

# Rank-65831 over GF(32)

January 15, 2021

## The equation

The equation of the surface is :

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

( 0, 0, 1, 0, 0, 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0 )

The point rank of the equation over GF(32) is 1141934117

## General information

Number of lines	1090
Number of points	2113
Number of singular points	1
Number of Eckardt points	0
Number of double points	0
Number of single points	1056
Number of points off lines	0
Number of Hesse planes	0
Number of axes	0
Type of points on lines	$33^{1090}$
Type of lines on points	$66, 33^{1056}, 1^{1056}$

## Singular Points

The surface has 1 singular points:

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

## The 1090 Lines

The lines and their Pluecker coordinates are:

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

$$\begin{aligned}
\ell_1 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1056} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1056} = \mathbf{Pl}(0, 0, 0, 0, 1, 0)_{1089} \\
\ell_2 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{32} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{32} = \mathbf{Pl}(1, 0, 0, 0, 1, 0)_{1090} \\
\ell_3 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{576} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{576} = \mathbf{Pl}(2, 0, 0, 0, 1, 0)_{1091} \\
\ell_4 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{896} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{896} = \mathbf{Pl}(3, 0, 0, 0, 1, 0)_{1092} \\
\ell_5 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{288} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{288} = \mathbf{Pl}(4, 0, 0, 0, 1, 0)_{1093} \\
\ell_6 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{736} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{736} = \mathbf{Pl}(5, 0, 0, 0, 1, 0)_{1094} \\
\ell_7 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{448} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{448} = \mathbf{Pl}(6, 0, 0, 0, 1, 0)_{1095} \\
\ell_8 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{384} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{384} = \mathbf{Pl}(7, 0, 0, 0, 1, 0)_{1096} \\
\ell_9 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{704} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{704} = \mathbf{Pl}(8, 0, 0, 0, 1, 0)_{1097} \\
\ell_{10} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{128} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{128} = \mathbf{Pl}(9, 0, 0, 0, 1, 0)_{1098} \\
\ell_{11} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{800} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{800} = \mathbf{Pl}(10, 0, 0, 0, 1, 0)_{1099} \\
\ell_{12} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{512} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{512} = \mathbf{Pl}(11, 0, 0, 0, 1, 0)_{1100} \\
\ell_{13} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{224} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{224} = \mathbf{Pl}(12, 0, 0, 0, 1, 0)_{1101} \\
\ell_{14} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{480} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{480} = \mathbf{Pl}(13, 0, 0, 0, 1, 0)_{1102} \\
\ell_{15} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{192} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{192} = \mathbf{Pl}(14, 0, 0, 0, 1, 0)_{1103} \\
\ell_{16} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{416} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{416} = \mathbf{Pl}(15, 0, 0, 0, 1, 0)_{1104} \\
\ell_{17} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{352} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{352} = \mathbf{Pl}(16, 0, 0, 0, 1, 0)_{1105} \\
\ell_{18} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{768} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{768} = \mathbf{Pl}(17, 0, 0, 0, 1, 0)_{1106} \\
\ell_{19} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{64} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{64} = \mathbf{Pl}(18, 0, 0, 0, 1, 0)_{1107} \\
\ell_{20} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{928} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{928} = \mathbf{Pl}(19, 0, 0, 0, 1, 0)_{1108} \\
\ell_{21} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{960} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{960} = \mathbf{Pl}(20, 0, 0, 0, 1, 0)_{1109}
\end{aligned}$$

$$\begin{aligned}
\ell_{22} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{832} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{832} = \mathbf{Pl}(21, 0, 0, 0, 1, 0)_{1110} \\
\ell_{23} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{256} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{256} = \mathbf{Pl}(22, 0, 0, 0, 1, 0)_{1111} \\
\ell_{24} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{160} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{160} = \mathbf{Pl}(23, 0, 0, 0, 1, 0)_{1112} \\
\ell_{25} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{544} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{544} = \mathbf{Pl}(24, 0, 0, 0, 1, 0)_{1113} \\
\ell_{26} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{320} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{320} = \mathbf{Pl}(25, 0, 0, 0, 1, 0)_{1114} \\
\ell_{27} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{672} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{672} = \mathbf{Pl}(26, 0, 0, 0, 1, 0)_{1115} \\
\ell_{28} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{992} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{992} = \mathbf{Pl}(27, 0, 0, 0, 1, 0)_{1116} \\
\ell_{29} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{96} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{96} = \mathbf{Pl}(28, 0, 0, 0, 1, 0)_{1117} \\
\ell_{30} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{608} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{608} = \mathbf{Pl}(29, 0, 0, 0, 1, 0)_{1118} \\
\ell_{31} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{640} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{640} = \mathbf{Pl}(30, 0, 0, 0, 1, 0)_{1119} \\
\ell_{32} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{864} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{864} = \mathbf{Pl}(31, 0, 0, 0, 1, 0)_{1120} \\
\ell_{33} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082400} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082400} = \mathbf{Pl}(0, 0, 0, 1, 0, 0)_{65} \\
\ell_{34} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{33824} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{33824} = \mathbf{Pl}(1, 0, 0, 1, 0, 0)_{66} \\
\ell_{35} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{608832} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{608832} = \mathbf{Pl}(2, 0, 0, 1, 0, 0)_{67} \\
\ell_{36} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{947072} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{947072} = \mathbf{Pl}(3, 0, 0, 1, 0, 0)_{68} \\
\ell_{37} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{304416} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{304416} = \mathbf{Pl}(4, 0, 0, 1, 0, 0)_{69} \\
\ell_{38} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{777952} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{777952} = \mathbf{Pl}(5, 0, 0, 1, 0, 0)_{70} \\
\ell_{39} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{473536} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{473536} = \mathbf{Pl}(6, 0, 0, 1, 0, 0)_{71} \\
\ell_{40} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{405888} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{405888} = \mathbf{Pl}(7, 0, 0, 1, 0, 0)_{72} \\
\ell_{41} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{744128} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{744128} = \mathbf{Pl}(8, 0, 0, 1, 0, 0)_{73} \\
\ell_{42} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{135296} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{135296} = \mathbf{Pl}(9, 0, 0, 1, 0, 0)_{74}
\end{aligned}$$

$$\begin{aligned}
\ell_{43} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{845600} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{845600} = \mathbf{Pl}(10, 0, 0, 1, 0, 0)_{75} \\
\ell_{44} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{541184} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{541184} = \mathbf{Pl}(11, 0, 0, 1, 0, 0)_{76} \\
\ell_{45} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{236768} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{236768} = \mathbf{Pl}(12, 0, 0, 1, 0, 0)_{77} \\
\ell_{46} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{507360} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{507360} = \mathbf{Pl}(13, 0, 0, 1, 0, 0)_{78} \\
\ell_{47} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{202944} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{202944} = \mathbf{Pl}(14, 0, 0, 1, 0, 0)_{79} \\
\ell_{48} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{439712} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{439712} = \mathbf{Pl}(15, 0, 0, 1, 0, 0)_{80} \\
\ell_{49} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{372064} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{372064} = \mathbf{Pl}(16, 0, 0, 1, 0, 0)_{81} \\
\ell_{50} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{811776} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{811776} = \mathbf{Pl}(17, 0, 0, 1, 0, 0)_{82} \\
\ell_{51} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & 0 \end{bmatrix}_{67648} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{67648} = \mathbf{Pl}(18, 0, 0, 1, 0, 0)_{83} \\
\ell_{52} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{980896} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{980896} = \mathbf{Pl}(19, 0, 0, 1, 0, 0)_{84} \\
\ell_{53} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{1014720} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{1014720} = \mathbf{Pl}(20, 0, 0, 1, 0, 0)_{85} \\
\ell_{54} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{879424} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{879424} = \mathbf{Pl}(21, 0, 0, 1, 0, 0)_{86} \\
\ell_{55} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{270592} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{270592} = \mathbf{Pl}(22, 0, 0, 1, 0, 0)_{87} \\
\ell_{56} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{169120} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{169120} = \mathbf{Pl}(23, 0, 0, 1, 0, 0)_{88} \\
\ell_{57} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{575008} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{575008} = \mathbf{Pl}(24, 0, 0, 1, 0, 0)_{89} \\
\ell_{58} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{338240} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{338240} = \mathbf{Pl}(25, 0, 0, 1, 0, 0)_{90} \\
\ell_{59} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{710304} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{710304} = \mathbf{Pl}(26, 0, 0, 1, 0, 0)_{91} \\
\ell_{60} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{1048544} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{1048544} = \mathbf{Pl}(27, 0, 0, 1, 0, 0)_{92} \\
\ell_{61} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{101472} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{101472} = \mathbf{Pl}(28, 0, 0, 1, 0, 0)_{93} \\
\ell_{62} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{642656} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{642656} = \mathbf{Pl}(29, 0, 0, 1, 0, 0)_{94} \\
\ell_{63} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{676480} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{676480} = \mathbf{Pl}(30, 0, 0, 1, 0, 0)_{95}
\end{aligned}$$

