

Rank-0 over GF(8)

January 15, 2021

The equation

The equation of the surface is :

$$X_0^3 = 0$$

(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(8) is 0

General information

Number of lines	73
Number of points	73
Number of singular points	73
Number of Eckardt points	0
Number of double points	0
Number of single points	0
Number of points off lines	0
Number of Hesse planes	0
Number of axes	0
Type of points on lines	9^{73}
Type of lines on points	9^{73}

Singular Points

The surface has 73 singular points:

0 : $P_1 = \mathbf{P}(0, 1, 0, 0) = \mathbf{P}(0, 1, 0, 0)$
1 : $P_2 = \mathbf{P}(0, 0, 1, 0) = \mathbf{P}(0, 0, 1, 0)$
2 : $P_3 = \mathbf{P}(0, 0, 0, 1) = \mathbf{P}(0, 0, 0, 1)$
3 : $P_{19} = \mathbf{P}(0, 1, 1, 0) = \mathbf{P}(0, 1, 1, 0)$
4 : $P_{27} = \mathbf{P}(0, \gamma, 1, 0) = \mathbf{P}(0, 2, 1, 0)$
5 : $P_{35} = \mathbf{P}(0, \gamma^5, 1, 0) = \mathbf{P}(0, 3, 1, 0)$
6 : $P_{43} = \mathbf{P}(0, \gamma^2, 1, 0) = \mathbf{P}(0, 4, 1, 0)$
7 : $P_{51} = \mathbf{P}(0, \gamma^3, 1, 0) = \mathbf{P}(0, 5, 1, 0)$
8 : $P_{59} = \mathbf{P}(0, \gamma^6, 1, 0) = \mathbf{P}(0, 6, 1, 0)$

9 : $P_{67} = \mathbf{P}(0, \gamma^4, 1, 0) = \mathbf{P}(0, 7, 1, 0)$
10 : $P_{82} = \mathbf{P}(0, 1, 0, 1) = \mathbf{P}(0, 1, 0, 1)$
11 : $P_{90} = \mathbf{P}(0, \gamma, 0, 1) = \mathbf{P}(0, 2, 0, 1)$
12 : $P_{98} = \mathbf{P}(0, \gamma^5, 0, 1) = \mathbf{P}(0, 3, 0, 1)$
13 : $P_{106} = \mathbf{P}(0, \gamma^2, 0, 1) = \mathbf{P}(0, 4, 0, 1)$
14 : $P_{114} = \mathbf{P}(0, \gamma^3, 0, 1) = \mathbf{P}(0, 5, 0, 1)$
15 : $P_{122} = \mathbf{P}(0, \gamma^6, 0, 1) = \mathbf{P}(0, 6, 0, 1)$
16 : $P_{130} = \mathbf{P}(0, \gamma^4, 0, 1) = \mathbf{P}(0, 7, 0, 1)$
17 : $P_{138} = \mathbf{P}(0, 0, 1, 1) = \mathbf{P}(0, 0, 1, 1)$

