Rank-65562 over GF(64)

January 15, 2021

The equation

The equation of the surface is:

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

(1, 1, 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)The point rank of the equation over GF(64) is 1107566726

General information

Number of lines	56
Number of points	3585
Number of singular points	1
Number of Eckardt points	0
Number of double points	0
Number of single points	3584
Number of points off lines	0
Number of Hesse planes	0
Number of axes	0
Type of points on lines	65^{56}
Type of lines on points	$56, 1^{3584}$

Singular Points

The surface has 1 singular points:

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

The 56 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & \epsilon^9 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{199727} = \begin{bmatrix} 1 & 47 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{199727} = \mathbf{Pl}(0, 0, 0, 47, 1, 0)_{18195}$$

$$\begin{split} \ell_1 &= \begin{bmatrix} 1 & \epsilon^{18} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{49931} = \begin{bmatrix} 1 & 111 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{49931} = \mathbf{PI}(0,0,0,11,1,0)_{13623} \\ \ell_2 &= \begin{bmatrix} 1 & \epsilon^{36} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{153956} = \begin{bmatrix} 1 & 36 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{153956} = \mathbf{PI}(0,0,0,36,1,0)_{16798} \\ \ell_3 &= \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{270464} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{270464} = \mathbf{PI}(0,1,0,0,1,0)_{4289} \\ \ell_4 &= \begin{bmatrix} 1 & 0 & \epsilon^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15183488} = \begin{bmatrix} 1 & 0 & 57 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15183488} = \mathbf{PI}(0,57,0,0,1,0)_{4345} \\ \ell_5 &= \begin{bmatrix} 1 & 0 & \epsilon^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14917184} = \begin{bmatrix} 1 & 0 & 56 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14917184} = \mathbf{PI}(0,56,0,0,1,0)_{4344} \\ \ell_6 &= \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17043585} = \begin{bmatrix} 1 & 57 & 57 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17043585} = \mathbf{PI}(0,1,0,1,0,0)_{193} \\ \ell_7 &= \begin{bmatrix} 1 & \epsilon^{21} & \epsilon^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15420665} = \begin{bmatrix} 1 & 57 & 57 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17043585} = \mathbf{PI}(0,57,0,57,1,0)_{19385} \\ \ell_8 &= \begin{bmatrix} 1 & \epsilon^{22} & \epsilon^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15150200} = \begin{bmatrix} 1 & 56 & 56 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15150200} = \mathbf{PI}(0,56,0,56,1,0)_{19457} \\ \ell_9 &= \begin{bmatrix} 1 & \epsilon^{22} & \epsilon^{61} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6595184} = \begin{bmatrix} 1 & 48 & 24 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1701848} = \mathbf{PI}(0,24,0,48,1,0)_{18469} \\ \ell_{10} &= \begin{bmatrix} 1 & \epsilon^{32} & \epsilon^{50} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6208211} = \begin{bmatrix} 1 & 19 & 23 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1701848} = \mathbf{PI}(0,23,0,19,1,0)_{14725} \\ \ell_{12} &= \begin{bmatrix} 1 & \epsilon^{33} & \epsilon^{32} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9782510} = \begin{bmatrix} 1 & 1 & 47 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12524609} = \mathbf{PI}(0,36,0,46,1,0)_{18167} \\ \ell_{14} &= \begin{bmatrix} 1 & \epsilon^{27} & \epsilon^{30} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17031332} = \mathbf{PI}(0,36,0,46,1,0)_{18167} \\ \ell_{15} &= \begin{bmatrix} 1 & \epsilon^{33} & \epsilon^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10353132} = \begin{bmatrix} 1 & 1 & 47 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10353132} = \mathbf{PI}(0,63,0,61,1,0)_{20099} \\ \ell_{15} &= \begin{bmatrix} 1 & \epsilon^{33} & \epsilon^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10352132} = \begin{bmatrix} 1 & 1 & 47 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10353132} = \mathbf{PI}(0,53,0,18,1,0)_{14223} \\ \ell_{16} &= \begin{bmatrix} 1 & \epsilon^{33} & \epsilon^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10452431} = \begin{bmatrix} 1 & 1 & 53 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14193170} = \mathbf{PI}(0,53,0,18,1,0)_{142$$