$$\begin{aligned}
\ell_{64} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & 0 \end{bmatrix}_{913248} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{913248} = \mathbf{Pl}(31, 0, 0, 1, 0, 0)_{96} \\
\ell_{65} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2113} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2113} = \mathbf{Pl}(0, 0, 0, 1, 1, 0)_{3105} \\
\ell_{66} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{33856} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{33856} = \mathbf{Pl}(1, 0, 0, 1, 1, 0)_{3106} \\
\ell_{67} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{609408} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{609408} = \mathbf{Pl}(2, 0, 0, 1, 1, 0)_{3107} \\
\ell_{68} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{947968} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{947968} = \mathbf{Pl}(3, 0, 0, 1, 1, 0)_{3108} \\
\ell_{69} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{304704} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{304704} = \mathbf{Pl}(4, 0, 0, 1, 1, 0)_{3109} \\
\ell_{70} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{778688} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{778688} = \mathbf{Pl}(5, 0, 0, 1, 1, 0)_{3110} \\
\ell_{71} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{473984} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{473984} = \mathbf{Pl}(6, 0, 0, 1, 1, 0)_{3111} \\
\ell_{72} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{406272} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{406272} = \mathbf{Pl}(7, 0, 0, 1, 1, 0)_{3112} \\
\ell_{73} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{744832} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{744832} = \mathbf{Pl}(8, 0, 0, 1, 1, 0)_{3113} \\
\ell_{74} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{135424} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{135424} = \mathbf{Pl}(9, 0, 0, 1, 1, 0)_{3114} \\
\ell_{75} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{846400} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{846400} = \mathbf{Pl}(10, 0, 0, 1, 1, 0)_{3115} \\
\ell_{76} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{541696} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{541696} = \mathbf{Pl}(11, 0, 0, 1, 1, 0)_{3116} \\
\ell_{77} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{236992} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{236992} = \mathbf{Pl}(12, 0, 0, 1, 1, 0)_{3117} \\
\ell_{78} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{507840} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{507840} = \mathbf{Pl}(13, 0, 0, 1, 1, 0)_{3118} \\
\ell_{79} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{203136} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{203136} = \mathbf{Pl}(14, 0, 0, 1, 1, 0)_{3119} \\
\ell_{80} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{440128} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{440128} = \mathbf{Pl}(15, 0, 0, 1, 1, 0)_{3120} \\
\ell_{81} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{372416} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{372416} = \mathbf{Pl}(16, 0, 0, 1, 1, 0)_{3121} \\
\ell_{82} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{812544} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{812544} = \mathbf{Pl}(17, 0, 0, 1, 1, 0)_{3122} \\
\ell_{83} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta \end{bmatrix}_{67712} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{67712} = \mathbf{Pl}(18, 0, 0, 1, 1, 0)_{3123} \\
\ell_{84} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{981824} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{981824} = \mathbf{Pl}(19, 0, 0, 1, 1, 0)_{3124}
\end{aligned}$$

$$\begin{aligned}
\ell_{85} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{1015680} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{1015680} = \mathbf{PI}(20, 0, 0, 1, 1, 0)_{3125} \\
\ell_{86} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{880256} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{880256} = \mathbf{PI}(21, 0, 0, 1, 1, 0)_{3126} \\
\ell_{87} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{270848} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{270848} = \mathbf{PI}(22, 0, 0, 1, 1, 0)_{3127} \\
\ell_{88} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{169280} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{169280} = \mathbf{PI}(23, 0, 0, 1, 1, 0)_{3128} \\
\ell_{89} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{575552} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{575552} = \mathbf{PI}(24, 0, 0, 1, 1, 0)_{3129} \\
\ell_{90} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{338560} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{338560} = \mathbf{PI}(25, 0, 0, 1, 1, 0)_{3130} \\
\ell_{91} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{710976} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{710976} = \mathbf{PI}(26, 0, 0, 1, 1, 0)_{3131} \\
\ell_{92} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{1049536} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{1049536} = \mathbf{PI}(27, 0, 0, 1, 1, 0)_{3132} \\
\ell_{93} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{101568} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{101568} = \mathbf{PI}(28, 0, 0, 1, 1, 0)_{3133} \\
\ell_{94} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{643264} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{643264} = \mathbf{PI}(29, 0, 0, 1, 1, 0)_{3134} \\
\ell_{95} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{677120} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{677120} = \mathbf{PI}(30, 0, 0, 1, 1, 0)_{3135} \\
\ell_{96} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{914112} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{914112} = \mathbf{PI}(31, 0, 0, 1, 1, 0)_{3136} \\
\ell_{97} &= \begin{bmatrix} 1 & \eta^{30} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{20082} = \begin{bmatrix} 1 & 18 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{20082} = \mathbf{PI}(0, 0, 0, 18, 1, 0)_{4176} \\
\ell_{98} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{33888} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{33888} = \mathbf{PI}(18, 0, 0, 18, 1, 0)_{4194} \\
\ell_{99} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{608864} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{608864} = \mathbf{PI}(1, 0, 0, 18, 1, 0)_{4177} \\
\ell_{100} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{948000} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{948000} = \mathbf{PI}(19, 0, 0, 18, 1, 0)_{4195} \\
\ell_{101} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{304992} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{304992} = \mathbf{PI}(2, 0, 0, 18, 1, 0)_{4178} \\
\ell_{102} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{778304} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{778304} = \mathbf{PI}(16, 0, 0, 18, 1, 0)_{4192} \\
\ell_{103} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{474432} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{474432} = \mathbf{PI}(3, 0, 0, 18, 1, 0)_{4179} \\
\ell_{104} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{406656} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{406656} = \mathbf{PI}(17, 0, 0, 18, 1, 0)_{4193} \\
\ell_{105} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{744416} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{744416} = \mathbf{PI}(4, 0, 0, 18, 1, 0)_{4180}
\end{aligned}$$

$$\begin{aligned}
\ell_{106} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{135552} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{135552} = \mathbf{Pl}(22, 0, 0, 18, 1, 0)_{4198} \\
\ell_{107} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{846336} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{846336} = \mathbf{Pl}(5, 0, 0, 18, 1, 0)_{4181} \\
\ell_{108} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{541344} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{541344} = \mathbf{Pl}(23, 0, 0, 18, 1, 0)_{4199} \\
\ell_{109} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{237216} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{237216} = \mathbf{Pl}(6, 0, 0, 18, 1, 0)_{4182} \\
\ell_{110} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{508320} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{508320} = \mathbf{Pl}(20, 0, 0, 18, 1, 0)_{4196} \\
\ell_{111} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{203328} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{203328} = \mathbf{Pl}(7, 0, 0, 18, 1, 0)_{4183} \\
\ell_{112} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{440544} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{440544} = \mathbf{Pl}(21, 0, 0, 18, 1, 0)_{4197} \\
\ell_{113} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{372768} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{372768} = \mathbf{Pl}(8, 0, 0, 18, 1, 0)_{4184} \\
\ell_{114} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{812448} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{812448} = \mathbf{Pl}(26, 0, 0, 18, 1, 0)_{4202} \\
\ell_{115} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{67776} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{67776} = \mathbf{Pl}(9, 0, 0, 18, 1, 0)_{4185} \\
\ell_{116} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{981888} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{981888} = \mathbf{Pl}(27, 0, 0, 18, 1, 0)_{4203} \\
\ell_{117} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{1015520} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{1015520} = \mathbf{Pl}(10, 0, 0, 18, 1, 0)_{4186} \\
\ell_{118} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{879968} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{879968} = \mathbf{Pl}(24, 0, 0, 18, 1, 0)_{4200} \\
\ell_{119} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{271104} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{271104} = \mathbf{Pl}(11, 0, 0, 18, 1, 0)_{4187} \\
\ell_{120} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{169440} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{169440} = \mathbf{Pl}(25, 0, 0, 18, 1, 0)_{4201} \\
\ell_{121} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{575232} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{575232} = \mathbf{Pl}(12, 0, 0, 18, 1, 0)_{4188} \\
\ell_{122} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{338880} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{338880} = \mathbf{Pl}(30, 0, 0, 18, 1, 0)_{4206} \\
\ell_{123} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{710784} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{710784} = \mathbf{Pl}(13, 0, 0, 18, 1, 0)_{4189} \\
\ell_{124} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{1049408} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{1049408} = \mathbf{Pl}(31, 0, 0, 18, 1, 0)_{4207} \\
\ell_{125} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{101664} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{101664} = \mathbf{Pl}(14, 0, 0, 18, 1, 0)_{4190} \\
\ell_{126} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{642752} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{642752} = \mathbf{Pl}(28, 0, 0, 18, 1, 0)_{4204}
\end{aligned}$$