$$\begin{aligned}
18 : P_{146} &= \mathbf{P}(0, 1, 1, 1) = \mathbf{P}(0, 1, 1, 1) \\
19 : P_{153} &= \mathbf{P}(0, \gamma, 1, 1) = \mathbf{P}(0, 2, 1, 1) \\
20 : P_{161} &= \mathbf{P}(0, \gamma^5, 1, 1) = \mathbf{P}(0, 3, 1, 1) \\
21 : P_{169} &= \mathbf{P}(0, \gamma^2, 1, 1) = \mathbf{P}(0, 4, 1, 1) \\
22 : P_{177} &= \mathbf{P}(0, \gamma^3, 1, 1) = \mathbf{P}(0, 5, 1, 1) \\
23 : P_{185} &= \mathbf{P}(0, \gamma^6, 1, 1) = \mathbf{P}(0, 6, 1, 1) \\
24 : P_{193} &= \mathbf{P}(0, \gamma^4, 1, 1) = \mathbf{P}(0, 7, 1, 1) \\
25 : P_{201} &= \mathbf{P}(0, 0, \gamma, 1) = \mathbf{P}(0, 0, 2, 1) \\
26 : P_{209} &= \mathbf{P}(0, 1, \gamma, 1) = \mathbf{P}(0, 1, 2, 1) \\
27 : P_{217} &= \mathbf{P}(0, \gamma, \gamma, 1) = \mathbf{P}(0, 2, 2, 1) \\
28 : P_{225} &= \mathbf{P}(0, \gamma^5, \gamma, 1) = \mathbf{P}(0, 3, 2, 1) \\
29 : P_{233} &= \mathbf{P}(0, \gamma^2, \gamma, 1) = \mathbf{P}(0, 4, 2, 1) \\
30 : P_{241} &= \mathbf{P}(0, \gamma^3, \gamma, 1) = \mathbf{P}(0, 5, 2, 1) \\
31 : P_{249} &= \mathbf{P}(0, \gamma^6, \gamma, 1) = \mathbf{P}(0, 6, 2, 1) \\
32 : P_{257} &= \mathbf{P}(0, \gamma^4, \gamma, 1) = \mathbf{P}(0, 7, 2, 1) \\
33 : P_{265} &= \mathbf{P}(0, 0, \gamma^5, 1) = \mathbf{P}(0, 0, 3, 1) \\
34 : P_{273} &= \mathbf{P}(0, 1, \gamma^5, 1) = \mathbf{P}(0, 1, 3, 1) \\
35 : P_{281} &= \mathbf{P}(0, \gamma, \gamma^5, 1) = \mathbf{P}(0, 2, 3, 1) \\
36 : P_{289} &= \mathbf{P}(0, \gamma^5, \gamma^5, 1) = \mathbf{P}(0, 3, 3, 1) \\
37 : P_{297} &= \mathbf{P}(0, \gamma^2, \gamma^5, 1) = \mathbf{P}(0, 4, 3, 1) \\
38 : P_{305} &= \mathbf{P}(0, \gamma^3, \gamma^5, 1) = \mathbf{P}(0, 5, 3, 1) \\
39 : P_{313} &= \mathbf{P}(0, \gamma^6, \gamma^5, 1) = \mathbf{P}(0, 6, 3, 1) \\
40 : P_{321} &= \mathbf{P}(0, \gamma^4, \gamma^5, 1) = \mathbf{P}(0, 7, 3, 1) \\
41 : P_{329} &= \mathbf{P}(0, 0, \gamma^2, 1) = \mathbf{P}(0, 0, 4, 1) \\
42 : P_{337} &= \mathbf{P}(0, 1, \gamma^2, 1) = \mathbf{P}(0, 1, 4, 1) \\
43 : P_{345} &= \mathbf{P}(0, \gamma, \gamma^2, 1) = \mathbf{P}(0, 2, 4, 1) \\
44 : P_{353} &= \mathbf{P}(0, \gamma^5, \gamma^2, 1) = \mathbf{P}(0, 3, 4, 1) \\
45 : P_{361} &= \mathbf{P}(0, \gamma^2, \gamma^2, 1) = \mathbf{P}(0, 4, 4, 1)
\end{aligned}$$