$$\begin{split} \ell_{22} &= \begin{bmatrix} 1 & \epsilon^{44} & \epsilon^{52} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13400834} = \begin{bmatrix} 1 & 34 & 50 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13400834} = \mathbf{PI}(0, 50, 0, 34, 1, 0)_{16657} \\ \ell_{23} &= \begin{bmatrix} 1 & \epsilon^{54} & \epsilon^{55} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4839242} = \begin{bmatrix} 1 & 10 & 18 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3469342} = \mathbf{PI}(0, 18, 0, 10, 1, 0)_{13577} \\ \ell_{24} &= \begin{bmatrix} 1 & \epsilon^{54} & \epsilon^{28} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16290314} = \begin{bmatrix} 1 & 10 & 61 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16290314} = \mathbf{PI}(0, 61, 0, 10, 1, 0)_{13620} \\ \ell_{25} &= \begin{bmatrix} 1 & \epsilon^{11} & \epsilon^{13} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{7855967} = \begin{bmatrix} 1 & 31 & 29 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17855967} = \mathbf{PI}(0, 29, 0, 31, 1, 0)_{16255} \\ \ell_{26} &= \begin{bmatrix} 1 & \epsilon^{37} & \epsilon^{69} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12840845} = \begin{bmatrix} 1 & 13 & 48 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12840845} = \mathbf{PI}(0, 48, 0, 13, 1, 0)_{13988} \\ \ell_{27} &= \begin{bmatrix} 1 & \epsilon^{27} & \epsilon^{49} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1844086} = \begin{bmatrix} 1 & 46 & 58 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1844086} = \mathbf{PI}(0, 30, 0, 46, 1, 0)_{18180} \\ \ell_{28} &= \begin{bmatrix} 1 & \epsilon^{27} & \epsilon^{49} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15641198} = \begin{bmatrix} 1 & 53 & 33 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15641198} = \mathbf{PI}(0, 58, 0, 46, 1, 0)_{18189} \\ \ell_{29} &= \begin{bmatrix} 1 & \epsilon^{17} & \epsilon^{6} & \epsilon & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{0012725} = \begin{bmatrix} 1 & 53 & 33 & 2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{074081} = \mathbf{PI}(0, 2, 0, 33, 1, 0)_{16482} \\ \ell_{31} &= \begin{bmatrix} 1 & \epsilon^{5} & \epsilon^{24} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12120992} = \begin{bmatrix} 1 & 32 & 45 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12120992} = \mathbf{PI}(0, 45, 0, 32, 1, 0)_{16398} \\ \ell_{32} &= \begin{bmatrix} 1 & \epsilon^{56} & \epsilon^{20} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{11887076} = \begin{bmatrix} 1 & 47 & 56 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12120992} = \mathbf{PI}(0, 44, 0, 40, 1, 0)_{17413} \\ \ell_{33} &= \begin{bmatrix} 1 & \epsilon^{56} & \epsilon^{20} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2546531} = \begin{bmatrix} 1 & 47 & 36 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2546531} = \mathbf{PI}(0, 9, 0, 35, 1, 0)_{16743} \\ \ell_{34} &= \begin{bmatrix} 1 & \epsilon^{56} & \epsilon^{47} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2586671} = \begin{bmatrix} 1 & 47 & 36 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2526258} = \mathbf{PI}(0, 47, 0, 10, 1, 1, 0)_{12427} \\ \ell_{37} &= \begin{bmatrix} 1 & \epsilon^{56} & \epsilon^{47} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{22937665} = \begin{bmatrix} 1 & 1 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2192846} = \mathbf{PI}(0, 10, 0, 45, 1, 0)_{14984} \\ \ell_{49} &= \begin{bmatrix} 1 & \epsilon^{47} & \epsilon^{48} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3694967} = \begin{bmatrix} 1 & 4$$