$$\begin{aligned}
\ell_{127} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{676896} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{676896} = \mathbf{Pl}(15, 0, 0, 18, 1, 0)_{4191} \\
\ell_{128} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{913856} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{913856} = \mathbf{Pl}(29, 0, 0, 18, 1, 0)_{4205} \\
\ell_{129} &= \begin{bmatrix} 1 & \eta^{13} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{30652} = \begin{bmatrix} 1 & 28 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{30652} = \mathbf{Pl}(0, 0, 0, 28, 1, 0)_{4806} \\
\ell_{130} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{33920} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{33920} = \mathbf{Pl}(28, 0, 0, 28, 1, 0)_{4834} \\
\ell_{131} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{609440} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{609440} = \mathbf{Pl}(29, 0, 0, 28, 1, 0)_{4835} \\
\ell_{132} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{947104} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{947104} = \mathbf{Pl}(1, 0, 0, 28, 1, 0)_{4807} \\
\ell_{133} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{305280} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{305280} = \mathbf{Pl}(31, 0, 0, 28, 1, 0)_{4837} \\
\ell_{134} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{778848} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{778848} = \mathbf{Pl}(3, 0, 0, 28, 1, 0)_{4809} \\
\ell_{135} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{474112} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{474112} = \mathbf{Pl}(2, 0, 0, 28, 1, 0)_{4808} \\
\ell_{136} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{406528} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{406528} = \mathbf{Pl}(30, 0, 0, 28, 1, 0)_{4836} \\
\ell_{137} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{745120} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{745120} = \mathbf{Pl}(27, 0, 0, 28, 1, 0)_{4833} \\
\ell_{138} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{135680} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{135680} = \mathbf{Pl}(7, 0, 0, 28, 1, 0)_{4813} \\
\ell_{139} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{846048} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{846048} = \mathbf{Pl}(6, 0, 0, 28, 1, 0)_{4812} \\
\ell_{140} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{541856} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{541856} = \mathbf{Pl}(26, 0, 0, 28, 1, 0)_{4832} \\
\ell_{141} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{237056} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{237056} = \mathbf{Pl}(4, 0, 0, 28, 1, 0)_{4810} \\
\ell_{142} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{507904} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{507904} = \mathbf{Pl}(24, 0, 0, 28, 1, 0)_{4830} \\
\ell_{143} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{203264} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{203264} = \mathbf{Pl}(25, 0, 0, 28, 1, 0)_{4831} \\
\ell_{144} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{440448} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{440448} = \mathbf{Pl}(5, 0, 0, 28, 1, 0)_{4811} \\
\ell_{145} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{372992} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{372992} = \mathbf{Pl}(19, 0, 0, 28, 1, 0)_{4825} \\
\ell_{146} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{812192} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{812192} = \mathbf{Pl}(15, 0, 0, 28, 1, 0)_{4821} \\
\ell_{147} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{67840} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{67840} = \mathbf{Pl}(14, 0, 0, 28, 1, 0)_{4820}
\end{aligned}$$



$$\begin{aligned}
\ell_{148} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{980960} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{980960} = \mathbf{Pl}(18, 0, 0, 28, 1, 0)_{4824} \\
\ell_{149} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{1014944} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{1014944} = \mathbf{Pl}(12, 0, 0, 28, 1, 0)_{4818} \\
\ell_{150} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{879776} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{879776} = \mathbf{Pl}(16, 0, 0, 28, 1, 0)_{4822} \\
\ell_{151} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{271360} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{271360} = \mathbf{Pl}(17, 0, 0, 28, 1, 0)_{4823} \\
\ell_{152} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{169600} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{169600} = \mathbf{Pl}(13, 0, 0, 28, 1, 0)_{4819} \\
\ell_{153} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{575712} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{575712} = \mathbf{Pl}(8, 0, 0, 28, 1, 0)_{4814} \\
\ell_{154} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{339200} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{339200} = \mathbf{Pl}(20, 0, 0, 28, 1, 0)_{4826} \\
\ell_{155} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{711136} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{711136} = \mathbf{Pl}(21, 0, 0, 28, 1, 0)_{4827} \\
\ell_{156} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{1048672} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{1048672} = \mathbf{Pl}(9, 0, 0, 28, 1, 0)_{4815} \\
\ell_{157} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{101632} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{101632} = \mathbf{Pl}(23, 0, 0, 28, 1, 0)_{4829} \\
\ell_{158} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{643168} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{643168} = \mathbf{Pl}(11, 0, 0, 28, 1, 0)_{4817} \\
\ell_{159} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{677280} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{677280} = \mathbf{Pl}(10, 0, 0, 28, 1, 0)_{4816} \\
\ell_{160} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{913504} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{913504} = \mathbf{Pl}(22, 0, 0, 28, 1, 0)_{4828} \\
\ell_{161} &= \begin{bmatrix} 1 & \eta^{29} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10569} = \begin{bmatrix} 1 & 9 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{10569} = \mathbf{Pl}(0, 0, 0, 9, 1, 0)_{3609} \\
\ell_{162} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{33952} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{33952} = \mathbf{Pl}(9, 0, 0, 9, 1, 0)_{3618} \\
\ell_{163} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{608896} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{608896} = \mathbf{Pl}(18, 0, 0, 9, 1, 0)_{3627} \\
\ell_{164} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{948064} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{948064} = \mathbf{Pl}(27, 0, 0, 9, 1, 0)_{3636} \\
\ell_{165} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{304448} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{304448} = \mathbf{Pl}(1, 0, 0, 9, 1, 0)_{3610} \\
\ell_{166} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{778656} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{778656} = \mathbf{Pl}(8, 0, 0, 9, 1, 0)_{3617} \\
\ell_{167} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{474464} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{474464} = \mathbf{Pl}(19, 0, 0, 9, 1, 0)_{3628} \\
\ell_{168} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{406560} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{406560} = \mathbf{Pl}(26, 0, 0, 9, 1, 0)_{3635}
\end{aligned}$$

$$\begin{aligned}
\ell_{169} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{744704} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{744704} = \mathbf{Pl}(2, 0, 0, 9, 1, 0)_{3611} \\
\ell_{170} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{135808} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{135808} = \mathbf{Pl}(11, 0, 0, 9, 1, 0)_{3620} \\
\ell_{171} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{845952} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{845952} = \mathbf{Pl}(16, 0, 0, 9, 1, 0)_{3625} \\
\ell_{172} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{541504} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{541504} = \mathbf{Pl}(25, 0, 0, 9, 1, 0)_{3634} \\
\ell_{173} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{237664} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{237664} = \mathbf{Pl}(3, 0, 0, 9, 1, 0)_{3612} \\
\ell_{174} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{508160} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{508160} = \mathbf{Pl}(10, 0, 0, 9, 1, 0)_{3619} \\
\ell_{175} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{203712} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{203712} = \mathbf{Pl}(17, 0, 0, 9, 1, 0)_{3626} \\
\ell_{176} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{440256} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{440256} = \mathbf{Pl}(24, 0, 0, 9, 1, 0)_{3633} \\
\ell_{177} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{372352} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{372352} = \mathbf{Pl}(4, 0, 0, 9, 1, 0)_{3613} \\
\ell_{178} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{812256} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{812256} = \mathbf{Pl}(13, 0, 0, 9, 1, 0)_{3622} \\
\ell_{179} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{67904} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{67904} = \mathbf{Pl}(22, 0, 0, 9, 1, 0)_{3631} \\
\ell_{180} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{981760} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{981760} = \mathbf{Pl}(31, 0, 0, 9, 1, 0)_{3640} \\
\ell_{181} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{1015456} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{1015456} = \mathbf{Pl}(5, 0, 0, 9, 1, 0)_{3614} \\
\ell_{182} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{879648} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{879648} = \mathbf{Pl}(12, 0, 0, 9, 1, 0)_{3621} \\
\ell_{183} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{270752} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{270752} = \mathbf{Pl}(23, 0, 0, 9, 1, 0)_{3632} \\
\ell_{184} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{169760} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{169760} = \mathbf{Pl}(30, 0, 0, 9, 1, 0)_{3639} \\
\ell_{185} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{575456} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{575456} = \mathbf{Pl}(6, 0, 0, 9, 1, 0)_{3615} \\
\ell_{186} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{338656} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{338656} = \mathbf{Pl}(15, 0, 0, 9, 1, 0)_{3624} \\
\ell_{187} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{711264} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{711264} = \mathbf{Pl}(20, 0, 0, 9, 1, 0)_{3629} \\
\ell_{188} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{1049152} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{1049152} = \mathbf{Pl}(29, 0, 0, 9, 1, 0)_{3638} \\
\ell_{189} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{101856} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{101856} = \mathbf{Pl}(7, 0, 0, 9, 1, 0)_{3616}
\end{aligned}$$

$$\begin{aligned}
\ell_{190} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{642848} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{642848} = \mathbf{Pl}(14, 0, 0, 9, 1, 0)_{3623} \\
\ell_{191} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{677312} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{677312} = \mathbf{Pl}(21, 0, 0, 9, 1, 0)_{3630} \\
\ell_{192} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{913344} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{913344} = \mathbf{Pl}(28, 0, 0, 9, 1, 0)_{3637} \\
\ell_{193} &= \begin{bmatrix} 1 & \eta^{26} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{25367} = \begin{bmatrix} 1 & 23 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{25367} = \mathbf{Pl}(0, 0, 0, 23, 1, 0)_{4491} \\
\ell_{194} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{33984} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{33984} = \mathbf{Pl}(23, 0, 0, 23, 1, 0)_{4514} \\
\ell_{195} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{609344} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{609344} = \mathbf{Pl}(11, 0, 0, 23, 1, 0)_{4502} \\
\ell_{196} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{947168} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{947168} = \mathbf{Pl}(28, 0, 0, 23, 1, 0)_{4519} \\
\ell_{197} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{304672} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{304672} = \mathbf{Pl}(22, 0, 0, 23, 1, 0)_{4513} \\
\ell_{198} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{777984} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{777984} = \mathbf{Pl}(1, 0, 0, 23, 1, 0)_{4492} \\
\ell_{199} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{474144} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{474144} = \mathbf{Pl}(29, 0, 0, 23, 1, 0)_{4520} \\
\ell_{200} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{406688} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{406688} = \mathbf{Pl}(10, 0, 0, 23, 1, 0)_{4501} \\
\ell_{201} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{744256} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{744256} = \mathbf{Pl}(9, 0, 0, 23, 1, 0)_{4500} \\
\ell_{202} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{135936} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{135936} = \mathbf{Pl}(30, 0, 0, 23, 1, 0)_{4521} \\
\ell_{203} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{846176} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{846176} = \mathbf{Pl}(2, 0, 0, 23, 1, 0)_{4493} \\
\ell_{204} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{542016} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{542016} = \mathbf{Pl}(21, 0, 0, 23, 1, 0)_{4512} \\
\ell_{205} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{237632} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{237632} = \mathbf{Pl}(31, 0, 0, 23, 1, 0)_{4522} \\
\ell_{206} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{508064} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{508064} = \mathbf{Pl}(8, 0, 0, 23, 1, 0)_{4499} \\
\ell_{207} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{203904} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{203904} = \mathbf{Pl}(20, 0, 0, 23, 1, 0)_{4511} \\
\ell_{208} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{440608} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{440608} = \mathbf{Pl}(3, 0, 0, 23, 1, 0)_{4494} \\
\ell_{209} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{372128} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{372128} = \mathbf{Pl}(18, 0, 0, 23, 1, 0)_{4509} \\
\ell_{210} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{812512} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{812512} = \mathbf{Pl}(5, 0, 0, 23, 1, 0)_{4496}
\end{aligned}$$

