{796}$$

$$\ell_{50} = \left[\begin{array}{cccc} 0 & 1 & \gamma^5 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4707} = \left[\begin{array}{cccc} 0 & 1 & 3 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4707} = \mathbf{Pl}(0,3,0,1,0,0)_{27}$$

$$\ell_{51} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^2 \end{array}\right]_{4685} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 4 \end{array}\right]_{4685} = \mathbf{Pl}(0,1,0,4,0,1)_{822}$$

$$\ell_{52} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma \end{array}\right]_{4728} = \left[\begin{array}{cccc} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 2 \end{array}\right]_{4728} = \mathbf{Pl}(0,6,0,2,0,1)_{797}$$

$$\ell_{53} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^4 \end{array}\right]_{4715} = \left[\begin{array}{cccc} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 7 \end{array}\right]_{4715} = \mathbf{Pl}(0,4,0,7,0,1)_{870}$$

$$\ell_{54} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4700} = \left[\begin{array}{cccc} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 1 \end{array}\right]_{4700} = \mathbf{Pl}(0,3,0,1,0,1)_{779}$$

$$\ell_{55} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^6 \end{array}\right]_{4741} = \left[\begin{array}{cccc} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 6 \end{array}\right]_{4741} = \mathbf{Pl}(0,7,0,6,0,1)_{858}$$

$$\ell_{56} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^3 \end{array}\right]_{4695} = \left[\begin{array}{cccc} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 5 \end{array}\right]_{4695} = \mathbf{Pl}(0,2,0,5,0,1)_{838}$$

$$\ell_{57} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^5 \end{array}\right]_{4720} = \left[\begin{array}{cccc} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 3 \end{array}\right]_{4720} = \mathbf{Pl}(0,5,0,3,0,1)_{811}$$

$$\ell_{58} = \left[\begin{array}{cccc} 0 & 1 & \gamma^4 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4743} = \left[\begin{array}{cccc} 0 & 1 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4743} = \mathbf{Pl}(0,7,0,1,0,0)_{31}$$

$$\ell_{59} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^3 \end{array}\right]_{4686} = \left[\begin{array}{cccc} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 5 \end{array}\right]_{4686} = \mathbf{Pl}(0,1,0,5,0,1)_{837}$$

$$\ell_{60} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^2 \end{array}\right]_{4730} = \left[\begin{array}{cccc} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 4 \end{array}\right]_{4730} = \mathbf{Pl}(0,6,0,4,0,1)_{827}$$

$$\ell_{61} = \left[\begin{array}{cccc} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^5 \end{array}\right]_{4711} = \left[\begin{array}{cccc} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 3 \end{array}\right]_{4711} = \mathbf{Pl}(0,4,0,3,0,1)_{810}$$

$$\ell_{62} = \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4701} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4701} = \mathbf{Pl}(0,3,0,2,0,1)_{794}$$

$$\ell_{63} = \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4736} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4736} = \mathbf{Pl}(0,7,0,1,0,1)_{783}$$

$$\ell_{64} = \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4697} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4697} = \mathbf{Pl}(0,2,0,7,0,1)_{868}$$

$$\ell_{65} = \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4723} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4723} = \mathbf{Pl}(0,5,0,6,0,1)_{856}$$

$$\ell_{66} = \begin{bmatrix} 0 & 1 & \gamma & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4698} = \begin{bmatrix} 0 & 1 & 2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4698} = \mathbf{Pl}(0,2,0,1,0,0)_{26}$$

$$\ell_{67} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4687} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4687} = \mathbf{Pl}(0,1,0,6,0,1)_{852}$$

$$\ell_{68} = \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4729} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4729} = \mathbf{Pl}(0,6,0,3,0,1)_{812}$$

$$\ell_{69} = \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4710} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4710} = \mathbf{Pl}(0,4,0,2,0,1)_{795}$$

$$\ell_{70} = \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4706} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4706} = \mathbf{Pl}(0,3,0,7,0,1)_{869}$$

$$\ell_{71} = \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4740} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4740} = \mathbf{Pl}(0,7,0,5,0,1)_{843}$$

$$\ell_{72} = \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4691} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4691} = \mathbf{Pl}(0,2,0,1,0,1)_{778}$$

$$\ell_{73} = \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4721} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4721} = \mathbf{Pl}(0,5,0,4,0,1)_{826}$$

$$\ell_{74} = \begin{bmatrix} 0 & 1 & \gamma^3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4725} = \begin{bmatrix} 0 & 1 & 5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4725} = \mathbf{Pl}(0,5,0,1,0,0)_{29}$$

$$\ell_{75} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4688} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4688} = \mathbf{Pl}(0,1,0,7,0,1)_{867}$$

$$\ell_{76} = \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4731} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4731} = \mathbf{Pl}(0,6,0,5,0,1)_{842}$$

$$\ell_{77} = \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4714} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4714} = \mathbf{Pl}(0,4,0,6,0,1)_{855}$$

$$\ell_{78} = \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4703} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4703} = \mathbf{Pl}(0,3,0,4,0,1)_{824}$$

$$\ell_{79} = \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4737} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4737} = \mathbf{Pl}(0,7,0,2,0,1)_{798}$$

$$\ell_{80} = \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4693} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4693} = \mathbf{Pl}(0,2,0,3,0,1)_{808}$$

$$\ell_{81} = \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4718} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4718} = \mathbf{Pl}(0,5,0,1,0,1)_{781}$$

