Rank-24 over GF(64)

January 15, 2021

The equation

The equation of the surface is :

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

(1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0)
The point rank of the equation over GF(64) is 148

General information

Number of lines	81
Number of points	5185
Number of singular points	1
Number of Eckardt points	0
Number of double points	0
Number of single points	5184
Number of points off lines	0
Number of Hesse planes	0
Number of axes	0
Type of points on lines	65^{81}
Type of lines on points	81, 1^{5184}

Singular Points

The surface has 1 singular points:

$0: \ P_3 = \mathbf{P}(0,0,0,1) = \mathbf{P}(0,0,0,1)$

The 81 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8321} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8321} = \mathbf{Pl}(0,0,0,1,1,0)_{12353}$$

$$\ell_1 = \begin{bmatrix} 1 & \epsilon^{21} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{241337} = \begin{bmatrix} 1 & 57 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{241337} = \mathbf{Pl}(0,0,0,57,1,0)_{19465}$$

$$\ell_2 = \left[\begin{array}{cccc} 1 & \epsilon^{42} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{237176} = \left[\begin{array}{cccc} 1 & 56 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{237176} = \mathbf{Pl}(0,0,0,56,1,0)_{19338}$$

$$\ell_3 = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{270464} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{270464} = \mathbf{Pl}(0,1,0,0,1,0)_{4289}$$

$$\ell_4 = \left[\begin{array}{cccc} 1 & 0 & \epsilon^{21} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{15183488} = \left[\begin{array}{cccc} 1 & 0 & 57 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{15183488} = \mathbf{Pl}(0,57,0,0,1,0)_{4345}$$

$$\ell_5 = \left[\begin{array}{cccc} 1 & 0 & \epsilon^{42} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{14917184} = \left[\begin{array}{cccc} 1 & 0 & 56 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{14917184} = \mathbf{Pl}(0,56,0,0,1,0)_{4344}$$

$$\ell_6 = \left[\begin{array}{cccc} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{17043585} = \left[\begin{array}{cccc} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{17043585} = \mathbf{Pl}(0,1,0,1,0,0)_{193}$$

$$\ell_7 = \left[\begin{array}{cccc} 1 & \epsilon^{54} & \epsilon^{15} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{5638154} = \left[\begin{array}{cccc} 1 & 10 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{5638154} = \mathbf{Pl}(0,21,0,10,1,0)_{13580}$$

$$\ell_8 = \left[\begin{array}{cccc} 1 & \epsilon^{33} & \epsilon^{57} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{13269428} = \left[\begin{array}{cccc} 1 & 52 & 49 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{13269428} = \mathbf{Pl}(0,49,0,52,1,0)_{18942}$$

$$\ell_9 = \left[\begin{array}{cccc} 1 & \epsilon^{12} & \epsilon^{36} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{9849086} = \left[\begin{array}{cccc} 1 & 62 & 36 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{9849086} = \mathbf{Pl}(0,36,0,62,1,0)_{20199}$$

$$\ell_{10} = \left[\begin{array}{cccc} 1 & \epsilon^{15} & \epsilon^{12} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{16602389} = \left[\begin{array}{cccc} 1 & 21 & 62 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{16602389} = \mathbf{Pl}(0,62,0,21,1,0)_{15018}$$

$$\ell_{11} = \left[\begin{array}{cccc} 1 & \epsilon^{57} & \epsilon^{54} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{2871089} = \left[\begin{array}{cccc} 1 & 49 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{2871089} = \mathbf{Pl}(0,10,0,49,1,0)_{18522}$$

$$\ell_{12} = \left[\begin{array}{cccc} 1 & \epsilon^{36} & \epsilon^{33} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{14001764} = \left[\begin{array}{cccc} 1 & 36 & 52 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{14001764} = \mathbf{Pl}(0,52,0,36,1,0)_{16913}$$

$$\ell_{13} = \left[\begin{array}{cccc} 1 & \epsilon^{39} & \epsilon^{48} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4027847} = \left[\begin{array}{cccc} 1 & 7 & 15 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{4027847} = \mathbf{Pl}(0,15,0,7,1,0)_{13193}$$