$$\begin{aligned}
\ell_{211} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{67968} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{67968} = \mathbf{Pl}(25, 0, 0, 23, 1, 0)_{4516} \\
\ell_{212} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{981088} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{981088} = \mathbf{Pl}(14, 0, 0, 23, 1, 0)_{4505} \\
\ell_{213} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{1015008} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{1015008} = \mathbf{Pl}(4, 0, 0, 23, 1, 0)_{4495} \\
\ell_{214} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{880352} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{880352} = \mathbf{Pl}(19, 0, 0, 23, 1, 0)_{4510} \\
\ell_{215} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{271008} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{271008} = \mathbf{Pl}(15, 0, 0, 23, 1, 0)_{4506} \\
\ell_{216} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{169664} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{169664} = \mathbf{Pl}(24, 0, 0, 23, 1, 0)_{4515} \\
\ell_{217} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{576000} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{576000} = \mathbf{Pl}(27, 0, 0, 23, 1, 0)_{4518} \\
\ell_{218} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{338464} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{338464} = \mathbf{Pl}(12, 0, 0, 23, 1, 0)_{4503} \\
\ell_{219} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{710656} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{710656} = \mathbf{Pl}(16, 0, 0, 23, 1, 0)_{4507} \\
\ell_{220} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{1048928} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{1048928} = \mathbf{Pl}(7, 0, 0, 23, 1, 0)_{4498} \\
\ell_{221} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{101952} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{101952} = \mathbf{Pl}(13, 0, 0, 23, 1, 0)_{4504} \\
\ell_{222} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{643328} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{643328} = \mathbf{Pl}(26, 0, 0, 23, 1, 0)_{4517} \\
\ell_{223} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{676928} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{676928} = \mathbf{Pl}(6, 0, 0, 23, 1, 0)_{4497} \\
\ell_{224} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{914016} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{914016} = \mathbf{Pl}(17, 0, 0, 23, 1, 0)_{4508} \\
\ell_{225} &= \begin{bmatrix} 1 & \eta^{12} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15854} = \begin{bmatrix} 1 & 14 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{15854} = \mathbf{Pl}(0, 0, 0, 14, 1, 0)_{3924} \\
\ell_{226} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{34016} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{34016} = \mathbf{Pl}(14, 0, 0, 14, 1, 0)_{3938} \\
\ell_{227} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{608928} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{608928} = \mathbf{Pl}(28, 0, 0, 14, 1, 0)_{3952} \\
\ell_{228} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{947136} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{947136} = \mathbf{Pl}(18, 0, 0, 14, 1, 0)_{3942} \\
\ell_{229} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{305024} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{305024} = \mathbf{Pl}(29, 0, 0, 14, 1, 0)_{3953} \\
\ell_{230} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{778880} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{778880} = \mathbf{Pl}(19, 0, 0, 14, 1, 0)_{3943} \\
\ell_{231} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{473568} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{473568} = \mathbf{Pl}(1, 0, 0, 14, 1, 0)_{3925}
\end{aligned}$$

$$\begin{aligned}
\ell_{232} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{406304} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{406304} = \mathbf{Pl}(15, 0, 0, 14, 1, 0)_{3939} \\
\ell_{233} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{744992} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{744992} = \mathbf{Pl}(31, 0, 0, 14, 1, 0)_{3955} \\
\ell_{234} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{136064} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{136064} = \mathbf{Pl}(17, 0, 0, 14, 1, 0)_{3941} \\
\ell_{235} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{846496} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{846496} = \mathbf{Pl}(3, 0, 0, 14, 1, 0)_{3927} \\
\ell_{236} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{541664} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{541664} = \mathbf{Pl}(13, 0, 0, 14, 1, 0)_{3937} \\
\ell_{237} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{237344} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{237344} = \mathbf{Pl}(2, 0, 0, 14, 1, 0)_{3926} \\
\ell_{238} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{507584} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{507584} = \mathbf{Pl}(12, 0, 0, 14, 1, 0)_{3936} \\
\ell_{239} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{203584} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{203584} = \mathbf{Pl}(30, 0, 0, 14, 1, 0)_{3954} \\
\ell_{240} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{440064} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{440064} = \mathbf{Pl}(16, 0, 0, 14, 1, 0)_{3940} \\
\ell_{241} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{373056} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{373056} = \mathbf{Pl}(27, 0, 0, 14, 1, 0)_{3951} \\
\ell_{242} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{812608} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{812608} = \mathbf{Pl}(21, 0, 0, 14, 1, 0)_{3945} \\
\ell_{243} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{68032} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{68032} = \mathbf{Pl}(7, 0, 0, 14, 1, 0)_{3931} \\
\ell_{244} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{981024} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{981024} = \mathbf{Pl}(9, 0, 0, 14, 1, 0)_{3933} \\
\ell_{245} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{1015168} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{1015168} = \mathbf{Pl}(6, 0, 0, 14, 1, 0)_{3930} \\
\ell_{246} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{880128} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{880128} = \mathbf{Pl}(8, 0, 0, 14, 1, 0)_{3932} \\
\ell_{247} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{271264} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{271264} = \mathbf{Pl}(26, 0, 0, 14, 1, 0)_{3950} \\
\ell_{248} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{170080} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{170080} = \mathbf{Pl}(20, 0, 0, 14, 1, 0)_{3944} \\
\ell_{249} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{575296} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{575296} = \mathbf{Pl}(4, 0, 0, 14, 1, 0)_{3928} \\
\ell_{250} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{339040} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{339040} = \mathbf{Pl}(10, 0, 0, 14, 1, 0)_{3934} \\
\ell_{251} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{710848} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{710848} = \mathbf{Pl}(24, 0, 0, 14, 1, 0)_{3948} \\
\ell_{252} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{1048800} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{1048800} = \mathbf{Pl}(22, 0, 0, 14, 1, 0)_{3946}
\end{aligned}$$

$$\begin{aligned}
\ell_{253} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{101792} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{101792} = \mathbf{Pl}(25, 0, 0, 14, 1, 0)_{3949} \\
\ell_{254} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{642816} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{642816} = \mathbf{Pl}(23, 0, 0, 14, 1, 0)_{3947} \\
\ell_{255} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{677216} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{677216} = \mathbf{Pl}(5, 0, 0, 14, 1, 0)_{3929} \\
\ell_{256} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{913760} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{913760} = \mathbf{Pl}(11, 0, 0, 14, 1, 0)_{3935} \\
\ell_{257} &= \begin{bmatrix} 1 & \eta^{20} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13740} = \begin{bmatrix} 1 & 12 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{13740} = \mathbf{Pl}(0, 0, 0, 12, 1, 0)_{3798} \\
\ell_{258} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{34048} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{34048} = \mathbf{Pl}(12, 0, 0, 12, 1, 0)_{3810} \\
\ell_{259} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{609376} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{609376} = \mathbf{Pl}(24, 0, 0, 12, 1, 0)_{3822} \\
\ell_{260} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{948032} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{948032} = \mathbf{Pl}(20, 0, 0, 12, 1, 0)_{3818} \\
\ell_{261} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{305248} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{305248} = \mathbf{Pl}(21, 0, 0, 12, 1, 0)_{3819} \\
\ell_{262} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{778272} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{778272} = \mathbf{Pl}(25, 0, 0, 12, 1, 0)_{3823} \\
\ell_{263} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{474016} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{474016} = \mathbf{Pl}(13, 0, 0, 12, 1, 0)_{3811} \\
\ell_{264} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{405920} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{405920} = \mathbf{Pl}(1, 0, 0, 12, 1, 0)_{3799} \\
\ell_{265} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{744544} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{744544} = \mathbf{Pl}(15, 0, 0, 12, 1, 0)_{3813} \\
\ell_{266} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{136192} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{136192} = \mathbf{Pl}(3, 0, 0, 12, 1, 0)_{3801} \\
\ell_{267} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{845760} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{845760} = \mathbf{Pl}(23, 0, 0, 12, 1, 0)_{3821} \\
\ell_{268} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{542176} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{542176} = \mathbf{Pl}(27, 0, 0, 12, 1, 0)_{3825} \\
\ell_{269} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{237440} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{237440} = \mathbf{Pl}(26, 0, 0, 12, 1, 0)_{3824} \\
\ell_{270} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{507616} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{507616} = \mathbf{Pl}(22, 0, 0, 12, 1, 0)_{3820} \\
\ell_{271} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{203520} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{203520} = \mathbf{Pl}(2, 0, 0, 12, 1, 0)_{3800} \\
\ell_{272} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{439904} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{439904} = \mathbf{Pl}(14, 0, 0, 12, 1, 0)_{3812} \\
\ell_{273} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{372704} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{372704} = \mathbf{Pl}(30, 0, 0, 12, 1, 0)_{3828}
\end{aligned}$$