Rank of lines: (0, 64, 4672, 9, 20, 29, 39, 46, 51, 58, 4680, 4673, 4678, 4676, 4675, 4679, 4674, 4677, 4744, 4681, 4726, 4708, 4699, 4735, 4690, 4717, 4689, 4682, 4732, 4712, 4702, 4742, 4692, 4722, 4734, 4683, 4727, 4713, 4705, 4738, 4694, 4724, 4716, 4684, 4733, 4709, 4704, 4739, 4696, 4719, ...4737, 4693, 4718)
Rank of points on Klein quadric: (0, 2, 649, 97, 117, 130, 144, 163, 173, 191, 17, 769, 844, 814, 799, 859, 784, 829, 1, 657, 662, 660, 659, 663, 658, 661, 25, 777, 857, 825, 809, 873, 793, 841, 30, 792, 782, 840, 854, 813, 823, 871, 28, 807, 872, 780, 839, 828, 853, 796, ...798, 808, 781)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

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

Single Points

The surface has 63 single points:
The single points on the surface are:

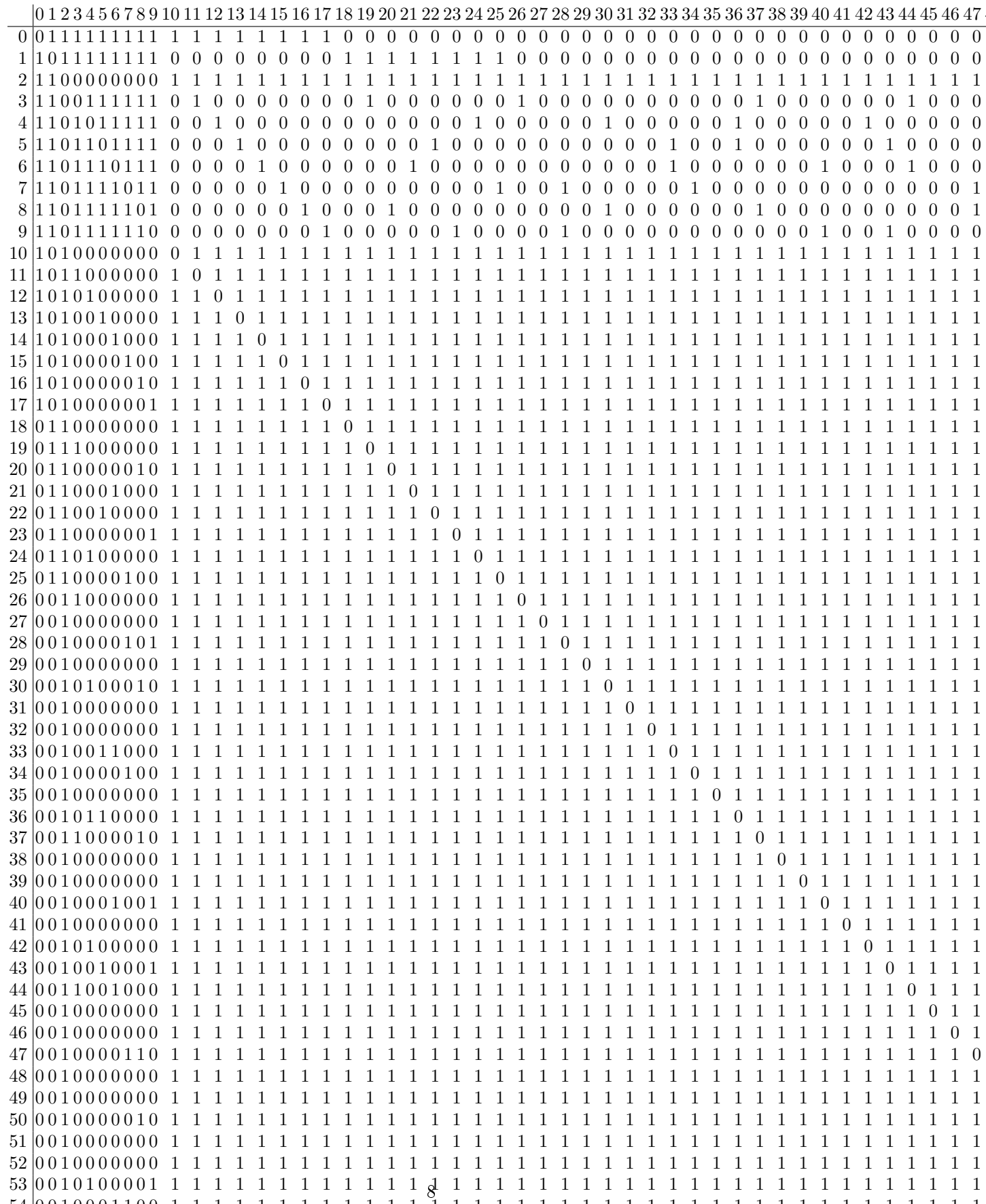
$0: P_4 = (1,1,1,1)$ lies on line ℓ_3
$1: P_5 = (1,1,0,0)$ lies on line ℓ_0
$2: P_6 = (2,1,0,0)$ lies on line ℓ_0
$3: P_7 = (3,1,0,0)$ lies on line ℓ_0
$4: P_8 = (4,1,0,0)$ lies on line ℓ_0
$5: P_9 = (5,1,0,0)$ lies on line ℓ_0
$6: P_{10} = (6,1,0,0)$ lies on line ℓ_0
$7: P_{11} = (7,1,0,0)$ lies on line ℓ_0
$8: P_{12} = (1,0,1,0)$ lies on line ℓ_1
$9: P_{13} = (2,0,1,0)$ lies on line ℓ_1
$10: P_{14} = (3,0,1,0)$ lies on line ℓ_1
$11: P_{15} = (4,0,1,0)$ lies on line ℓ_1
$12: P_{16} = (5,0,1,0)$ lies on line ℓ_1
$13: P_{17} = (6,0,1,0)$ lies on line ℓ_1
$14: P_{18} = (7,0,1,0)$ lies on line ℓ_1
$15: P_{147} = (2,1,1,1)$ lies on line ℓ_3
$16: P_{148} = (3,1,1,1)$ lies on line ℓ_3
$17: P_{149} = (4,1,1,1)$ lies on line ℓ_3
$18: P_{150} = (5,1,1,1)$ lies on line ℓ_3
$19: P_{151} = (6,1,1,1)$ lies on line ℓ_3
$20: P_{152} = (7,1,1,1)$ lies on line ℓ_3
$21: P_{250} = (1,6,2,1)$ lies on line ℓ_4
$22: P_{251} = (2,6,2,1)$ lies on line ℓ_4
$23: P_{252} = (3,6,2,1)$ lies on line ℓ_4
$24: P_{253} = (4,6,2,1)$ lies on line ℓ_4
$25: P_{254} = (5,6,2,1)$ lies on line ℓ_4
$26: P_{255} = (6,6,2,1)$ lies on line ℓ_4
$27: P_{256} = (7,6,2,1)$ lies on line ℓ_4
$28: P_{298} = (1,4,3,1)$ lies on line ℓ_5
$29: P_{299} = (2,4,3,1)$ lies on line ℓ_5
$30: P_{300} = (3,4,3,1)$ lies on line ℓ_5
$31: P_{301} = (4,4,3,1)$ lies on line ℓ_5
$32: P_{302} = (5,4,3,1)$ lies on line ℓ_5
$33: P_{303} = (6,4,3,1)$ lies on line ℓ_5
$34: P_{304} = (7,4,3,1)$ lies on line ℓ_5
$35: P_{354} = (1,3,4,1)$ lies on line ℓ_6
$36: P_{355} = (2,3,4,1)$ lies on line ℓ_6
$37: P_{356} = (3,3,4,1)$ lies on line ℓ_6
$38: P_{357} = (4,3,4,1)$ lies on line ℓ_6
$39: P_{358} = (5,3,4,1)$ lies on line ℓ_6
$40: P_{359} = (6,3,4,1)$ lies on line ℓ_6
$41: P_{360} = (7,3,4,1)$ lies on line ℓ_6
$42: P_{450} = (1,7,5,1)$ lies on line ℓ_7
$43: P_{451} = (2,7,5,1)$ lies on line ℓ_7
$44: P_{452} = (3,7,5,1)$ lies on line ℓ_7
$45: P_{453} = (4,7,5,1)$ lies on line ℓ_7
$46: P_{454} = (5,7,5,1)$ lies on line ℓ_7
$47: P_{455} = (6,7,5,1)$ lies on line ℓ_7
$48: P_{456} = (7,7,5,1)$ lies on line ℓ_7
$49: P_{474} = (1,2,6,1)$ lies on line ℓ_8
$50: P_{475} = (2,2,6,1)$ lies on line ℓ_8
$51: P_{476} = (3,2,6,1)$ lies on line ℓ_8
$52: P_{477} = (4,2,6,1)$ lies on line ℓ_8
$53: P_{478} = (5,2,6,1)$ lies on line ℓ_8
$54: P_{479} = (6,2,6,1)$ lies on line ℓ_8
$55: P_{480} = (7,2,6,1)$ lies on line ℓ_8
$56: P_{562} = (1,5,7,1)$ lies on line ℓ_9
$57: P_{563} = (2,5,7,1)$ lies on line ℓ_9
$58: P_{564} = (3,5,7,1)$ lies on line ℓ_9
$59: P_{565} = (4,5,7,1)$ lies on line ℓ_9
$60: P_{566} = (5,5,7,1)$ lies on line ℓ_9
$61: P_{567} = (6,5,7,1)$ lies on line ℓ_9
$62: P_{568} = (7,5,7,1)$ lies on line ℓ_9