$$\begin{aligned}
46 : P_{369} &= \mathbf{P}(0, \gamma^3, \gamma^2, 1) = \mathbf{P}(0, 5, 4, 1) \\
47 : P_{377} &= \mathbf{P}(0, \gamma^6, \gamma^2, 1) = \mathbf{P}(0, 6, 4, 1) \\
48 : P_{385} &= \mathbf{P}(0, \gamma^4, \gamma^2, 1) = \mathbf{P}(0, 7, 4, 1) \\
49 : P_{393} &= \mathbf{P}(0, 0, \gamma^3, 1) = \mathbf{P}(0, 0, 5, 1) \\
50 : P_{401} &= \mathbf{P}(0, 1, \gamma^3, 1) = \mathbf{P}(0, 1, 5, 1) \\
51 : P_{409} &= \mathbf{P}(0, \gamma, \gamma^3, 1) = \mathbf{P}(0, 2, 5, 1) \\
52 : P_{417} &= \mathbf{P}(0, \gamma^5, \gamma^3, 1) = \mathbf{P}(0, 3, 5, 1) \\
53 : P_{425} &= \mathbf{P}(0, \gamma^2, \gamma^3, 1) = \mathbf{P}(0, 4, 5, 1) \\
54 : P_{433} &= \mathbf{P}(0, \gamma^3, \gamma^3, 1) = \mathbf{P}(0, 5, 5, 1) \\
55 : P_{441} &= \mathbf{P}(0, \gamma^6, \gamma^3, 1) = \mathbf{P}(0, 6, 5, 1) \\
56 : P_{449} &= \mathbf{P}(0, \gamma^4, \gamma^3, 1) = \mathbf{P}(0, 7, 5, 1) \\
57 : P_{457} &= \mathbf{P}(0, 0, \gamma^6, 1) = \mathbf{P}(0, 0, 6, 1) \\
58 : P_{465} &= \mathbf{P}(0, 1, \gamma^6, 1) = \mathbf{P}(0, 1, 6, 1) \\
59 : P_{473} &= \mathbf{P}(0, \gamma, \gamma^6, 1) = \mathbf{P}(0, 2, 6, 1) \\
60 : P_{481} &= \mathbf{P}(0, \gamma^5, \gamma^6, 1) = \mathbf{P}(0, 3, 6, 1) \\
61 : P_{489} &= \mathbf{P}(0, \gamma^2, \gamma^6, 1) = \mathbf{P}(0, 4, 6, 1) \\
62 : P_{497} &= \mathbf{P}(0, \gamma^3, \gamma^6, 1) = \mathbf{P}(0, 5, 6, 1) \\
63 : P_{505} &= \mathbf{P}(0, \gamma^6, \gamma^6, 1) = \mathbf{P}(0, 6, 6, 1) \\
64 : P_{513} &= \mathbf{P}(0, \gamma^4, \gamma^6, 1) = \mathbf{P}(0, 7, 6, 1) \\
65 : P_{521} &= \mathbf{P}(0, 0, \gamma^4, 1) = \mathbf{P}(0, 0, 7, 1) \\
66 : P_{529} &= \mathbf{P}(0, 1, \gamma^4, 1) = \mathbf{P}(0, 1, 7, 1) \\
67 : P_{537} &= \mathbf{P}(0, \gamma, \gamma^4, 1) = \mathbf{P}(0, 2, 7, 1) \\
68 : P_{545} &= \mathbf{P}(0, \gamma^5, \gamma^4, 1) = \mathbf{P}(0, 3, 7, 1) \\
69 : P_{553} &= \mathbf{P}(0, \gamma^2, \gamma^4, 1) = \mathbf{P}(0, 4, 7, 1) \\
70 : P_{561} &= \mathbf{P}(0, \gamma^3, \gamma^4, 1) = \mathbf{P}(0, 5, 7, 1) \\
71 : P_{569} &= \mathbf{P}(0, \gamma^6, \gamma^4, 1) = \mathbf{P}(0, 6, 7, 1) \\
72 : P_{577} &= \mathbf{P}(0, \gamma^4, \gamma^4, 1) = \mathbf{P}(0, 7, 7, 1)
\end{aligned}$$

The 73 Lines

The lines and their Pluecker coordinates are:

$$\begin{aligned}
\ell_0 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4672} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4672} = \mathbf{Pl}(0, 0, 0, 0, 0, 1)_{649} \\
\ell_1 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4680} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4680} = \mathbf{Pl}(0, 0, 0, 1, 0, 0)_{17} \\
\ell_2 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4673} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4673} = \mathbf{Pl}(0, 0, 0, 1, 0, 1)_{769} \\
\ell_3 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4678} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4678} = \mathbf{Pl}(0, 0, 0, 6, 0, 1)_{844} \\
\ell_4 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4676} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4676} = \mathbf{Pl}(0, 0, 0, 4, 0, 1)_{814} \\
\ell_5 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4675} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4675} = \mathbf{Pl}(0, 0, 0, 3, 0, 1)_{799} \\
\ell_6 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4679} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4679} = \mathbf{Pl}(0, 0, 0, 7, 0, 1)_{859} \\
\ell_7 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4674} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4674} = \mathbf{Pl}(0, 0, 0, 2, 0, 1)_{784}
\end{aligned}$$