$$\ell_{14} = \left[\begin{array}{cccc} 1 & \epsilon^{18} & \epsilon^{27} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{12299915} = \left[\begin{array}{cccc} 1 & 11 & 46 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{12299915} = \mathbf{Pl}(0,46,0,11,1,0)_{13732}$$

$$\ell_{15} = \left[\begin{array}{cccc} 1 & \epsilon^{60} & \epsilon^{6} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{8842124} = \left[\begin{array}{cccc} 1 & 12 & 33 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{8842124} = \mathbf{Pl}(0,33,0,12,1,0)_{13846}$$

$$\ell_{16} = \left[\begin{array}{cccc} 1 & \epsilon^{33} & \epsilon^{15} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{5812916} = \left[\begin{array}{cccc} 1 & 52 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{5812916} = \mathbf{Pl}(0,21,0,52,1,0)_{18914}$$

$$\ell_{17} = \left[\begin{array}{cccc} 1 & \epsilon^{12} & \epsilon^{57} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{13311038} = \left[\begin{array}{cccc} 1 & 62 & 49 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{13311038} = \mathbf{Pl}(0,49,0,62,1,0)_{20212}$$

$$\ell_{18} = \left[\begin{array}{cccc} 1 & \epsilon^{54} & \epsilon^{36} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{9632714} = \left[\begin{array}{cccc} 1 & 10 & 36 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{9632714} = \mathbf{Pl}(0,36,0,10,1,0)_{13595}$$

$$\ell_{19} = \left[\begin{array}{cccc} 1 & \epsilon^{12} & \epsilon^{15} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{5854526} = \left[\begin{array}{cccc} 1 & 62 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{5854526} = \mathbf{Pl}(0,21,0,62,1,0)_{20184}$$

$$\ell_{20} = \left[\begin{array}{cccc} 1 & \epsilon^{54} & \epsilon^{57} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{13094666} = \left[\begin{array}{cccc} 1 & 10 & 49 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{13094666} = \mathbf{Pl}(0,49,0,10,1,0)_{13608}$$

$$\ell_{21} = \left[\begin{array}{cccc} 1 & \epsilon^{33} & \epsilon^{36} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{9807476} = \left[\begin{array}{cccc} 1 & 52 & 36 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{9807476} = \mathbf{Pl}(0,36,0,52,1,0)_{18929}$$

$$\ell_{22} = \left[\begin{array}{cccc} 1 & \epsilon^{9} & \epsilon^{24} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{12183407} = \left[\begin{array}{cccc} 1 & 47 & 45 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{12183407} = \mathbf{Pl}(0,45,0,47,1,0)_{18303}$$

$$\ell_{23} = \begin{bmatrix} 1 & \epsilon^{30} & \epsilon^{45} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10082102} = \begin{bmatrix} 1 & 54 & 37 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10082102} = \mathbf{Pl}(0, 37, 0, 54, 1, 0)_{19184}$$

$$\ell_{24} = \begin{bmatrix} 1 & \epsilon^{51} & \epsilon^{3} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2238617} = \begin{bmatrix} 1 & 25 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2238617} = \mathbf{Pl}(0, 8, 0, 25, 1, 0)_{15472}$$

$$\ell_{25} = \begin{bmatrix} 1 & \epsilon^{49} & \epsilon^{14} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15574622} = \begin{bmatrix} 1 & 30 & 58 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15574622} = \mathbf{Pl}(0, 58, 0, 30, 1, 0)_{16157}$$

$$\ell_{26} = \begin{bmatrix} 1 & \epsilon^{28} & \epsilon^{56} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10910141} = \begin{bmatrix} 1 & 61 & 40 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10910141} = \mathbf{Pl}(0, 40, 0, 61, 1, 0)_{20076}$$

$$\ell_{27} = \begin{bmatrix} 1 & \epsilon^{7} & \epsilon^{35} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4943267} = \begin{bmatrix} 1 & 35 & 18 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4943267} = \mathbf{Pl}(0, 18, 0, 35, 1, 0)_{16752}$$

$$\ell_{28} = \begin{bmatrix} 1 & \epsilon^{24} & \epsilon^{9} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12707693} = \begin{bmatrix} 1 & 45 & 47 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12707693} = \mathbf{Pl}(0, 47, 0, 45, 1, 0)_{18051}$$