The single points on the surface are:

Points on surface but on no line

The surface has 0 points not on any line:
The points on the surface but not on lines are:

Line Intersection Graph



Neighbor sets in the line intersection graph:
Line 0 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}
in point	P_0	P_1	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_1

Line 1 intersects

Line	ℓ_0	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_0	P_2	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_2

Line 2 intersects

Line	ℓ_0	ℓ_1	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}	ℓ_{27}	ℓ_{28}	ℓ
in point	P_1	P_2	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{19}	P_{19}	P_{19}	P

Line 3 intersects

Line	ℓ_0	ℓ_1	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{11}	ℓ_{19}	ℓ_{26}	ℓ_{37}	ℓ_{44}	ℓ_{55}	ℓ_{62}	ℓ_{73}	ℓ_{80}
in point	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_{146}	P_{146}	P_{146}	P_{146}	P_{146}	P_{146}	P_{146}	P_{146}	P_{146}

Line 4 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{12}	ℓ_{24}	ℓ_{30}	ℓ_{36}	ℓ_{42}	ℓ_{53}	ℓ_{59}	ℓ_{73}	ℓ_{79}
in point	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_{249}	P_{249}	P_{249}	P_{249}	P_{249}	P_{249}	P_{249}	P_{249}	P_{249}

Line 5 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_4	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{13}	ℓ_{22}	ℓ_{33}	ℓ_{36}	ℓ_{43}	ℓ_{55}	ℓ_{64}	ℓ_{69}	ℓ_{74}
in point	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_{297}	P_{297}	P_{297}	P_{297}	P_{297}	P_{297}	P_{297}	P_{297}	P_{297}

Line 6 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_4	ℓ_5	ℓ_7	ℓ_8	ℓ_9	ℓ_{14}	ℓ_{21}	ℓ_{33}	ℓ_{40}	ℓ_{44}	ℓ_{54}	ℓ_{58}	ℓ_{67}	ℓ_{79}
in point	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_{353}	P_{353}	P_{353}	P_{353}	P_{353}	P_{353}	P_{353}	P_{353}	P_{353}

Line 7 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_8	ℓ_9	ℓ_{15}	ℓ_{25}	ℓ_{28}	ℓ_{34}	ℓ_{47}	ℓ_{54}	ℓ_{59}	ℓ_{69}	ℓ_{80}
in point	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_{449}	P_{449}	P_{449}	P_{449}	P_{449}	P_{449}	P_{449}	P_{449}	P_{449}