$$\begin{aligned}
\ell_8 &= \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_9 &= \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_{10} &= \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_{11} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4726} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4726} = \mathbf{Pl}(0, 6, 0, 0, 0, 1)_{662} \\
\ell_{12} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4708} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4708} = \mathbf{Pl}(0, 4, 0, 0, 0, 1)_{660} \\
\ell_{13} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4699} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4699} = \mathbf{Pl}(0, 3, 0, 0, 0, 1)_{659} \\
\ell_{14} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4735} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4735} = \mathbf{Pl}(0, 7, 0, 0, 0, 1)_{663} \\
\ell_{15} &= \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4690} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4690} = \mathbf{Pl}(0, 2, 0, 0, 0, 1)_{658} \\
\ell_{16} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4717} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{4717} = \mathbf{Pl}(0, 5, 0, 0, 0, 1)_{661} \\
\ell_{17} &= \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4689} = \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4689} = \mathbf{Pl}(0, 1, 0, 1, 0, 0)_{25} \\
\ell_{18} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4682} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4682} = \mathbf{Pl}(0, 1, 0, 1, 0, 1)_{777} \\
\ell_{19} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4732} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4732} = \mathbf{Pl}(0, 6, 0, 6, 0, 1)_{857} \\
\ell_{20} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4712} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4712} = \mathbf{Pl}(0, 4, 0, 4, 0, 1)_{825} \\
\ell_{21} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4702} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4702} = \mathbf{Pl}(0, 3, 0, 3, 0, 1)_{809} \\
\ell_{22} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4742} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4742} = \mathbf{Pl}(0, 7, 0, 7, 0, 1)_{873} \\
\ell_{23} &= \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4692} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4692} = \mathbf{Pl}(0, 2, 0, 2, 0, 1)_{793} \\
\ell_{24} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4722} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4722} = \mathbf{Pl}(0, 5, 0, 5, 0, 1)_{841} \\
\ell_{25} &= \begin{bmatrix} 0 & 1 & \gamma^6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4734} = \begin{bmatrix} 0 & 1 & 6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4734} = \mathbf{Pl}(0, 6, 0, 1, 0, 0)_{30} \\
\ell_{26} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4683} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4683} = \mathbf{Pl}(0, 1, 0, 2, 0, 1)_{792} \\
\ell_{27} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4727} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4727} = \mathbf{Pl}(0, 6, 0, 1, 0, 1)_{782} \\
\ell_{28} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4713} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4713} = \mathbf{Pl}(0, 4, 0, 5, 0, 1)_{840}
\end{aligned}$$