$$\begin{aligned}
\ell_{274} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{811840} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{811840} = \mathbf{Pl}(18, 0, 0, 12, 1, 0)_{3816} \\
\ell_{275} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{68096} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{68096} = \mathbf{Pl}(6, 0, 0, 12, 1, 0)_{3804} \\
\ell_{276} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{981696} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{981696} = \mathbf{Pl}(10, 0, 0, 12, 1, 0)_{3808} \\
\ell_{277} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{1015232} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{1015232} = \mathbf{Pl}(11, 0, 0, 12, 1, 0)_{3809} \\
\ell_{278} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{879808} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{879808} = \mathbf{Pl}(7, 0, 0, 12, 1, 0)_{3805} \\
\ell_{279} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{271520} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{271520} = \mathbf{Pl}(19, 0, 0, 12, 1, 0)_{3817} \\
\ell_{280} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{169984} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{169984} = \mathbf{Pl}(31, 0, 0, 12, 1, 0)_{3829} \\
\ell_{281} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{575776} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{575776} = \mathbf{Pl}(17, 0, 0, 12, 1, 0)_{3815} \\
\ell_{282} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{338848} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{338848} = \mathbf{Pl}(29, 0, 0, 12, 1, 0)_{3827} \\
\ell_{283} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{710432} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{710432} = \mathbf{Pl}(9, 0, 0, 12, 1, 0)_{3807} \\
\ell_{284} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{1049280} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{1049280} = \mathbf{Pl}(5, 0, 0, 12, 1, 0)_{3803} \\
\ell_{285} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{101760} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{101760} = \mathbf{Pl}(4, 0, 0, 12, 1, 0)_{3802} \\
\ell_{286} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{643360} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{643360} = \mathbf{Pl}(8, 0, 0, 12, 1, 0)_{3806} \\
\ell_{287} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{676576} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{676576} = \mathbf{Pl}(28, 0, 0, 12, 1, 0)_{3826} \\
\ell_{288} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{913600} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{913600} = \mathbf{Pl}(16, 0, 0, 12, 1, 0)_{3814} \\
\ell_{289} &= \begin{bmatrix} 1 & \eta^{28} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{24310} = \begin{bmatrix} 1 & 22 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{24310} = \mathbf{Pl}(0, 0, 0, 22, 1, 0)_{4428} \\
\ell_{290} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{34080} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{34080} = \mathbf{Pl}(22, 0, 0, 22, 1, 0)_{4450} \\
\ell_{291} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{608960} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{608960} = \mathbf{Pl}(9, 0, 0, 22, 1, 0)_{4437} \\
\ell_{292} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{947936} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{947936} = \mathbf{Pl}(31, 0, 0, 22, 1, 0)_{4459} \\
\ell_{293} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{304480} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{304480} = \mathbf{Pl}(18, 0, 0, 22, 1, 0)_{4446} \\
\ell_{294} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{778240} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{778240} = \mathbf{Pl}(4, 0, 0, 22, 1, 0)_{4432}
\end{aligned}$$

$$\begin{aligned}
\ell_{295} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{474528} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{474528} = \mathbf{Pl}(27, 0, 0, 22, 1, 0)_{4455} \\
\ell_{296} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{406368} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{406368} = \mathbf{Pl}(13, 0, 0, 22, 1, 0)_{4441} \\
\ell_{297} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{744160} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{744160} = \mathbf{Pl}(1, 0, 0, 22, 1, 0)_{4429} \\
\ell_{298} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{135456} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{135456} = \mathbf{Pl}(23, 0, 0, 22, 1, 0)_{4451} \\
\ell_{299} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{846304} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{846304} = \mathbf{Pl}(8, 0, 0, 22, 1, 0)_{4436} \\
\ell_{300} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{541824} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{541824} = \mathbf{Pl}(30, 0, 0, 22, 1, 0)_{4458} \\
\ell_{301} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{237696} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{237696} = \mathbf{Pl}(19, 0, 0, 22, 1, 0)_{4447} \\
\ell_{302} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{508096} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{508096} = \mathbf{Pl}(5, 0, 0, 22, 1, 0)_{4433} \\
\ell_{303} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{203616} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{203616} = \mathbf{Pl}(26, 0, 0, 22, 1, 0)_{4454} \\
\ell_{304} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{439936} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{439936} = \mathbf{Pl}(12, 0, 0, 22, 1, 0)_{4440} \\
\ell_{305} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{372640} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{372640} = \mathbf{Pl}(2, 0, 0, 22, 1, 0)_{4430} \\
\ell_{306} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{812736} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{812736} = \mathbf{Pl}(20, 0, 0, 22, 1, 0)_{4448} \\
\ell_{307} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{68160} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{68160} = \mathbf{Pl}(11, 0, 0, 22, 1, 0)_{4439} \\
\ell_{308} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{981504} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{981504} = \mathbf{Pl}(29, 0, 0, 22, 1, 0)_{4457} \\
\ell_{309} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{1015072} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{1015072} = \mathbf{Pl}(16, 0, 0, 22, 1, 0)_{4444} \\
\ell_{310} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{879872} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{879872} = \mathbf{Pl}(6, 0, 0, 22, 1, 0)_{4434} \\
\ell_{311} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{270912} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{270912} = \mathbf{Pl}(25, 0, 0, 22, 1, 0)_{4453} \\
\ell_{312} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{169536} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{169536} = \mathbf{Pl}(15, 0, 0, 22, 1, 0)_{4443} \\
\ell_{313} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{575904} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{575904} = \mathbf{Pl}(3, 0, 0, 22, 1, 0)_{4431} \\
\ell_{314} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{339072} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{339072} = \mathbf{Pl}(21, 0, 0, 22, 1, 0)_{4449} \\
\ell_{315} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{711104} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{711104} = \mathbf{Pl}(10, 0, 0, 22, 1, 0)_{4438}
\end{aligned}$$



$$\begin{aligned}
\ell_{316} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{1048640} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{1048640} = \mathbf{Pl}(28, 0, 0, 22, 1, 0)_{4456} \\
\ell_{317} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{102240} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{102240} = \mathbf{Pl}(17, 0, 0, 22, 1, 0)_{4445} \\
\ell_{318} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{643040} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{643040} = \mathbf{Pl}(7, 0, 0, 22, 1, 0)_{4435} \\
\ell_{319} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{677024} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{677024} = \mathbf{Pl}(24, 0, 0, 22, 1, 0)_{4452} \\
\ell_{320} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{913440} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{913440} = \mathbf{Pl}(14, 0, 0, 22, 1, 0)_{4442} \\
\ell_{321} &= \begin{bmatrix} 1 & \eta^2 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{5284} = \begin{bmatrix} 1 & 4 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{5284} = \mathbf{Pl}(0, 0, 0, 4, 1, 0)_{3294} \\
\ell_{322} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{34112} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{34112} = \mathbf{Pl}(4, 0, 0, 4, 1, 0)_{3298} \\
\ell_{323} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{609536} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{609536} = \mathbf{Pl}(8, 0, 0, 4, 1, 0)_{3302} \\
\ell_{324} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{947296} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{947296} = \mathbf{Pl}(12, 0, 0, 4, 1, 0)_{3306} \\
\ell_{325} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{304768} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{304768} = \mathbf{Pl}(16, 0, 0, 4, 1, 0)_{3310} \\
\ell_{326} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{778912} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{778912} = \mathbf{Pl}(20, 0, 0, 4, 1, 0)_{3314} \\
\ell_{327} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{474080} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{474080} = \mathbf{Pl}(24, 0, 0, 4, 1, 0)_{3318} \\
\ell_{328} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{405984} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{405984} = \mathbf{Pl}(28, 0, 0, 4, 1, 0)_{3322} \\
\ell_{329} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{744864} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{744864} = \mathbf{Pl}(5, 0, 0, 4, 1, 0)_{3299} \\
\ell_{330} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{135328} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{135328} = \mathbf{Pl}(1, 0, 0, 4, 1, 0)_{3295} \\
\ell_{331} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{846080} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{846080} = \mathbf{Pl}(13, 0, 0, 4, 1, 0)_{3307} \\
\ell_{332} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{541312} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{541312} = \mathbf{Pl}(9, 0, 0, 4, 1, 0)_{3303} \\
\ell_{333} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{237600} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{237600} = \mathbf{Pl}(21, 0, 0, 4, 1, 0)_{3315} \\
\ell_{334} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{508128} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{508128} = \mathbf{Pl}(17, 0, 0, 4, 1, 0)_{3311} \\
\ell_{335} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{203552} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{203552} = \mathbf{Pl}(29, 0, 0, 4, 1, 0)_{3323} \\
\ell_{336} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{440032} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{440032} = \mathbf{Pl}(25, 0, 0, 4, 1, 0)_{3319}
\end{aligned}$$