$$\ell_{29} = \begin{bmatrix} 1 & \epsilon^{45} & \epsilon^{30} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14538533} = \begin{bmatrix} 1 & 37 & 54 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14538533} = \mathbf{Pl}(0, 54, 0, 37, 1, 0)_{17042}$$

$$\ell_{30} = \begin{bmatrix} 1 & \epsilon^{3} & \epsilon^{51} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6695048} = \begin{bmatrix} 1 & 8 & 25 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6695048} = \mathbf{Pl}(0, 25, 0, 8, 1, 0)_{13330}$$

$$\ell_{31} = \begin{bmatrix} 1 & \epsilon^{48} & \epsilon^{60} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3262223} = \begin{bmatrix} 1 & 15 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3262223} = \mathbf{Pl}(0, 12, 0, 15, 1, 0)_{14206}$$

$$\ell_{32} = \begin{bmatrix} 1 & \epsilon^{6} & \epsilon^{18} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3070817} = \begin{bmatrix} 1 & 33 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3070817} = \mathbf{Pl}(0, 11, 0, 33, 1, 0)_{16491}$$

$$\ell_{33} = \begin{bmatrix} 1 & \epsilon^{27} & \epsilon^{39} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2059694} = \begin{bmatrix} 1 & 46 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2059694} = \mathbf{Pl}(0, 7, 0, 46, 1, 0)_{18138}$$

$$\ell_{34} = \begin{bmatrix} 1 & \epsilon^{14} & \epsilon^{28} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16490042} = \begin{bmatrix} 1 & 58 & 61 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16490042} = \mathbf{Pl}(0, 61, 0, 58, 1, 0)_{19716}$$

$$\ell_{35} = \begin{bmatrix} 1 & \epsilon^{56} & \epsilon^{7} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9491240} = \begin{bmatrix} 1 & 40 & 35 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9491240} = \mathbf{Pl}(0, 35, 0, 40, 1, 0)_{17404}$$

$$\ell_{36} = \begin{bmatrix} 1 & \epsilon^{35} & \epsilon^{49} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8068178} = \begin{bmatrix} 1 & 18 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8068178} = \mathbf{Pl}(0, 30, 0, 18, 1, 0)_{14605}$$

$$\ell_{37} = \begin{bmatrix} 1 & \epsilon^{30} & \epsilon^{24} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12212534} = \begin{bmatrix} 1 & 54 & 45 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12212534} = \mathbf{Pl}(0, 45, 0, 54, 1, 0)_{19192}$$

$$\ell_{38} = \begin{bmatrix} 1 & \epsilon^{51} & \epsilon^{45} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9961433} = \begin{bmatrix} 1 & 25 & 37 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9961433} = \mathbf{Pl}(0, 37, 0, 25, 1, 0)_{15501}$$

$$\ell_{39} = \begin{bmatrix} 1 & \epsilon^{9} & \epsilon^{3} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2330159} = \begin{bmatrix} 1 & 47 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2330159} = \mathbf{Pl}(0, 8, 0, 47, 1, 0)_{18266}$$

$$\ell_{40} = \begin{bmatrix} 1 & \epsilon^{35} & \epsilon^{28} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16323602} = \begin{bmatrix} 1 & 18 & 61 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16323602} = \mathbf{Pl}(0, 61, 0, 18, 1, 0)_{14636}$$

$$\ell_{41} = \begin{bmatrix} 1 & \epsilon^{14} & \epsilon^{7} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9566138} = \begin{bmatrix} 1 & 58 & 35 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9566138} = \mathbf{Pl}(0, 35, 0, 58, 1, 0)_{19690}$$

$$\ell_{42} = \begin{bmatrix} 1 & \epsilon^{56} & \epsilon^{49} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8159720} = \begin{bmatrix} 1 & 40 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8159720} = \mathbf{Pl}(0, 30, 0, 40, 1, 0)_{17399}$$

$$\ell_{43} = \begin{bmatrix} 1 & \epsilon^{45} & \epsilon^{9} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12674405} = \begin{bmatrix} 1 & 37 & 47 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12674405} = \mathbf{Pl}(0, 47, 0, 37, 1, 0)_{17035}$$