$$\begin{split} \ell_{43} &= \begin{bmatrix} 1 & \epsilon^{14} & \epsilon^5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8767226} = \begin{bmatrix} 1 & 58 & 32 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8767226} = \mathbf{PI}(0, 32, 0, 58, 1, 0)_{19687} \\ \ell_{44} &= \begin{bmatrix} 1 & \epsilon^{18} & \epsilon^9 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12566219} = \begin{bmatrix} 1 & 11 & 47 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12566219} = \mathbf{PI}(0, 47, 0, 11, 1, 0)_{13733} \\ \ell_{45} &= \begin{bmatrix} 1 & \epsilon^{49} & \epsilon^{40} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3857246} = \begin{bmatrix} 1 & 30 & 14 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3857246} = \mathbf{PI}(0, 14, 0, 30, 1, 0)_{16113} \\ \ell_{46} &= \begin{bmatrix} 1 & \epsilon^{37} & \epsilon^{38} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13756265} = \begin{bmatrix} 1 & 41 & 51 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13756265} = \mathbf{PI}(0, 51, 0, 41, 1, 0)_{17547} \\ \ell_{47} &= \begin{bmatrix} 1 & \epsilon^{45} & \epsilon^{56} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10810277} = \begin{bmatrix} 1 & 37 & 40 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10810277} = \mathbf{PI}(0, 40, 0, 37, 1, 0)_{17028} \\ \ell_{48} &= \begin{bmatrix} 1 & \epsilon^{45} & \epsilon^7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1405300} = \begin{bmatrix} 1 & 52 & 42 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1405300} = \mathbf{PI}(0, 42, 0, 52, 1, 0)_{18935} \\ \ell_{50} &= \begin{bmatrix} 1 & \epsilon^{25} & \epsilon^{41} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047225} = \begin{bmatrix} 1 & 59 & 28 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047225} = \mathbf{PI}(0, 57, 0, 1, 0, 0)_{249} \\ \ell_{52} &= \begin{bmatrix} 0 & 1 & \epsilon^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17047160} = \begin{bmatrix} 0 & 1 & 56 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1704725} = \mathbf{PI}(0, 56, 0, 1, 0, 0)_{248} \\ \ell_{53} &= \begin{bmatrix} 1 & \epsilon^{10} & \epsilon^{48} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14035052} = \begin{bmatrix} 1 & 63 & 15 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14035052} = \mathbf{PI}(0, 52, 0, 44, 1, 0)_{17929} \\ \ell_{54} &= \begin{bmatrix} 1 & \epsilon^{12} & \epsilon^2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1327358} = \begin{bmatrix} 1 & 62 & 4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1327358} = \mathbf{PI}(0, 4, 0, 62, 1, 0)_{20167} \end{aligned}$$

Rank of lines: (199727, 49931, 153956, 270464, 15183488, 14917184, 17043585, 15420665, 15150200, 6595184, 1701848, 6208211, 6961352, 12524609, 9782510, 17035133, 3083300, 14193170, 6112508, 10452431, 5355206, 16552457, 13460834, 4839242, 16290314, 7855967, 12840845, 8184686, 15641198, 9012725, 674081, 12120992, 11887976, 2546531, 9786671, 12562058, 2937665, 14734100, 2192846, 3694967, 4452269, 3087461, 9595265, 8767226, 12566219, 3857246, 13756265, 10810277, 9478757, 11405300, ...4260863, 14035052, 1327358) Rank of points on Klein quadric: <math>(18195, 13623, 16798, 4289, 4345, 4344, 193, 19585, 19457, 18409, 15343, 14725, 13331, 12463, 18167, 20099, 16872, 14628, 19931, 14233, 13071, 13494, 16657, 13577, 13620, 16255, 13988, 18161, 18189, 19053, 16482, 16398, 17413, 16743, 18294, 13606, 12427, 14884, 14075, 19287, 18020, 16999, 12452, 19687, 13733, 16113, 17547, 17028, 17023, 18935, ...20305, 17929, 20167)

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 3584 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

012345678910111213141	5 16 17 18 10 20 21	22 23 24 25 26 27 28	90 30 31 39 33 3 <i>4</i> 35 3	6 37 38 39 40 41 42 43 44 45 46 47
0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u> </u>			
1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
	1		1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
				$flack 1 \ flack 1 $
	$1\ 1\ 1\ 1\ 1\ 1$		1 1 1 1 1 1 1	
$4 \mid 11110111111 \mid 1 \mid 1 \mid 1 \mid 1 \mid 1 \mid 1 \mid$			1 1 1 1 1 1 1	
$5 \mid 111111011111 \ 1 \ 1 \ 1 \ 1 \ 1$	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	
$6 \mid 111111101111 1 1 1 1 1 1 1$	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
7 11111111011 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
8 11111111101 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
9 11111111110 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
10 1111111111 0 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1
11 1111111111 1 0 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1
12 1111111111 1 1 0 1 1			1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1
13 111111111 1 1 1 0 1				
14 111111111 1 1 1 0				
15 1111111111 1 1 1 1 1 1				
-	-			
16 1111111111 1 1 1 1 1 1	-			
17 1111111111				
18 1111111111				
$19 \mid 1111111111111111111111111111111111$				
20 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-			
21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 0	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
$22 \mid 1111111111111111111111111111111111$	1 1 1 1 1 1 1	0 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
23 111111111111 1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 0 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
24 1111111111 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 0 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1
25 11111111111 1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 0 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1
26 1111111111 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 0 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1
27 1111111111 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 0 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1
28 1111111111 1 1 1 1 1 1				
29 1111111111 1 1 1 1 1		-		
30 1111111111 1 1 1 1 1			-	
31 1111111111 1 1 1 1 1 1			-	
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33 1111111111 1 1 1 1 1 1			-	
34 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
35 1111111111				
36 1111111111 1 1 1 1 1 1				
37 1111111111 1 1 1 1 1 1				
38 1111111111 1 1 1 1 1 1				
39 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
40 1111111111 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 0 1 1 1 1 1 1 1
41 1111111111 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 0 1 1 1 1 1 1
42 1111111111 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 0 1 1 1 1 1
43 1111111111 1 1 1 1 1 1				
44 1111111111 1 1 1 1 1 1				
45 1111111111 1 1 1 1 1 1				
46 1 1 1 1 1 1 1 1 1 1 1 1 1				
47 1111111111 1 1 1 1 1				
48 1111111111 1 1 1 1 1 1				
49 1111111111 1 1 1 1 1 1 1				
50 11111111111 1 1 1 1 1 1				
51 1111111111 1 1 1 1 1 1				
52 1111111111 1 1 1 1 1 1				
53 1111111111 1 1 1 1 1 1				
54 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
55 11111111111 1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1