$$\begin{aligned}
\ell_{29} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4705} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4705} = \mathbf{Pl}(0, 3, 0, 6, 0, 1)_{854} \\
\ell_{30} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4738} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4738} = \mathbf{Pl}(0, 7, 0, 3, 0, 1)_{813} \\
\ell_{31} &= \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4694} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4694} = \mathbf{Pl}(0, 2, 0, 4, 0, 1)_{823} \\
\ell_{32} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4724} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4724} = \mathbf{Pl}(0, 5, 0, 7, 0, 1)_{871} \\
\ell_{33} &= \begin{bmatrix} 0 & 1 & \gamma^2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4716} = \begin{bmatrix} 0 & 1 & 4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4716} = \mathbf{Pl}(0, 4, 0, 1, 0, 0)_{28} \\
\ell_{34} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4684} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4684} = \mathbf{Pl}(0, 1, 0, 3, 0, 1)_{807} \\
\ell_{35} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4733} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4733} = \mathbf{Pl}(0, 6, 0, 7, 0, 1)_{872} \\
\ell_{36} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4709} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4709} = \mathbf{Pl}(0, 4, 0, 1, 0, 1)_{780} \\
\ell_{37} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4704} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4704} = \mathbf{Pl}(0, 3, 0, 5, 0, 1)_{839} \\
\ell_{38} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4739} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4739} = \mathbf{Pl}(0, 7, 0, 4, 0, 1)_{828} \\
\ell_{39} &= \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4696} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4696} = \mathbf{Pl}(0, 2, 0, 6, 0, 1)_{853} \\
\ell_{40} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4719} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4719} = \mathbf{Pl}(0, 5, 0, 2, 0, 1)_{796} \\
\ell_{41} &= \begin{bmatrix} 0 & 1 & \gamma^5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4707} = \begin{bmatrix} 0 & 1 & 3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4707} = \mathbf{Pl}(0, 3, 0, 1, 0, 0)_{27} \\
\ell_{42} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4685} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4685} = \mathbf{Pl}(0, 1, 0, 4, 0, 1)_{822} \\
\ell_{43} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma \end{bmatrix}_{4728} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{4728} = \mathbf{Pl}(0, 6, 0, 2, 0, 1)_{797} \\
\ell_{44} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^4 \end{bmatrix}_{4715} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{4715} = \mathbf{Pl}(0, 4, 0, 7, 0, 1)_{870} \\
\ell_{45} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^5 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4700} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4700} = \mathbf{Pl}(0, 3, 0, 1, 0, 1)_{779} \\
\ell_{46} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^4 \\ 0 & 0 & 1 & \gamma^6 \end{bmatrix}_{4741} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{4741} = \mathbf{Pl}(0, 7, 0, 6, 0, 1)_{858} \\
\ell_{47} &= \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4695} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4695} = \mathbf{Pl}(0, 2, 0, 5, 0, 1)_{838} \\
\ell_{48} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4720} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4720} = \mathbf{Pl}(0, 5, 0, 3, 0, 1)_{811} \\
\ell_{49} &= \begin{bmatrix} 0 & 1 & \gamma^4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4743} = \begin{bmatrix} 0 & 1 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4743} = \mathbf{Pl}(0, 7, 0, 1, 0, 0)_{31}
\end{aligned}$$

$$\begin{aligned}
\ell_{50} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \gamma^3 \end{bmatrix}_{4686} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{4686} = \mathbf{Pl}(0, 1, 0, 5, 0, 1)_{837} \\
\ell_{51} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^6 \\ 0 & 0 & 1 & \gamma^2 \end{bmatrix}_{4730} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{4730} = \mathbf{Pl}(0, 6, 0, 4, 0, 1)_{827} \\
\ell_{52} &= \begin{bmatrix} 0 & 1 & 0 & \gamma^2 \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4711} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4711} = \mathbf{Pl}(0, 4, 0, 3, 0, 1)_{810} \\
\ell_{53} &= \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_{54} &= \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_{55} &= \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_{56} &= \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_{57} &= \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_{58} &= \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_{59} &= \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_{60} &= \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_{61} &= \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_{62} &= \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_{63} &= \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_{64} &= \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_{65} &= \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_{66} &= \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_{67} &= \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_{68} &= \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_{69} &= \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_{70} &= \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}
\end{aligned}$$

$$\ell_{71} = \begin{bmatrix} 0 & 1 & 0 & \gamma \\ 0 & 0 & 1 & \gamma^5 \end{bmatrix}_{4693} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{4693} = \mathbf{PI}(0, 2, 0, 3, 0, 1)_{808}$$

$$\ell_{72} = \begin{bmatrix} 0 & 1 & 0 & \gamma^3 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4718} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{4718} = \mathbf{PI}(0, 5, 0, 1, 0, 1)_{781}$$

Rank of lines: (4672, 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, 4707, 4685, 4728, 4715, 4700, 4741, 4695, 4720, 4743, ...4737, 4693, 4718)

Rank of points on Klein quadric: (649, 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, 27, 822, 797, 870, 779, 858, 838, 811, 31, ...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 0 single points:

The single points on the surface are:

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

[illegible]

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_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_{19}	P_{19}	P_{19}

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_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_{98}	P_{106}	P_{114}

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_1	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}	P_{138}	P_{146}	P_{138}	P_{161}	P_{169}

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_1	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}	P_{225}	P_{201}	P_{209}	P_{217}	P_{225}

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_1	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}	P_{281}	P_{273}	P_{265}	P_{273}	P_{281}

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_1	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}	P_{369}	P_{377}	P_{385}	P_{361}	P_{369}