Line 8 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_9	ℓ_{16}	ℓ_{20}	ℓ_{30}	ℓ_{37}	ℓ_{47}	ℓ_{50}	ℓ_{64}	ℓ_{67}	ℓ_{81}
in point	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_{473}	P_{473}	P_{473}	P_{473}	P_{473}	P_{473}	P_{473}	P_{473}	P_{473}

Line 9 intersects

Line	ℓ_0	ℓ_1	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_{17}	ℓ_{23}	ℓ_{28}	ℓ_{40}	ℓ_{43}	ℓ_{53}	ℓ_{62}	ℓ_{66}	ℓ_{81}
in point	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_0	P_{561}	P_{561}	P_{561}	P_{561}	P_{561}	P_{561}	P_{561}	P_{561}	P_{561}

Line 10 intersects

Line	ℓ_0	ℓ_2	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}	ℓ_{27}	ℓ_{28}	ℓ
in point	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_3	P_{82}	P_{90}	P_{98}	P_{106}	P_{114}	P_{122}	P_{130}	P_3	P_{82}	P_{90}	P

Line 11 intersects

Line	ℓ_0	ℓ_2	ℓ_3	ℓ_{10}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_1	P_1	P_{146}	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_{138}	P_{146}	P_{153}	P_{161}	P_{169}	P_{177}	P_{185}	P_{193}	P_{146}

Line 12 intersects

Line	ℓ_0	ℓ_2	ℓ_4	ℓ_{10}	ℓ_{11}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_1	P_1	P_{249}	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_{201}	P_{209}	P_{217}	P_{225}	P_{233}	P_{241}	P_{249}	P_{257}	P_{217}

Line 13 intersects

Line	ℓ_0	ℓ_2	ℓ_5	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_1	P_1	P_{297}	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_{265}	P_{273}	P_{281}	P_{289}	P_{297}	P_{305}	P_{313}	P_{321}	P_{289}

Line 14 intersects

Line	ℓ_0	ℓ_2	ℓ_6	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_1	P_1	P_{353}	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_{329}	P_{337}	P_{345}	P_{353}	P_{361}	P_{369}	P_{377}	P_{385}	P_{361}

Line 15 intersects

Line	ℓ_0	ℓ_2	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_1	P_1	P_{449}	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_{393}	P_{401}	P_{409}	P_{417}	P_{425}	P_{433}	P_{441}	P_{449}	P_{433}

Line 16 intersects

Line	ℓ_0	ℓ_2	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_1	P_1	P_{473}	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_{457}	P_{465}	P_{473}	P_{481}	P_{489}	P_{497}	P_{505}	P_{513}	P_{505}

Line 17 intersects

Line	ℓ_0	ℓ_2	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_1	P_1	P_{561}	P_1	P_1	P_1	P_1	P_1	P_1	P_1	P_{521}	P_{529}	P_{537}	P_{545}	P_{553}	P_{561}	P_{569}	P_{577}	P_{577}

Line 18 intersects

Line	ℓ_1	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}	ℓ_{27}	ℓ
in point	P_2	P_2	P_3	P_{138}	P_{201}	P_{265}	P_{329}	P_{393}	P_{457}	P_{521}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_3	P_{138}	P

Line 19 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_2	P_2	P_{146}	P_{82}	P_{146}	P_{209}	P_{273}	P_{337}	P_{401}	P_{465}	P_{529}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{146}

Line 20 intersects

Line	ℓ_1	ℓ_2	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_2	P_2	P_{473}	P_{90}	P_{153}	P_{217}	P_{281}	P_{345}	P_{409}	P_{473}	P_{537}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{217}

Line 21 intersects

Line	ℓ_1	ℓ_2	ℓ_6	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_2	P_2	P_{353}	P_{98}	P_{161}	P_{225}	P_{289}	P_{353}	P_{417}	P_{481}	P_{545}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{289}

Line 22 intersects

Line	ℓ_1	ℓ_2	ℓ_5	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_2	P_2	P_{297}	P_{106}	P_{169}	P_{233}	P_{297}	P_{361}	P_{425}	P_{489}	P_{553}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{361}

Line 23 intersects

Line	ℓ_1	ℓ_2	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{24}	ℓ_{25}	ℓ_{26}
in point	P_2	P_2	P_{561}	P_{114}	P_{177}	P_{241}	P_{305}	P_{369}	P_{433}	P_{497}	P_{561}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{433}

Line 24 intersects

Line	ℓ_1	ℓ_2	ℓ_4	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{25}	ℓ_{26}
in point	P_2	P_2	P_{249}	P_{122}	P_{185}	P_{249}	P_{313}	P_{377}	P_{441}	P_{505}	P_{569}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{505}

Line 25 intersects

Line	ℓ_1	ℓ_2	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{26}
in point	P_2	P_2	P_{449}	P_{130}	P_{193}	P_{257}	P_{321}	P_{385}	P_{449}	P_{513}	P_{577}	P_2	P_2	P_2	P_2	P_2	P_2	P_2	P_{577}

Line 26 intersects

Line	ℓ_2	ℓ_3	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_2
in point	P_{19}	P_{146}	P_3	P_{146}	P_{217}	P_{289}	P_{361}	P_{433}	P_{505}	P_{577}	P_3	P_{146}	P_{217}	P_{289}	P_{361}	P_{433}	P_{505}	P_5

Line 27 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{19}	P_{82}	P_{138}	P_{225}	P_{281}	P_{369}	P_{425}	P_{513}	P_{569}	P_{138}	P_{82}	P_{281}	P_{225}	P_{425}	P_{369}	P_{569}	P_{513}	P

Line 28 intersects

Line	ℓ_2	ℓ_7	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{19}	P_{449}	P_{561}	P_{90}	P_{161}	P_{201}	P_{273}	P_{377}	P_{449}	P_{489}	P_{561}	P_{201}	P_{273}	P_{90}	P_{161}	P_{489}	P_{561}	P