$$\ell_{44} = \begin{bmatrix} 1 & \epsilon^{3} & \epsilon^{30} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14417864} = \begin{bmatrix} 1 & 8 & 54 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14417864} = \mathbf{Pl}(0, 54, 0, 8, 1, 0)_{13359}$$

$$\ell_{45} = \begin{bmatrix} 1 & \epsilon^{24} & \epsilon^{51} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6849005} = \begin{bmatrix} 1 & 45 & 25 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6849005} = \mathbf{Pl}(0, 25, 0, 45, 1, 0)_{18029}$$

$$\ell_{46} = \begin{bmatrix} 1 & \epsilon^{57} & \epsilon^{12} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16718897} = \begin{bmatrix} 1 & 49 & 62 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16718897} = \mathbf{Pl}(0, 62, 0, 49, 1, 0)_{18574}$$

$$\ell_{47} = \begin{bmatrix} 1 & \epsilon^{36} & \epsilon^{54} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2816996} = \begin{bmatrix} 1 & 36 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2816996} = \mathbf{Pl}(0, 10, 0, 36, 1, 0)_{16871}$$

$$\ell_{48} = \begin{bmatrix} 1 & \epsilon^{15} & \epsilon^{33} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13939349} = \begin{bmatrix} 1 & 21 & 52 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13939349} = \mathbf{Pl}(0, 52, 0, 21, 1, 0)_{15008}$$

$$\ell_{49} = \begin{bmatrix} 1 & \epsilon^{7} & \epsilon^{14} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15595427} = \begin{bmatrix} 1 & 35 & 58 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15595427} = \mathbf{Pl}(0, 58, 0, 35, 1, 0)_{16792}$$

$$\ell_{50} = \begin{bmatrix} 1 & \epsilon^{49} & \epsilon^{56} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10781150} = \begin{bmatrix} 1 & 30 & 40 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10781150} = \mathbf{Pl}(0, 40, 0, 30, 1, 0)_{16139}$$

$$\ell_{51} = \begin{bmatrix} 1 & \epsilon^{28} & \epsilon^{35} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{5051453} = \begin{bmatrix} 1 & 61 & 18 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{5051453} = \mathbf{Pl}(0, 18, 0, 61, 1, 0)_{20054}$$

$$\ell_{52} = \begin{bmatrix} 1 & \epsilon^{36} & \epsilon^{12} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16664804} = \begin{bmatrix} 1 & 36 & 62 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16664804} = \mathbf{Pl}(0, 62, 0, 36, 1, 0)_{16923}$$

$$\ell_{53} = \begin{bmatrix} 1 & \epsilon^{15} & \epsilon^{54} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2754581} = \begin{bmatrix} 1 & 21 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2754581} = \mathbf{Pl}(0, 10, 0, 21, 1, 0)_{14966}$$

$$\ell_{54} = \begin{bmatrix} 1 & \epsilon^{57} & \epsilon^{33} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14055857} = \begin{bmatrix} 1 & 49 & 52 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14055857} = \mathbf{Pl}(0, 52, 0, 49, 1, 0)_{18564}$$

$$\ell_{55} = \begin{bmatrix} 1 & \epsilon^{51} & \epsilon^{24} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12091865} = \begin{bmatrix} 1 & 25 & 45 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12091865} = \mathbf{Pl}(0, 45, 0, 25, 1, 0)_{15509}$$

$$\ell_{56} = \begin{bmatrix} 1 & \epsilon^{9} & \epsilon^{45} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10052975} = \begin{bmatrix} 1 & 47 & 37 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10052975} = \mathbf{Pl}(0, 37, 0, 47, 1, 0)_{18295}$$

$$\ell_{57} = \begin{bmatrix} 1 & \epsilon^{30} & \epsilon^{3} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2359286} = \begin{bmatrix} 1 & 54 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2359286} = \mathbf{Pl}(0, 8, 0, 54, 1, 0)_{19155}$$

$$\ell_{58} = \begin{bmatrix} 1 & \epsilon^{6} & \epsilon^{60} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3337121} = \begin{bmatrix} 1 & 33 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3337121} = \mathbf{Pl}(0, 12, 0, 33, 1, 0)_{16492}$$

$$\ell_{59} = \begin{bmatrix} 1 & \epsilon^{27} & \epsilon^{18} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3124910} = \begin{bmatrix} 1 & 46 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3124910} = \mathbf{Pl}(0, 11, 0, 46, 1, 0)_{18142}$$