$$\begin{aligned}
\ell_{337} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{372864} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{372864} = \mathbf{Pl}(10, 0, 0, 4, 1, 0)_{3304} \\
\ell_{338} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{811968} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{811968} = \mathbf{Pl}(14, 0, 0, 4, 1, 0)_{3308} \\
\ell_{339} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{68224} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{68224} = \mathbf{Pl}(2, 0, 0, 4, 1, 0)_{3296} \\
\ell_{340} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{981344} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{981344} = \mathbf{Pl}(6, 0, 0, 4, 1, 0)_{3300} \\
\ell_{341} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{1015392} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{1015392} = \mathbf{Pl}(26, 0, 0, 4, 1, 0)_{3320} \\
\ell_{342} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{880064} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{880064} = \mathbf{Pl}(30, 0, 0, 4, 1, 0)_{3324} \\
\ell_{343} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{270656} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{270656} = \mathbf{Pl}(18, 0, 0, 4, 1, 0)_{3312} \\
\ell_{344} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{169376} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{169376} = \mathbf{Pl}(22, 0, 0, 4, 1, 0)_{3316} \\
\ell_{345} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{575424} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{575424} = \mathbf{Pl}(15, 0, 0, 4, 1, 0)_{3309} \\
\ell_{346} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{338752} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{338752} = \mathbf{Pl}(11, 0, 0, 4, 1, 0)_{3305} \\
\ell_{347} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{710688} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{710688} = \mathbf{Pl}(7, 0, 0, 4, 1, 0)_{3301} \\
\ell_{348} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{1049440} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{1049440} = \mathbf{Pl}(3, 0, 0, 4, 1, 0)_{3297} \\
\ell_{349} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{102336} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{102336} = \mathbf{Pl}(31, 0, 0, 4, 1, 0)_{3325} \\
\ell_{350} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{643648} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{643648} = \mathbf{Pl}(27, 0, 0, 4, 1, 0)_{3321} \\
\ell_{351} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{676640} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{676640} = \mathbf{Pl}(23, 0, 0, 4, 1, 0)_{3317} \\
\ell_{352} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{914176} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{914176} = \mathbf{Pl}(19, 0, 0, 4, 1, 0)_{3313} \\
\ell_{353} &= \begin{bmatrix} 1 & \eta^{25} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{27481} = \begin{bmatrix} 1 & 25 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{27481} = \mathbf{Pl}(0, 0, 0, 25, 1, 0)_{4617} \\
\ell_{354} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{34144} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{34144} = \mathbf{Pl}(25, 0, 0, 25, 1, 0)_{4642} \\
\ell_{355} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{608992} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{608992} = \mathbf{Pl}(23, 0, 0, 25, 1, 0)_{4640} \\
\ell_{356} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{947264} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{947264} = \mathbf{Pl}(14, 0, 0, 25, 1, 0)_{4631} \\
\ell_{357} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{304928} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{304928} = \mathbf{Pl}(11, 0, 0, 25, 1, 0)_{4628}
\end{aligned}$$

$$\begin{aligned}
\ell_{358} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{778016} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{778016} = \mathbf{Pl}(18, 0, 0, 25, 1, 0)_{4635} \\
\ell_{359} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{473632} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{473632} = \mathbf{Pl}(28, 0, 0, 25, 1, 0)_{4645} \\
\ell_{360} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{406624} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{406624} = \mathbf{Pl}(5, 0, 0, 25, 1, 0)_{4622} \\
\ell_{361} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{744384} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{744384} = \mathbf{Pl}(22, 0, 0, 25, 1, 0)_{4639} \\
\ell_{362} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{135712} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{135712} = \mathbf{Pl}(15, 0, 0, 25, 1, 0)_{4632} \\
\ell_{363} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{845632} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{845632} = \mathbf{Pl}(1, 0, 0, 25, 1, 0)_{4618} \\
\ell_{364} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{541728} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{541728} = \mathbf{Pl}(24, 0, 0, 25, 1, 0)_{4641} \\
\ell_{365} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{237376} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{237376} = \mathbf{Pl}(29, 0, 0, 25, 1, 0)_{4646} \\
\ell_{366} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{507648} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{507648} = \mathbf{Pl}(4, 0, 0, 25, 1, 0)_{4621} \\
\ell_{367} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{203744} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{203744} = \mathbf{Pl}(10, 0, 0, 25, 1, 0)_{4627} \\
\ell_{368} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{440640} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{440640} = \mathbf{Pl}(19, 0, 0, 25, 1, 0)_{4636} \\
\ell_{369} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{372192} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{372192} = \mathbf{Pl}(9, 0, 0, 25, 1, 0)_{4626} \\
\ell_{370} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{812128} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{812128} = \mathbf{Pl}(16, 0, 0, 25, 1, 0)_{4633} \\
\ell_{371} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{68288} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{68288} = \mathbf{Pl}(30, 0, 0, 25, 1, 0)_{4647} \\
\ell_{372} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{981280} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{981280} = \mathbf{Pl}(7, 0, 0, 25, 1, 0)_{4624} \\
\ell_{373} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{1015296} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{1015296} = \mathbf{Pl}(2, 0, 0, 25, 1, 0)_{4619} \\
\ell_{374} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{880416} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{880416} = \mathbf{Pl}(27, 0, 0, 25, 1, 0)_{4644} \\
\ell_{375} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{271424} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{271424} = \mathbf{Pl}(21, 0, 0, 25, 1, 0)_{4638} \\
\ell_{376} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{169344} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{169344} = \mathbf{Pl}(12, 0, 0, 25, 1, 0)_{4629} \\
\ell_{377} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{575872} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{575872} = \mathbf{Pl}(31, 0, 0, 25, 1, 0)_{4648} \\
\ell_{378} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{338688} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{338688} = \mathbf{Pl}(6, 0, 0, 25, 1, 0)_{4623}
\end{aligned}$$

$$\begin{aligned}
\ell_{379} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{711008} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{711008} = \mathbf{Pl}(8, 0, 0, 25, 1, 0)_{4625} \\
\ell_{380} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{1049312} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{1049312} = \mathbf{Pl}(17, 0, 0, 25, 1, 0)_{4634} \\
\ell_{381} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{102432} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{102432} = \mathbf{Pl}(20, 0, 0, 25, 1, 0)_{4637} \\
\ell_{382} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{643136} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{643136} = \mathbf{Pl}(13, 0, 0, 25, 1, 0)_{4630} \\
\ell_{383} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{677376} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{677376} = \mathbf{Pl}(3, 0, 0, 25, 1, 0)_{4620} \\
\ell_{384} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{913920} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{913920} = \mathbf{Pl}(26, 0, 0, 25, 1, 0)_{4643} \\
\ell_{385} &= \begin{bmatrix} 1 & \eta^4 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17968} = \begin{bmatrix} 1 & 16 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{17968} = \mathbf{Pl}(0, 0, 0, 16, 1, 0)_{4050} \\
\ell_{386} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{34176} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{34176} = \mathbf{Pl}(16, 0, 0, 16, 1, 0)_{4066} \\
\ell_{387} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{609568} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{609568} = \mathbf{Pl}(5, 0, 0, 16, 1, 0)_{4055} \\
\ell_{388} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{947904} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{947904} = \mathbf{Pl}(21, 0, 0, 16, 1, 0)_{4071} \\
\ell_{389} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{305216} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{305216} = \mathbf{Pl}(10, 0, 0, 16, 1, 0)_{4060} \\
\ell_{390} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{778624} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{778624} = \mathbf{Pl}(26, 0, 0, 16, 1, 0)_{4076} \\
\ell_{391} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{473952} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{473952} = \mathbf{Pl}(15, 0, 0, 16, 1, 0)_{4065} \\
\ell_{392} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{406752} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{406752} = \mathbf{Pl}(31, 0, 0, 16, 1, 0)_{4081} \\
\ell_{393} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{745088} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{745088} = \mathbf{Pl}(20, 0, 0, 16, 1, 0)_{4070} \\
\ell_{394} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{135584} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{135584} = \mathbf{Pl}(4, 0, 0, 16, 1, 0)_{4054} \\
\ell_{395} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{846368} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{846368} = \mathbf{Pl}(17, 0, 0, 16, 1, 0)_{4067} \\
\ell_{396} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{541216} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{541216} = \mathbf{Pl}(1, 0, 0, 16, 1, 0)_{4051} \\
\ell_{397} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{237408} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{237408} = \mathbf{Pl}(30, 0, 0, 16, 1, 0)_{4080} \\
\ell_{398} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{507552} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{507552} = \mathbf{Pl}(14, 0, 0, 16, 1, 0)_{4064} \\
\ell_{399} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{203936} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{203936} = \mathbf{Pl}(27, 0, 0, 16, 1, 0)_{4077}
\end{aligned}$$

$$\begin{aligned}
\ell_{400} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{440224} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{440224} = \mathbf{Pl}(11, 0, 0, 16, 1, 0)_{4061} \\
\ell_{401} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{372544} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{372544} = \mathbf{Pl}(13, 0, 0, 16, 1, 0)_{4063} \\
\ell_{402} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{812384} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{812384} = \mathbf{Pl}(29, 0, 0, 16, 1, 0)_{4079} \\
\ell_{403} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{68352} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{68352} = \mathbf{Pl}(8, 0, 0, 16, 1, 0)_{4058} \\
\ell_{404} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{981440} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{981440} = \mathbf{Pl}(24, 0, 0, 16, 1, 0)_{4074} \\
\ell_{405} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{1015104} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{1015104} = \mathbf{Pl}(7, 0, 0, 16, 1, 0)_{4057} \\
\ell_{406} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{879584} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{879584} = \mathbf{Pl}(23, 0, 0, 16, 1, 0)_{4073} \\
\ell_{407} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{271168} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{271168} = \mathbf{Pl}(2, 0, 0, 16, 1, 0)_{4052} \\
\ell_{408} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{169184} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{169184} = \mathbf{Pl}(18, 0, 0, 16, 1, 0)_{4068} \\
\ell_{409} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{575328} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{575328} = \mathbf{Pl}(25, 0, 0, 16, 1, 0)_{4075} \\
\ell_{410} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{338368} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{338368} = \mathbf{Pl}(9, 0, 0, 16, 1, 0)_{4059} \\
\ell_{411} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{710400} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{710400} = \mathbf{Pl}(28, 0, 0, 16, 1, 0)_{4078} \\
\ell_{412} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{1048768} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{1048768} = \mathbf{Pl}(12, 0, 0, 16, 1, 0)_{4062} \\
\ell_{413} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{102400} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{102400} = \mathbf{Pl}(19, 0, 0, 16, 1, 0)_{4069} \\
\ell_{414} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{643552} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{643552} = \mathbf{Pl}(3, 0, 0, 16, 1, 0)_{4053} \\
\ell_{415} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{676736} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{676736} = \mathbf{Pl}(22, 0, 0, 16, 1, 0)_{4072} \\
\ell_{416} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{913696} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{913696} = \mathbf{Pl}(6, 0, 0, 16, 1, 0)_{4056} \\
\ell_{417} &= \begin{bmatrix} 1 & \eta^{11} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8455} = \begin{bmatrix} 1 & 7 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{8455} = \mathbf{Pl}(0, 0, 0, 7, 1, 0)_{3483} \\
\ell_{418} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{34208} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{34208} = \mathbf{Pl}(7, 0, 0, 7, 1, 0)_{3490} \\
\ell_{419} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{609024} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{609024} = \mathbf{Pl}(14, 0, 0, 7, 1, 0)_{3497} \\
\ell_{420} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{947200} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{947200} = \mathbf{Pl}(9, 0, 0, 7, 1, 0)_{3492}
\end{aligned}$$