Line 29 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{19}	P_{98}	P_{153}	P_{209}	P_{265}	P_{385}	P_{441}	P_{497}	P_{553}	P_{265}	P_{209}	P_{153}	P_{98}	P_{553}	P_{497}	P_{441}	P_{385}	P

Line 30 intersects

Line	ℓ_2	ℓ_4	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{19}	P_{249}	P_{473}	P_{106}	P_{177}	P_{249}	P_{321}	P_{329}	P_{401}	P_{473}	P_{545}	P_{329}	P_{401}	P_{473}	P_{545}	P_{106}	P_{177}

Line 31 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{19}	P_{114}	P_{169}	P_{257}	P_{313}	P_{337}	P_{393}	P_{481}	P_{537}	P_{393}	P_{337}	P_{537}	P_{481}	P_{169}	P_{114}	P_{313}	P_{257}

Line 32 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{19}	P_{122}	P_{193}	P_{233}	P_{305}	P_{345}	P_{417}	P_{457}	P_{529}	P_{457}	P_{529}	P_{345}	P_{417}	P_{233}	P_{305}	P_{122}	P_{193}

Line 33 intersects

Line	ℓ_2	ℓ_5	ℓ_6	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{19}	P_{297}	P_{353}	P_{130}	P_{185}	P_{241}	P_{297}	P_{353}	P_{409}	P_{465}	P_{521}	P_{521}	P_{465}	P_{409}	P_{353}	P_{297}	P_{241}

Line 34 intersects

Line	ℓ_2	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_2
in point	P_{27}	P_{449}	P_3	P_{153}	P_{233}	P_{313}	P_{369}	P_{449}	P_{465}	P_{545}	P_3	P_{465}	P_{153}	P_{545}	P_{233}	P_{369}	P_{313}	P_4

Line 35 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{27}	P_{82}	P_{161}	P_{241}	P_{321}	P_{361}	P_{441}	P_{457}	P_{537}	P_{457}	P_{82}	P_{537}	P_{161}	P_{361}	P_{241}	P_{441}	P_{321}	P

Line 36 intersects

Line	ℓ_2	ℓ_4	ℓ_5	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{27}	P_{249}	P_{297}	P_{90}	P_{138}	P_{249}	P_{297}	P_{385}	P_{433}	P_{481}	P_{529}	P_{138}	P_{529}	P_{90}	P_{481}	P_{297}	P_{433}	P

Line 37 intersects

Line	ℓ_2	ℓ_3	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{27}	P_{146}	P_{473}	P_{98}	P_{146}	P_{257}	P_{305}	P_{377}	P_{425}	P_{473}	P_{521}	P_{521}	P_{146}	P_{473}	P_{98}	P_{425}	P_{305}	P

Line 38 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{27}	P_{106}	P_{185}	P_{201}	P_{281}	P_{337}	P_{417}	P_{497}	P_{577}	P_{201}	P_{337}	P_{281}	P_{417}	P_{106}	P_{497}	P_{185}	P_{577}

Line 39 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{27}	P_{114}	P_{193}	P_{209}	P_{289}	P_{329}	P_{409}	P_{489}	P_{569}	P_{329}	P_{209}	P_{409}	P_{289}	P_{489}	P_{114}	P_{569}	P_{193}

Line 40 intersects

Line	ℓ_2	ℓ_6	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{27}	P_{353}	P_{561}	P_{122}	P_{169}	P_{217}	P_{265}	P_{353}	P_{401}	P_{513}	P_{561}	P_{265}	P_{401}	P_{217}	P_{353}	P_{169}	P_{561}

Line 41 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{27}	P_{130}	P_{177}	P_{225}	P_{273}	P_{345}	P_{393}	P_{505}	P_{553}	P_{393}	P_{273}	P_{345}	P_{225}	P_{553}	P_{177}	P_{505}	P_{130}

Line 42 intersects

Line	ℓ_2	ℓ_4	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_2
in point	P_{35}	P_{249}	P_3	P_{161}	P_{249}	P_{305}	P_{337}	P_{409}	P_{513}	P_{553}	P_3	P_{337}	P_{409}	P_{161}	P_{553}	P_{305}	P_{249}	P_5

Line 43 intersects

Line	ℓ_2	ℓ_5	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{35}	P_{297}	P_{561}	P_{82}	P_{153}	P_{257}	P_{297}	P_{329}	P_{417}	P_{505}	P_{561}	P_{329}	P_{82}	P_{153}	P_{417}	P_{297}	P_{561}	P

Line 44 intersects

Line	ℓ_2	ℓ_3	ℓ_6	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{35}	P_{146}	P_{353}	P_{90}	P_{146}	P_{233}	P_{321}	P_{353}	P_{393}	P_{497}	P_{569}	P_{393}	P_{146}	P_{90}	P_{353}	P_{233}	P_{497}	P

Line 45 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{35}	P_{98}	P_{138}	P_{241}	P_{313}	P_{345}	P_{401}	P_{489}	P_{577}	P_{138}	P_{401}	P_{345}	P_{98}	P_{489}	P_{241}	P_{313}	P_{577}	P

Line 46 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{35}	P_{106}	P_{193}	P_{217}	P_{273}	P_{369}	P_{441}	P_{481}	P_{521}	P_{521}	P_{273}	P_{217}	P_{481}	P_{106}	P_{369}	P_{441}	P_{193}

Line 47 intersects

Line	ℓ_2	ℓ_7	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{35}	P_{449}	P_{473}	P_{114}	P_{185}	P_{225}	P_{265}	P_{361}	P_{449}	P_{473}	P_{529}	P_{265}	P_{529}	P_{473}	P_{225}	P_{361}	P_{114}

Line 48 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{35}	P_{122}	P_{177}	P_{201}	P_{289}	P_{385}	P_{425}	P_{465}	P_{537}	P_{201}	P_{465}	P_{537}	P_{289}	P_{425}	P_{177}	P_{122}	P_{385}