$$\ell_{60} = \begin{bmatrix} 1 & \epsilon^{48} & \epsilon^{39} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1930703} = \begin{bmatrix} 1 & 15 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1930703} = \mathbf{Pl}(0, 7, 0, 15, 1, 0)_{14201}$$

$$\ell_{61} = \begin{bmatrix} 1 & \epsilon^{3} & \epsilon^{9} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12553736} = \begin{bmatrix} 1 & 8 & 47 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12553736} = \mathbf{Pl}(0, 47, 0, 8, 1, 0)_{13352}$$

$$\ell_{62} = \begin{bmatrix} 1 & \epsilon^{24} & \epsilon^{30} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14571821} = \begin{bmatrix} 1 & 45 & 54 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14571821} = \mathbf{Pl}(0, 54, 0, 45, 1, 0)_{18058}$$

$$\ell_{63} = \begin{bmatrix} 1 & \epsilon^{45} & \epsilon^{51} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6815717} = \begin{bmatrix} 1 & 37 & 25 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6815717} = \mathbf{Pl}(0, 25, 0, 37, 1, 0)_{17013}$$

$$\ell_{64} = \begin{bmatrix} 1 & \epsilon^{18} & \epsilon^{48} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4044491} = \begin{bmatrix} 1 & 11 & 15 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4044491} = \mathbf{Pl}(0, 15, 0, 11, 1, 0)_{13701}$$

$$\ell_{65} = \begin{bmatrix} 1 & \epsilon^{60} & \epsilon^{27} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12304076} = \begin{bmatrix} 1 & 12 & 46 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12304076} = \mathbf{Pl}(0,46,0,12,1,0)_{13859}$$

$$\ell_{66} = \begin{bmatrix} 1 & \epsilon^{39} & \epsilon^{6} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8821319} = \begin{bmatrix} 1 & 7 & 33 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8821319} = \mathbf{Pl}(0,33,0,7,1,0)_{13211}$$

$$\ell_{67} = \begin{bmatrix} 1 & \epsilon^{27} & \epsilon^{60} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3391214} = \begin{bmatrix} 1 & 46 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3391214} = \mathbf{Pl}(0,12,0,46,1,0)_{18143}$$

$$\ell_{68} = \begin{bmatrix} 1 & \epsilon^{48} & \epsilon^{18} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2995919} = \begin{bmatrix} 1 & 15 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2995919} = \mathbf{Pl}(0,11,0,15,1,0)_{14205}$$

$$\ell_{69} = \begin{bmatrix} 1 & \epsilon^{6} & \epsilon^{39} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2005601} = \begin{bmatrix} 1 & 33 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2005601} = \mathbf{Pl}(0,7,0,33,1,0)_{16487}$$

$$\ell_{70} = \begin{bmatrix} 0 & 1 & \epsilon^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047225} = \begin{bmatrix} 0 & 1 & 57 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047225} = \mathbf{Pl}(0,57,0,1,0,0)_{249}$$

$$\ell_{71} = \begin{bmatrix} 0 & 1 & \epsilon^{42} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047160} = \begin{bmatrix} 0 & 1 & 56 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047160} = \mathbf{Pl}(0,56,0,1,0,0)_{248}$$

$$\ell_{72} = \begin{bmatrix} 1 & \epsilon^{28} & \epsilon^{14} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15703613} = \begin{bmatrix} 1 & 61 & 58 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15703613} = \mathbf{Pl}(0,58,0,61,1,0)_{20094}$$

$$\ell_{73} = \begin{bmatrix} 1 & \epsilon^{7} & \epsilon^{56} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10801955} = \begin{bmatrix} 1 & 35 & 40 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10801955} = \mathbf{Pl}(0,40,0,35,1,0)_{16774}$$

$$\ell_{74} = \begin{bmatrix} 1 & \epsilon^{49} & \epsilon^{35} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4922462} = \begin{bmatrix} 1 & 30 & 18 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4922462} = \mathbf{Pl}(0,18,0,30,1,0)_{16117}$$