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_1	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}	P_{425}	P_{409}	P_{393}	P_{401}	P_{409}

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_1	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}	P_{513}	P_{489}	P_{473}	P_{465}	P_{457}

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_1	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}	P_{569}	P_{537}	P_{529}	P_{521}	P_{537}

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_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_{201}	P_{265}	P_{329}	P_{393}

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_2	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}	P_{82}	P_{146}	P_{209}	P_{273}	P_{337}

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_2	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}	P_{281}	P_{345}	P_{409}	P_{473}	P_{537}

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}
in point	P_2	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}	P_{225}	P_{161}

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}
in point	P_2	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}	P_{425}	P_{489}

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}
in point	P_2	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}	P_{369}	P_{561}

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}
in point	P_2	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}	P_{569}	P_{377}

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}
in point	P_2	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}	P_{513}	P_{449}

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}
in point	P_{19}	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_{577}	P_{19}	P_{19}

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_{18}	ℓ_{19}
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_{138}	P_{82}

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_{18}	ℓ_{19}
in point	P_{19}	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_{377}	P_{449}	P_{201}	P_{273}

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_{18}	ℓ_{19}
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_{265}	P_{209}

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_{18}	ℓ_{19}
in point	P_{19}	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}	P_{249}	P_{321}	P_{329}	P_{401}

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_{18}	ℓ_{19}
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}	P_{313}	P_{257}

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_{18}	ℓ_{19}
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}	P_{233}	P_{193}

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_{18}	ℓ_{19}
in point	P_{19}	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}	P_{185}	P_{130}	P_{241}	P_{130}

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}
in point	P_{27}	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_{449}	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}
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_{457}

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}
in point	P_{27}	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_{249}	P_{385}	P_{481}

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}
in point	P_{27}	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_{377}	P_{257}	P_{473}

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}
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}	P_{497}

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}
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}	P_{489}

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}
in point	P_{27}	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}	P_{122}	P_{513}	P_{401}

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}
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}	P_{401}

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}
in point	P_{35}	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_{513}	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}
in point	P_{35}	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_{505}	P_{257}	P_{417}

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}
in point	P_{35}	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_{569}	P_{321}	P_{497}

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}
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_{489}

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}
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}	P_{481}

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}
in point	P_{35}	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}	P_{185}	P_{449}

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}
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 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}
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 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}
in point	P_{43}	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_{385}	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}
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_{265}

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}
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_{457}

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}
in point	P_{43}	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_{249}	P_{193}	P_{465}

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}
in point	P_{43}	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}	P_{505}	P_{449}	P_{505}

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}
in point	P_{43}	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}	P_{441}	P_{513}	P_{513}

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}
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}	P_{321}

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}
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}	P_{130}

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}
in point	P_{51}	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_{257}	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}
in point	P_{51}	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_{249}	P_{449}	P_{497}

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}
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_{51}

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}
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_{51}

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}
in point	P_{51}	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}	P_{313}	P_{385}	P_{51}

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}
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}	P_{51}

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}
in point	P_{51}	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}	P_{122}	P_{577}	P_{51}

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}
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}	P_{51}

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}
in point	P_{59}	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_{321}	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}
in point	P_{59}	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_{313}	P_{193}	P_{59}

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}
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_{59}

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}
in point	P_{59}	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_{569}	P_{449}	P_{59}

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}
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}	P_{59}

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}
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}	P_{59}

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}
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}	P_{59}

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}
in point	P_{59}	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}	P_{249}	P_{130}	P_{59}

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}
in point	P_{67}	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_{193}	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}
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_{67}

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}
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_{67}

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}
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_{67}

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}
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}	P_{67}

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}
in point	P_{67}	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}	P_{249}	P_{577}	P_{67}

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}
in point	P_{67}	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}	P_{122}	P_{449}	P_{67}

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}
in point	P_{67}	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}	P_{441}	P_{130}	P_{67}

The surface has 73 points:

The points on the surface are:

0 : $P_1 = (0, 1, 0, 0)$	9 : $P_{67} = (0, 7, 1, 0)$	18 : $P_{146} = (0, 1, 1, 1)$
1 : $P_2 = (0, 0, 1, 0)$	10 : $P_{82} = (0, 1, 0, 1)$	19 : $P_{153} = (0, 2, 1, 1)$
2 : $P_3 = (0, 0, 0, 1)$	11 : $P_{90} = (0, 2, 0, 1)$	20 : $P_{161} = (0, 3, 1, 1)$
3 : $P_{19} = (0, 1, 1, 0)$	12 : $P_{98} = (0, 3, 0, 1)$	21 : $P_{169} = (0, 4, 1, 1)$
4 : $P_{27} = (0, 2, 1, 0)$	13 : $P_{106} = (0, 4, 0, 1)$	22 : $P_{177} = (0, 5, 1, 1)$
5 : $P_{35} = (0, 3, 1, 0)$	14 : $P_{114} = (0, 5, 0, 1)$	23 : $P_{185} = (0, 6, 1, 1)$
6 : $P_{43} = (0, 4, 1, 0)$	15 : $P_{122} = (0, 6, 0, 1)$	24 : $P_{193} = (0, 7, 1, 1)$
7 : $P_{51} = (0, 5, 1, 0)$	16 : $P_{130} = (0, 7, 0, 1)$	25 : $P_{201} = (0, 0, 2, 1)$
8 : $P_{59} = (0, 6, 1, 0)$	17 : $P_{138} = (0, 0, 1, 1)$	26 : $P_{209} = (0, 1, 2, 1)$

27 : $P_{217} = (0, 2, 2, 1)$	43 : $P_{345} = (0, 2, 4, 1)$	59 : $P_{473} = (0, 2, 6, 1)$
28 : $P_{225} = (0, 3, 2, 1)$	44 : $P_{353} = (0, 3, 4, 1)$	60 : $P_{481} = (0, 3, 6, 1)$
29 : $P_{233} = (0, 4, 2, 1)$	45 : $P_{361} = (0, 4, 4, 1)$	61 : $P_{489} = (0, 4, 6, 1)$
30 : $P_{241} = (0, 5, 2, 1)$	46 : $P_{369} = (0, 5, 4, 1)$	62 : $P_{497} = (0, 5, 6, 1)$
31 : $P_{249} = (0, 6, 2, 1)$	47 : $P_{377} = (0, 6, 4, 1)$	63 : $P_{505} = (0, 6, 6, 1)$
32 : $P_{257} = (0, 7, 2, 1)$	48 : $P_{385} = (0, 7, 4, 1)$	64 : $P_{513} = (0, 7, 6, 1)$
33 : $P_{265} = (0, 0, 3, 1)$	49 : $P_{393} = (0, 0, 5, 1)$	65 : $P_{521} = (0, 0, 7, 1)$
34 : $P_{273} = (0, 1, 3, 1)$	50 : $P_{401} = (0, 1, 5, 1)$	66 : $P_{529} = (0, 1, 7, 1)$
35 : $P_{281} = (0, 2, 3, 1)$	51 : $P_{409} = (0, 2, 5, 1)$	67 : $P_{537} = (0, 2, 7, 1)$
36 : $P_{289} = (0, 3, 3, 1)$	52 : $P_{417} = (0, 3, 5, 1)$	68 : $P_{545} = (0, 3, 7, 1)$
37 : $P_{297} = (0, 4, 3, 1)$	53 : $P_{425} = (0, 4, 5, 1)$	69 : $P_{553} = (0, 4, 7, 1)$
38 : $P_{305} = (0, 5, 3, 1)$	54 : $P_{433} = (0, 5, 5, 1)$	70 : $P_{561} = (0, 5, 7, 1)$
39 : $P_{313} = (0, 6, 3, 1)$	55 : $P_{441} = (0, 6, 5, 1)$	71 : $P_{569} = (0, 6, 7, 1)$
40 : $P_{321} = (0, 7, 3, 1)$	56 : $P_{449} = (0, 7, 5, 1)$	72 : $P_{577} = (0, 7, 7, 1)$
41 : $P_{329} = (0, 0, 4, 1)$	57 : $P_{457} = (0, 0, 6, 1)$	
42 : $P_{337} = (0, 1, 4, 1)$	58 : $P_{465} = (0, 1, 6, 1)$	