Line 49 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{35}	P_{130}	P_{169}	P_{209}	P_{281}	P_{377}	P_{433}	P_{457}	P_{545}	P_{457}	P_{209}	P_{281}	P_{545}	P_{169}	P_{433}	P_{377}	P_{130}

Line 50 intersects

Line	ℓ_2	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_2
in point	P_{43}	P_{473}	P_3	P_{169}	P_{241}	P_{273}	P_{385}	P_{417}	P_{473}	P_{569}	P_3	P_{273}	P_{473}	P_{417}	P_{169}	P_{241}	P_{569}	P_3

Line 51 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{43}	P_{82}	P_{177}	P_{233}	P_{265}	P_{377}	P_{409}	P_{481}	P_{577}	P_{265}	P_{82}	P_{409}	P_{481}	P_{233}	P_{177}	P_{377}	P_{577}	P

Line 52 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{43}	P_{90}	P_{185}	P_{257}	P_{289}	P_{369}	P_{401}	P_{457}	P_{553}	P_{457}	P_{401}	P_{90}	P_{289}	P_{553}	P_{369}	P_{185}	P_{257}	P

Line 53 intersects

Line	ℓ_2	ℓ_4	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{43}	P_{249}	P_{561}	P_{98}	P_{193}	P_{249}	P_{281}	P_{361}	P_{393}	P_{465}	P_{561}	P_{393}	P_{465}	P_{281}	P_{98}	P_{361}	P_{561}	P

Line 54 intersects

Line	ℓ_2	ℓ_6	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{43}	P_{353}	P_{449}	P_{106}	P_{138}	P_{209}	P_{305}	P_{353}	P_{449}	P_{505}	P_{537}	P_{138}	P_{209}	P_{537}	P_{353}	P_{106}	P_{305}

Line 55 intersects

Line	ℓ_2	ℓ_3	ℓ_5	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{43}	P_{146}	P_{297}	P_{114}	P_{146}	P_{201}	P_{297}	P_{345}	P_{441}	P_{513}	P_{545}	P_{201}	P_{146}	P_{345}	P_{545}	P_{297}	P_{114}

Line 56 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{43}	P_{122}	P_{153}	P_{225}	P_{321}	P_{337}	P_{433}	P_{489}	P_{521}	P_{521}	P_{337}	P_{153}	P_{225}	P_{489}	P_{433}	P_{122}	P_{321}

Line 57 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{43}	P_{130}	P_{161}	P_{217}	P_{313}	P_{329}	P_{425}	P_{497}	P_{529}	P_{329}	P_{529}	P_{217}	P_{161}	P_{425}	P_{497}	P_{313}	P_{130}

Line 58 intersects

Line	ℓ_2	ℓ_6	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_2
in point	P_{51}	P_{353}	P_3	P_{177}	P_{257}	P_{281}	P_{353}	P_{441}	P_{489}	P_{529}	P_3	P_{529}	P_{281}	P_{353}	P_{489}	P_{177}	P_{441}	P_2

Line 59 intersects

Line	ℓ_2	ℓ_4	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{51}	P_{249}	P_{449}	P_{82}	P_{169}	P_{249}	P_{289}	P_{345}	P_{449}	P_{497}	P_{521}	P_{521}	P_{82}	P_{345}	P_{289}	P_{169}	P_{497}	P

Line 60 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{51}	P_{90}	P_{193}	P_{241}	P_{265}	P_{337}	P_{425}	P_{505}	P_{545}	P_{265}	P_{337}	P_{90}	P_{545}	P_{425}	P_{241}	P_{505}	P_{193}	P

Line 61 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{51}	P_{98}	P_{185}	P_{233}	P_{273}	P_{329}	P_{433}	P_{513}	P_{537}	P_{329}	P_{273}	P_{537}	P_{98}	P_{233}	P_{433}	P_{185}	P_{513}	P

Line 62 intersects

Line	ℓ_2	ℓ_3	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{51}	P_{146}	P_{561}	P_{106}	P_{146}	P_{225}	P_{313}	P_{385}	P_{409}	P_{457}	P_{561}	P_{457}	P_{146}	P_{409}	P_{225}	P_{106}	P_{561}

Line 63 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{51}	P_{114}	P_{138}	P_{217}	P_{321}	P_{377}	P_{417}	P_{465}	P_{553}	P_{138}	P_{465}	P_{217}	P_{417}	P_{553}	P_{114}	P_{377}	P_{321}

Line 64 intersects

Line	ℓ_2	ℓ_5	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{51}	P_{297}	P_{473}	P_{122}	P_{161}	P_{209}	P_{297}	P_{369}	P_{393}	P_{473}	P_{577}	P_{393}	P_{209}	P_{473}	P_{161}	P_{297}	P_{369}

Line 65 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{51}	P_{130}	P_{153}	P_{201}	P_{305}	P_{361}	P_{401}	P_{481}	P_{569}	P_{201}	P_{401}	P_{153}	P_{481}	P_{361}	P_{305}	P_{569}	P_{130}

Line 66 intersects

Line	ℓ_2	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_2
in point	P_{59}	P_{561}	P_3	P_{185}	P_{209}	P_{321}	P_{345}	P_{425}	P_{481}	P_{561}	P_3	P_{209}	P_{345}	P_{481}	P_{425}	P_{561}	P_{185}	P_3

Line 67 intersects

Line	ℓ_2	ℓ_6	ℓ_8	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{59}	P_{353}	P_{473}	P_{82}	P_{193}	P_{201}	P_{313}	P_{353}	P_{433}	P_{473}	P_{553}	P_{201}	P_{82}	P_{473}	P_{353}	P_{553}	P_{433}	P