$$\ell_{75} = \begin{bmatrix} 1 & \epsilon^{56} & \epsilon^{28} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16415144} = \begin{bmatrix} 1 & 40 & 61 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16415144} = \mathbf{Pl}(0,61,0,40,1,0)_{17430}$$

$$\ell_{76} = \begin{bmatrix} 1 & \epsilon^{35} & \epsilon^{7} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9399698} = \begin{bmatrix} 1 & 18 & 35 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9399698} = \mathbf{Pl}(0,35,0,18,1,0)_{14610}$$

$$\ell_{77} = \begin{bmatrix} 1 & \epsilon^{14} & \epsilon^{49} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8234618} = \begin{bmatrix} 1 & 58 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8234618} = \mathbf{Pl}(0,30,0,58,1,0)_{19685}$$

$$\ell_{78} = \begin{bmatrix} 1 & \epsilon^{60} & \epsilon^{48} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4048652} = \begin{bmatrix} 1 & 12 & 15 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4048652} = \mathbf{Pl}(0,15,0,12,1,0)_{13828}$$

$$\ell_{79} = \begin{bmatrix} 1 & \epsilon^{39} & \epsilon^{27} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12283271} = \begin{bmatrix} 1 & 7 & 46 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12283271} = \mathbf{Pl}(0,46,0,7,1,0)_{13224}$$

$$\ell_{80} = \begin{bmatrix} 1 & \epsilon^{18} & \epsilon^{6} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8837963} = \begin{bmatrix} 1 & 11 & 33 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8837963} = \mathbf{Pl}(0,33,0,11,1,0)_{13719}$$

Rank of lines: (8321, 241337, 237176, 270464, 15183488, 14917184, 17043585, 5638154, 13269428, 9849086, 16602389, 2871089, 14001764, 4027847, 12299915, 8842124, 5812916, 13311038, 9632714, 5854526, 13094666, 9807476, 12183407, 10082102, 2238617, 15574622, 10910141, 4943267, 12707693, 14538533, 6695048, 3262223, 3070817, 2059694, 16490042, 9491240, 8068178, 12212534, 9961433, 2330159, 16323602, 9566138, 8159720, 12674405, 14417864, 6849005, 16718897, 2816996, 13939349, 15595427, ...4048652, 12283271, 8837963)
Rank of points on Klein quadric: (12353, 19465, 19338, 4289, 4345, 4344, 193, 13580, 18942, 20199, 15018, 18522, 16913, 13193, 13732, 13846, 18914, 20212, 13595, 20184, 13608, 18929, 18303, 19184, 15472, 16157, 20076, 16752, 18051, 17042, 13330, 14206, 16491, 18138, 19716, 17404, 14605, 19192, 15501, 18266, 14636, 19690, 17399, 17035, 13359, 18029, 18574, 16871, 15008, 16792, ...13828, 13224, 13719)

Eckardt Points

The surface has 0 Eckardt points:

Double Points

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

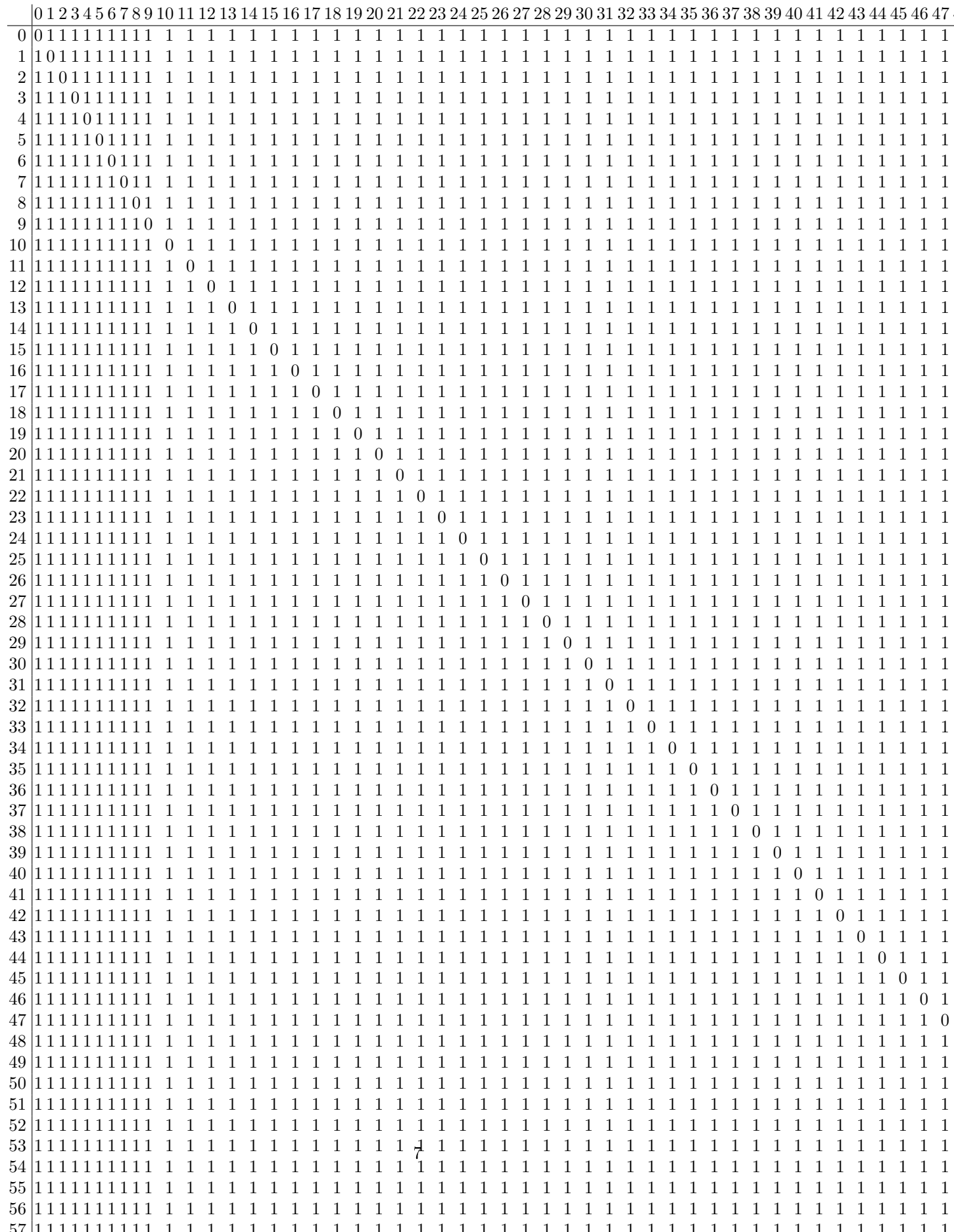
Single Points

The surface has 5184 single points:
Too many to print.

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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 1 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 2 intersects

Line	ℓ_0	ℓ_1	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 3 intersects

Line	ℓ_0	ℓ_1	ℓ_2	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 4 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 5 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_6	ℓ_7	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}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 6 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_7	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}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 7 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	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}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 8 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	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}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 9 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	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}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 10 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 11 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_9	ℓ_{10}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 12 intersects

Line	ℓ_0	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_5	ℓ_6	ℓ_7	ℓ_8	ℓ_9	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
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 13 intersects

Line	ℓ_0	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_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 14 intersects

Line	ℓ_0	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_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 15 intersects

Line	ℓ_0	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_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 16 intersects

Line	ℓ_0	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_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 17 intersects

Line	ℓ_0	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_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 18 intersects

Line	ℓ_0	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}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 19 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{20}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 20 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{21}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 21 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{22}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 22 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 23 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 24 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 25 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 26 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 27 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 28 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 29 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 30 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 31 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 32 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 33 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 34 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 35 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 36 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 37 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 38 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 39 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 40 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 41 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 42 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 43 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 44 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 45 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 46 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 47 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 48 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 49 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 50 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 51 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 52 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 53 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 54 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 55 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 56 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 57 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 58 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 59 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 60 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 61 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 62 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 63 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3

Line 64 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 65 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 66 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 67 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 68 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 69 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 70 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 71 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 72 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 73 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 74 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 75 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 76 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	

Line 77 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	$P_$

Line 78 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	$P_$

Line 79 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	$P_$

Line 80 intersects

Line	ℓ_0	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}	ℓ_{18}	ℓ_{19}	ℓ_{20}	ℓ_{21}	ℓ
in point	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	P_3	$P_$

The surface has 5185 points:
Too many to print.