$$\begin{aligned}
\ell_{421} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{304512} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{304512} = \mathbf{Pl}(28, 0, 0, 7, 1, 0)_{3511} \\
\ell_{422} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{778944} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{778944} = \mathbf{Pl}(27, 0, 0, 7, 1, 0)_{3510} \\
\ell_{423} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{473600} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{473600} = \mathbf{Pl}(18, 0, 0, 7, 1, 0)_{3501} \\
\ell_{424} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{406720} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{406720} = \mathbf{Pl}(21, 0, 0, 7, 1, 0)_{3504} \\
\ell_{425} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{744736} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{744736} = \mathbf{Pl}(29, 0, 0, 7, 1, 0)_{3512} \\
\ell_{426} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{135968} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{135968} = \mathbf{Pl}(26, 0, 0, 7, 1, 0)_{3509} \\
\ell_{427} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{846528} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{846528} = \mathbf{Pl}(19, 0, 0, 7, 1, 0)_{3502} \\
\ell_{428} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{542144} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{542144} = \mathbf{Pl}(20, 0, 0, 7, 1, 0)_{3503} \\
\ell_{429} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{236800} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{236800} = \mathbf{Pl}(1, 0, 0, 7, 1, 0)_{3484} \\
\ell_{430} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{507808} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{507808} = \mathbf{Pl}(6, 0, 0, 7, 1, 0)_{3489} \\
\ell_{431} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{203360} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{203360} = \mathbf{Pl}(15, 0, 0, 7, 1, 0)_{3498} \\
\ell_{432} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{440416} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{440416} = \mathbf{Pl}(8, 0, 0, 7, 1, 0)_{3491} \\
\ell_{433} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{372928} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{372928} = \mathbf{Pl}(31, 0, 0, 7, 1, 0)_{3514} \\
\ell_{434} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{812320} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{812320} = \mathbf{Pl}(24, 0, 0, 7, 1, 0)_{3507} \\
\ell_{435} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{68416} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{68416} = \mathbf{Pl}(17, 0, 0, 7, 1, 0)_{3500} \\
\ell_{436} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{981152} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{981152} = \mathbf{Pl}(22, 0, 0, 7, 1, 0)_{3505} \\
\ell_{437} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{1015616} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{1015616} = \mathbf{Pl}(3, 0, 0, 7, 1, 0)_{3486} \\
\ell_{438} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{879712} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{879712} = \mathbf{Pl}(4, 0, 0, 7, 1, 0)_{3487} \\
\ell_{439} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{271072} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{271072} = \mathbf{Pl}(13, 0, 0, 7, 1, 0)_{3496} \\
\ell_{440} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{169920} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{169920} = \mathbf{Pl}(10, 0, 0, 7, 1, 0)_{3493} \\
\ell_{441} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{575584} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{575584} = \mathbf{Pl}(2, 0, 0, 7, 1, 0)_{3485}
\end{aligned}$$

$$\begin{aligned}
\ell_{442} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{338976} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{338976} = \mathbf{Pl}(5, 0, 0, 7, 1, 0)_{3488} \\
\ell_{443} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{710528} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{710528} = \mathbf{Pl}(12, 0, 0, 7, 1, 0)_{3495} \\
\ell_{444} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{1049056} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{1049056} = \mathbf{Pl}(11, 0, 0, 7, 1, 0)_{3494} \\
\ell_{445} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{102112} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{102112} = \mathbf{Pl}(30, 0, 0, 7, 1, 0)_{3513} \\
\ell_{446} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{642976} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{642976} = \mathbf{Pl}(25, 0, 0, 7, 1, 0)_{3508} \\
\ell_{447} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{676832} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{676832} = \mathbf{Pl}(16, 0, 0, 7, 1, 0)_{3499} \\
\ell_{448} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{913408} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{913408} = \mathbf{Pl}(23, 0, 0, 7, 1, 0)_{3506} \\
\ell_{449} &= \begin{bmatrix} 1 & \eta^{23} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16911} = \begin{bmatrix} 1 & 15 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{16911} = \mathbf{Pl}(0, 0, 0, 15, 1, 0)_{3987} \\
\ell_{450} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{34240} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{34240} = \mathbf{Pl}(15, 0, 0, 15, 1, 0)_{4002} \\
\ell_{451} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{609472} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{609472} = \mathbf{Pl}(30, 0, 0, 15, 1, 0)_{4017} \\
\ell_{452} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{947840} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{947840} = \mathbf{Pl}(17, 0, 0, 15, 1, 0)_{4004} \\
\ell_{453} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{304736} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{304736} = \mathbf{Pl}(25, 0, 0, 15, 1, 0)_{4012} \\
\ell_{454} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{778208} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{778208} = \mathbf{Pl}(22, 0, 0, 15, 1, 0)_{4009} \\
\ell_{455} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{473920} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{473920} = \mathbf{Pl}(7, 0, 0, 15, 1, 0)_{3994} \\
\ell_{456} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{406592} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{406592} = \mathbf{Pl}(8, 0, 0, 15, 1, 0)_{3995} \\
\ell_{457} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{744288} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{744288} = \mathbf{Pl}(23, 0, 0, 15, 1, 0)_{4010} \\
\ell_{458} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{135840} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{135840} = \mathbf{Pl}(24, 0, 0, 15, 1, 0)_{4011} \\
\ell_{459} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{845728} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{845728} = \mathbf{Pl}(9, 0, 0, 15, 1, 0)_{3996} \\
\ell_{460} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{541632} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{541632} = \mathbf{Pl}(6, 0, 0, 15, 1, 0)_{3993} \\
\ell_{461} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{236960} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{236960} = \mathbf{Pl}(14, 0, 0, 15, 1, 0)_{4001} \\
\ell_{462} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{507392} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{507392} = \mathbf{Pl}(1, 0, 0, 15, 1, 0)_{3988}
\end{aligned}$$

$$\begin{aligned}
\ell_{463} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{203296} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{203296} = \mathbf{Pl}(16, 0, 0, 15, 1, 0)_{4003} \\
\ell_{464} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{440576} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{440576} = \mathbf{Pl}(31, 0, 0, 15, 1, 0)_{4018} \\
\ell_{465} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{372576} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{372576} = \mathbf{Pl}(11, 0, 0, 15, 1, 0)_{3998} \\
\ell_{466} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{812064} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{812064} = \mathbf{Pl}(4, 0, 0, 15, 1, 0)_{3991} \\
\ell_{467} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{68480} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{68480} = \mathbf{Pl}(21, 0, 0, 15, 1, 0)_{4008} \\
\ell_{468} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{981568} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{981568} = \mathbf{Pl}(26, 0, 0, 15, 1, 0)_{4013} \\
\ell_{469} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{1014784} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{1014784} = \mathbf{Pl}(18, 0, 0, 15, 1, 0)_{4005} \\
\ell_{470} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{880032} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{880032} = \mathbf{Pl}(29, 0, 0, 15, 1, 0)_{4016} \\
\ell_{471} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{270816} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{270816} = \mathbf{Pl}(12, 0, 0, 15, 1, 0)_{3999} \\
\ell_{472} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{170016} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{170016} = \mathbf{Pl}(3, 0, 0, 15, 1, 0)_{3990} \\
\ell_{473} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{575104} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{575104} = \mathbf{Pl}(28, 0, 0, 15, 1, 0)_{4015} \\
\ell_{474} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{339168} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{339168} = \mathbf{Pl}(19, 0, 0, 15, 1, 0)_{4006} \\
\ell_{475} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{710880} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{710880} = \mathbf{Pl}(2, 0, 0, 15, 1, 0)_{3989} \\
\ell_{476} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{1049024} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{1049024} = \mathbf{Pl}(13, 0, 0, 15, 1, 0)_{4000} \\
\ell_{477} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{102208} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{102208} = \mathbf{Pl}(5, 0, 0, 15, 1, 0)_{3992} \\
\ell_{478} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{643456} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{643456} = \mathbf{Pl}(10, 0, 0, 15, 1, 0)_{3997} \\
\ell_{479} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{677472} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{677472} = \mathbf{Pl}(27, 0, 0, 15, 1, 0)_{4014} \\
\ell_{480} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{914208} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{914208} = \mathbf{Pl}(20, 0, 0, 15, 1, 0)_{4007} \\
\ell_{481} &= \begin{bmatrix} 1 & \eta^{19} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{7398} = \begin{bmatrix} 1 & 6 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{7398} = \mathbf{Pl}(0, 0, 0, 6, 1, 0)_{3420} \\
\ell_{482} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{34272} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{34272} = \mathbf{Pl}(6, 0, 0, 6, 1, 0)_{3426} \\
\ell_{483} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{609056} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{609056} = \mathbf{Pl}(12, 0, 0, 6, 1, 0)_{3432}
\end{aligned}$$