Neighbor s Line 0 inte			line	inter	secti	on gr	aph:															
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 inte	ersect	s																				
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 inte	ersect	S																				
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 inte	ersect	S																				
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 inte	ersect	S																				
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 inte	ersect	s																				
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 inte	ersect																					
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 inte	ersect	S																				
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 inte	ersect	īS.																				
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 inte	ersect	S																				
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 in	erse	cts																				
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

 ℓ_8

 P_3

 ℓ_9

 P_3

 ℓ_{10}

 P_3

 ℓ_6

 P_3

 P_3

 ℓ_7

 P_3

 $\overline{\ell}_{12}$

 P_3

 ℓ_{13}

 P_3

 $\overline{\ell_{14}}$

 P_3

 ℓ_{15}

 P_3

 ℓ_{16}

 P_3

 ℓ_{17}

 P_3

 ℓ_{18}

 P_3

 ℓ_{19}

 P_3

 ℓ_{20}

 P_3

 ℓ_{21}

 P_3

 P_3

Line 11 intersects

 ℓ_3

 P_3 P_3

 P_3

 P_3

Line

in point

Line 12 int	ersec	ets																				
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										
Line 13 int	ersec	ets																				
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										
Line 14 int	ersec	ets																				
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										
Line 15 int	ersec	ets																				
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										
Line 16 in	ersec	ets																				
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 .										
Line 17 int	ersec	ets																				
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										
Line 18 int		ets																				
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										
Line 19 int	ersec	ets																				
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										
Line 20 int	ersec	ets																				
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										
Line 21 int	ersec	ets																				
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										
Line 22 int	ersec	ets																				
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										
Line 23 int		ets																				
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										
Line 24 int	ersec	ets																				
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										

Line 25 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<u>l</u>
Line 26 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	
in point $ P_3 $	⊥-
Line 27 intersects	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1
in point $ P_3 $	┸
Line 28 intersects	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
in point $ P_3 $	⊥-
Line 29 intersects	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1
in point P ₃ P ₃	⊥-
Line 30 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	
Line 31 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	+
Line 32 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	\top_{I}
in point P ₃ P ₃	1
Line 33 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	I
in point P_3 P	⊥-
Line 34 intersects	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
in point P ₃ P ₃	<u>_</u>
Line 35 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	
Line 36 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	\top_{I}
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Line 37 intersects	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	T.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	

Line 38 int	terse	${ m cts}$																					
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}	1
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	Ц
Line 39 int	terse	cts																					
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	Ц
Line 40 int		cts																					
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	щ
Line 41 int	terse	ets																					
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	ئے
Line 42 int	terse	ets																					
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}	_{
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	Ц
Line 43 int																							
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	Ц
Line 44 int		ets		<u>. </u>														,		,	<u>. </u>		
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	႕
Line 45 int		cts																					
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 46 int																							_
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 47 int																							
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 48 int																							
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}	1
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 49 int	terse	cts																					
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}	1
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	L
Line 50 int	terse	cts																					
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}	·

 P_3 P_3

in point

 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}	
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											

${\bf Line~52~intersects}$

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}	_,
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											

${\rm Line}~53~{\rm intersects}$

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}	
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											

Line 54 intersects

																						'
Line	ℓ_0	$\mid \ell_1 \mid$	ℓ_2	ℓ_3	ℓ_4	ℓ_5	$\mid \ell_6 \mid$	ℓ_7	ℓ_8	$\mid \ell_9 \mid$	$\mid \ell_{10} \mid$	ℓ_{11}	ℓ_{12}	ℓ_{13}	ℓ_{14}	ℓ_{15}	ℓ_{16}	ℓ_{17}	ℓ_{18}	ℓ_{19}	ℓ_{20}	$\mid \ell_{21} \mid \ell$
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 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}
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										

The surface has 3585 points:

Too many to print.