Line 68 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{59}	P_{90}	P_{169}	P_{225}	P_{305}	P_{329}	P_{441}	P_{465}	P_{577}	P_{329}	P_{465}	P_{90}	P_{225}	P_{169}	P_{305}	P_{441}	P_{577}	P

Line 69 intersects

Line	ℓ_2	ℓ_5	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ
in point	P_{59}	P_{297}	P_{449}	P_{98}	P_{177}	P_{217}	P_{297}	P_{337}	P_{449}	P_{457}	P_{569}	P_{457}	P_{337}	P_{217}	P_{98}	P_{297}	P_{177}	P

Line 70 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{59}	P_{106}	P_{153}	P_{241}	P_{289}	P_{377}	P_{393}	P_{513}	P_{529}	P_{393}	P_{529}	P_{153}	P_{289}	P_{106}	P_{241}	P_{377}	P_{513}

Line 71 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{59}	P_{114}	P_{161}	P_{233}	P_{281}	P_{385}	P_{401}	P_{505}	P_{521}	P_{521}	P_{401}	P_{281}	P_{161}	P_{233}	P_{114}	P_{505}	P_{385}

Line 72 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{59}	P_{122}	P_{138}	P_{257}	P_{273}	P_{361}	P_{409}	P_{497}	P_{545}	P_{138}	P_{273}	P_{409}	P_{545}	P_{361}	P_{497}	P_{122}	P_{257}

Line 73 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{59}	P_{146}	P_{249}	P_{130}	P_{146}	P_{249}	P_{265}	P_{369}	P_{417}	P_{489}	P_{537}	P_{265}	P_{146}	P_{537}	P_{417}	P_{489}	P_{369}

Line 74 intersects

Line	ℓ_2	ℓ_5	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_2
in point	P_{67}	P_{297}	P_3	P_{193}	P_{225}	P_{297}	P_{377}	P_{401}	P_{497}	P_{537}	P_3	P_{401}	P_{537}	P_{225}	P_{297}	P_{497}	P_{377}	P_1

Line 75 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{67}	P_{82}	P_{185}	P_{217}	P_{305}	P_{385}	P_{393}	P_{489}	P_{545}	P_{393}	P_{82}	P_{217}	P_{545}	P_{489}	P_{305}	P_{185}	P_{385}	P

Line 76 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{67}	P_{90}	P_{177}	P_{209}	P_{313}	P_{361}	P_{417}	P_{513}	P_{521}	P_{521}	P_{209}	P_{90}	P_{417}	P_{361}	P_{177}	P_{313}	P_{513}	P

Line 77 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}	ℓ
in point	P_{67}	P_{98}	P_{169}	P_{201}	P_{321}	P_{369}	P_{409}	P_{505}	P_{529}	P_{201}	P_{529}	P_{409}	P_{98}	P_{169}	P_{369}	P_{505}	P_{321}	P

Line 78 intersects

Line	ℓ_2	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}	ℓ_{24}	ℓ_{25}
in point	P_{67}	P_{106}	P_{161}	P_{257}	P_{265}	P_{345}	P_{433}	P_{465}	P_{569}	P_{265}	P_{465}	P_{345}	P_{161}	P_{106}	P_{433}	P_{569}	P_{257}

Line 79 intersects

Line	ℓ_2	ℓ_4	ℓ_6	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{67}	P_{249}	P_{353}	P_{114}	P_{153}	P_{249}	P_{273}	P_{353}	P_{425}	P_{457}	P_{577}	P_{457}	P_{273}	P_{153}	P_{353}	P_{425}	P_{114}

Line 80 intersects

Line	ℓ_2	ℓ_3	ℓ_7	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{67}	P_{146}	P_{449}	P_{122}	P_{146}	P_{241}	P_{281}	P_{329}	P_{449}	P_{481}	P_{553}	P_{329}	P_{146}	P_{281}	P_{481}	P_{553}	P_{241}

Line 81 intersects

Line	ℓ_2	ℓ_8	ℓ_9	ℓ_{10}	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ_{23}
in point	P_{67}	P_{473}	P_{561}	P_{130}	P_{138}	P_{233}	P_{289}	P_{337}	P_{441}	P_{473}	P_{561}	P_{138}	P_{337}	P_{473}	P_{289}	P_{233}	P_{561}

The surface has 137 points:
The points on the surface are:

0 : $P_0 = (1,0,0,0)$
1 : $P_1 = (0,1,0,0)$
2 : $P_2 = (0,0,1,0)$
3 : $P_3 = (0,0,0,1)$
4 : $P_4 = (1,1,1,1)$
5 : $P_5 = (1,1,0,0)$
6 : $P_6 = (2,1,0,0)$
7 : $P_7 = (3,1,0,0)$
8 : $P_8 = (4,1,0,0)$
9 : $P_9 = (5,1,0,0)$
10 : $P_{10} = (6,1,0,0)$
11 : $P_{11} = (7,1,0,0)$
12 : $P_{12} = (1,0,1,0)$
13 : $P_{13} = (2,0,1,0)$
14 : $P_{14} = (3,0,1,0)$
15 : $P_{15} = (4,0,1,0)$
16 : $P_{16} = (5,0,1,0)$
17 : $P_{17} = (6,0,1,0)$
18 : $P_{18} = (7,0,1,0)$
19 : $P_{19} = (0,1,1,0)$
20 : $P_{27} = (0,2,1,0)$
21 : $P_{35} = (0,3,1,0)$
22 : $P_{43} = (0,4,1,0)$
23 : $P_{51} = (0,5,1,0)$
24 : $P_{59} = (0,6,1,0)$
25 : $P_{67} = (0,7,1,0)$
26 : $P_{82} = (0,1,0,1)$
27 : $P_{90} = (0,2,0,1)$
28 : $P_{98} = (0,3,0,1)$
29 : $P_{106} = (0,4,0,1)$
30 : $P_{114} = (0,5,0,1)$
31 : $P_{122} = (0,6,0,1)$
32 : $P_{130} = (0,7,0,1)$
33 : $P_{138} = (0,0,1,1)$
34 : $P_{146} = (0,1,1,1)$
35 : $P_{147} = (2,1,1,1)$
36 : $P_{148} = (3,1,1,1)$
37 : $P_{149} = (4,1,1,1)$
38 : $P_{150} = (5,1,1,1)$
39 : $P_{151} = (6,1,1,1)$
40 : $P_{152} = (7,1,1,1)$
41 : $P_{153} = (0,2,1,1)$
42 : $P_{161} = (0,3,1,1)$
43 : $P_{169} = (0,4,1,1)$
44 : $P_{177} = (0,5,1,1)$
45 : $P_{185} = (0,6,1,1)$
46 : $P_{193} = (0,7,1,1)$
47 : $P_{201} = (0,0,2,1)$
48 : $P_{209} = (0,1,2,1)$
49 : $P_{217} = (0,2,2,1)$
50 : $P_{225} = (0,3,2,1)$
51 : $P_{233} = (0,4,2,1)$
52 : $P_{241} = (0,5,2,1)$
53 : $P_{249} = (0,6,2,1)$
54 : $P_{250} = (1,6,2,1)$
55 : $P_{251} = (2,6,2,1)$
56 : $P_{252} = (3,6,2,1)$
57 : $P_{253} = (4,6,2,1)$
58 : $P_{254} = (5,6,2,1)$
59 : $P_{255} = (6,6,2,1)$
60 : $P_{256} = (7,6,2,1)$
61 : $P_{257} = (0,7,2,1)$
62 : $P_{265} = (0,0,3,1)$
63 : $P_{273} = (0,1,3,1)$
64 : $P_{281} = (0,2,3,1)$
65 : $P_{289} = (0,3,3,1)$
66 : $P_{297} = (0,4,3,1)$
67 : $P_{298} = (1,4,3,1)$
68 : $P_{299} = (2,4,3,1)$
69 : $P_{300} = (3,4,3,1)$
70 : $P_{301} = (4,4,3,1)$
71 : $P_{302} = (5,4,3,1)$
72 : $P_{303} = (6,4,3,1)$
73 : $P_{304} = (7,4,3,1)$
74 : $P_{305} = (0,5,3,1)$
75 : $P_{313} = (0,6,3,1)$
76 : $P_{321} = (0,7,3,1)$
77 : $P_{329} = (0,0,4,1)$
78 : $P_{337} = (0,1,4,1)$
79 : $P_{345} = (0,2,4,1)$
80 : $P_{353} = (0,3,4,1)$

81 : $P_{354} = (1, 3, 4, 1)$
82 : $P_{355} = (2, 3, 4, 1)$
83 : $P_{356} = (3, 3, 4, 1)$
84 : $P_{357} = (4, 3, 4, 1)$
85 : $P_{358} = (5, 3, 4, 1)$
86 : $P_{359} = (6, 3, 4, 1)$
87 : $P_{360} = (7, 3, 4, 1)$
88 : $P_{361} = (0, 4, 4, 1)$
89 : $P_{369} = (0, 5, 4, 1)$
90 : $P_{377} = (0, 6, 4, 1)$
91 : $P_{385} = (0, 7, 4, 1)$
92 : $P_{393} = (0, 0, 5, 1)$
93 : $P_{401} = (0, 1, 5, 1)$
94 : $P_{409} = (0, 2, 5, 1)$
95 : $P_{417} = (0, 3, 5, 1)$
96 : $P_{425} = (0, 4, 5, 1)$
97 : $P_{433} = (0, 5, 5, 1)$
98 : $P_{441} = (0, 6, 5, 1)$
99 : $P_{449} = (0, 7, 5, 1)$
100 : $P_{450} = (1, 7, 5, 1)$
101 : $P_{451} = (2, 7, 5, 1)$
102 : $P_{452} = (3, 7, 5, 1)$
103 : $P_{453} = (4, 7, 5, 1)$
104 : $P_{454} = (5, 7, 5, 1)$
105 : $P_{455} = (6, 7, 5, 1)$
106 : $P_{456} = (7, 7, 5, 1)$
107 : $P_{457} = (0, 0, 6, 1)$
108 : $P_{465} = (0, 1, 6, 1)$
109 : $P_{473} = (0, 2, 6, 1)$
110 : $P_{474} = (1, 2, 6, 1)$
111 : $P_{475} = (2, 2, 6, 1)$
112 : $P_{476} = (3, 2, 6, 1)$
113 : $P_{477} = (4, 2, 6, 1)$
114 : $P_{478} = (5, 2, 6, 1)$
115 : $P_{479} = (6, 2, 6, 1)$
116 : $P_{480} = (7, 2, 6, 1)$
117 : $P_{481} = (0, 3, 6, 1)$
118 : $P_{489} = (0, 4, 6, 1)$
119 : $P_{497} = (0, 5, 6, 1)$
120 : $P_{505} = (0, 6, 6, 1)$
121 : $P_{513} = (0, 7, 6, 1)$
122 : $P_{521} = (0, 0, 7, 1)$
123 : $P_{529} = (0, 1, 7, 1)$
124 : $P_{537} = (0, 2, 7, 1)$
125 : $P_{545} = (0, 3, 7, 1)$
126 : $P_{553} = (0, 4, 7, 1)$
127 : $P_{561} = (0, 5, 7, 1)$
128 : $P_{562} = (1, 5, 7, 1)$
129 : $P_{563} = (2, 5, 7, 1)$
130 : $P_{564} = (3, 5, 7, 1)$
131 : $P_{565} = (4, 5, 7, 1)$
132 : $P_{566} = (5, 5, 7, 1)$
133 : $P_{567} = (6, 5, 7, 1)$
134 : $P_{568} = (7, 5, 7, 1)$
135 : $P_{569} = (0, 6, 7, 1)$
136 : $P_{577} = (0, 7, 7, 1)$