$$\begin{aligned}
\ell_{484} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{947872} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{947872} = \mathbf{Pl}(10, 0, 0, 6, 1, 0)_{3430} \\
\ell_{485} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{304960} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{304960} = \mathbf{Pl}(24, 0, 0, 6, 1, 0)_{3444} \\
\ell_{486} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{778592} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{778592} = \mathbf{Pl}(30, 0, 0, 6, 1, 0)_{3450} \\
\ell_{487} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{474496} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{474496} = \mathbf{Pl}(20, 0, 0, 6, 1, 0)_{3440} \\
\ell_{488} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{405952} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{405952} = \mathbf{Pl}(18, 0, 0, 6, 1, 0)_{3438} \\
\ell_{489} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{744960} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{744960} = \mathbf{Pl}(21, 0, 0, 6, 1, 0)_{3441} \\
\ell_{490} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{136224} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{136224} = \mathbf{Pl}(19, 0, 0, 6, 1, 0)_{3439} \\
\ell_{491} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{845920} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{845920} = \mathbf{Pl}(25, 0, 0, 6, 1, 0)_{3445} \\
\ell_{492} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{542048} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{542048} = \mathbf{Pl}(31, 0, 0, 6, 1, 0)_{3451} \\
\ell_{493} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{237248} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{237248} = \mathbf{Pl}(13, 0, 0, 6, 1, 0)_{3433} \\
\ell_{494} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{507872} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{507872} = \mathbf{Pl}(11, 0, 0, 6, 1, 0)_{3431} \\
\ell_{495} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{202976} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{202976} = \mathbf{Pl}(1, 0, 0, 6, 1, 0)_{3421} \\
\ell_{496} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{440096} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{440096} = \mathbf{Pl}(7, 0, 0, 6, 1, 0)_{3427} \\
\ell_{497} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{372480} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{372480} = \mathbf{Pl}(15, 0, 0, 6, 1, 0)_{3435} \\
\ell_{498} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{811904} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{811904} = \mathbf{Pl}(9, 0, 0, 6, 1, 0)_{3429} \\
\ell_{499} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{68544} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{68544} = \mathbf{Pl}(3, 0, 0, 6, 1, 0)_{3423} \\
\ell_{500} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{981632} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{981632} = \mathbf{Pl}(5, 0, 0, 6, 1, 0)_{3425} \\
\ell_{501} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{1014880} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{1014880} = \mathbf{Pl}(23, 0, 0, 6, 1, 0)_{3443} \\
\ell_{502} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{880192} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{880192} = \mathbf{Pl}(17, 0, 0, 6, 1, 0)_{3437} \\
\ell_{503} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{271584} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{271584} = \mathbf{Pl}(27, 0, 0, 6, 1, 0)_{3447} \\
\ell_{504} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{169728} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{169728} = \mathbf{Pl}(29, 0, 0, 6, 1, 0)_{3449}
\end{aligned}$$

$$\begin{aligned}
\ell_{505} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{575680} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{575680} = \mathbf{Pl}(26, 0, 0, 6, 1, 0)_{3446} \\
\ell_{506} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{338336} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{338336} = \mathbf{Pl}(28, 0, 0, 6, 1, 0)_{3448} \\
\ell_{507} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{710560} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{710560} = \mathbf{Pl}(22, 0, 0, 6, 1, 0)_{3442} \\
\ell_{508} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{1048896} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{1048896} = \mathbf{Pl}(16, 0, 0, 6, 1, 0)_{3436} \\
\ell_{509} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{102048} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{102048} = \mathbf{Pl}(2, 0, 0, 6, 1, 0)_{3422} \\
\ell_{510} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{642944} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{642944} = \mathbf{Pl}(4, 0, 0, 6, 1, 0)_{3424} \\
\ell_{511} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{676672} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{676672} = \mathbf{Pl}(14, 0, 0, 6, 1, 0)_{3434} \\
\ell_{512} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{913952} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{913952} = \mathbf{Pl}(8, 0, 0, 6, 1, 0)_{3428} \\
\ell_{513} &= \begin{bmatrix} 1 & \eta^8 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14797} = \begin{bmatrix} 1 & 13 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{14797} = \mathbf{Pl}(0, 0, 0, 13, 1, 0)_{3861} \\
\ell_{514} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{34304} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{34304} = \mathbf{Pl}(13, 0, 0, 13, 1, 0)_{3874} \\
\ell_{515} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{609504} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{609504} = \mathbf{Pl}(26, 0, 0, 13, 1, 0)_{3887} \\
\ell_{516} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{947232} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{947232} = \mathbf{Pl}(23, 0, 0, 13, 1, 0)_{3884} \\
\ell_{517} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{305184} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{305184} = \mathbf{Pl}(17, 0, 0, 13, 1, 0)_{3878} \\
\ell_{518} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{778048} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{778048} = \mathbf{Pl}(28, 0, 0, 13, 1, 0)_{3889} \\
\ell_{519} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{474048} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{474048} = \mathbf{Pl}(11, 0, 0, 13, 1, 0)_{3872} \\
\ell_{520} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{406336} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{406336} = \mathbf{Pl}(6, 0, 0, 13, 1, 0)_{3867} \\
\ell_{521} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{744512} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{744512} = \mathbf{Pl}(7, 0, 0, 13, 1, 0)_{3868} \\
\ell_{522} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{136096} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{136096} = \mathbf{Pl}(10, 0, 0, 13, 1, 0)_{3871} \\
\ell_{523} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{846208} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{846208} = \mathbf{Pl}(29, 0, 0, 13, 1, 0)_{3890} \\
\ell_{524} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{541536} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{541536} = \mathbf{Pl}(16, 0, 0, 13, 1, 0)_{3877} \\
\ell_{525} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{237024} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{237024} = \mathbf{Pl}(22, 0, 0, 13, 1, 0)_{3883}
\end{aligned}$$

$$\begin{aligned}
\ell_{526} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{508352} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{508352} = \mathbf{Pl}(27, 0, 0, 13, 1, 0)_{3888} \\
\ell_{527} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{203168} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{203168} = \mathbf{Pl}(12, 0, 0, 13, 1, 0)_{3873} \\
\ell_{528} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{439744} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{439744} = \mathbf{Pl}(1, 0, 0, 13, 1, 0)_{3862} \\
\ell_{529} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{372256} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{372256} = \mathbf{Pl}(14, 0, 0, 13, 1, 0)_{3875} \\
\ell_{530} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{812672} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{812672} = \mathbf{Pl}(3, 0, 0, 13, 1, 0)_{3864} \\
\ell_{531} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{68608} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{68608} = \mathbf{Pl}(20, 0, 0, 13, 1, 0)_{3881} \\
\ell_{532} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{981216} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{981216} = \mathbf{Pl}(25, 0, 0, 13, 1, 0)_{3886} \\
\ell_{533} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{1015584} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{1015584} = \mathbf{Pl}(31, 0, 0, 13, 1, 0)_{3892} \\
\ell_{534} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{879488} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{879488} = \mathbf{Pl}(18, 0, 0, 13, 1, 0)_{3879} \\
\ell_{535} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{271328} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{271328} = \mathbf{Pl}(5, 0, 0, 13, 1, 0)_{3866} \\
\ell_{536} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{169824} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{169824} = \mathbf{Pl}(8, 0, 0, 13, 1, 0)_{3869} \\
\ell_{537} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{575136} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{575136} = \mathbf{Pl}(9, 0, 0, 13, 1, 0)_{3870} \\
\ell_{538} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{338528} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{338528} = \mathbf{Pl}(4, 0, 0, 13, 1, 0)_{3865} \\
\ell_{539} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{711232} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{711232} = \mathbf{Pl}(19, 0, 0, 13, 1, 0)_{3880} \\
\ell_{540} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{1049184} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{1049184} = \mathbf{Pl}(30, 0, 0, 13, 1, 0)_{3891} \\
\ell_{541} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{102016} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{102016} = \mathbf{Pl}(24, 0, 0, 13, 1, 0)_{3885} \\
\ell_{542} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{643488} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{643488} = \mathbf{Pl}(21, 0, 0, 13, 1, 0)_{3882} \\
\ell_{543} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{677056} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{677056} = \mathbf{Pl}(2, 0, 0, 13, 1, 0)_{3863} \\
\ell_{544} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{913664} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{913664} = \mathbf{Pl}(15, 0, 0, 13, 1, 0)_{3876} \\
\ell_{545} &= \begin{bmatrix} 1 & \eta^{27} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12683} = \begin{bmatrix} 1 & 11 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{12683} = \mathbf{Pl}(0, 0, 0, 11, 1, 0)_{3735} \\
\ell_{546} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{34336} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{34336} = \mathbf{Pl}(11, 0, 0, 11, 1, 0)_{3746}
\end{aligned}$$

$$\begin{aligned}
\ell_{547} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{609088} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{609088} = \mathbf{Pl}(22, 0, 0, 11, 1, 0)_{3757} \\
\ell_{548} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{947680} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{947680} = \mathbf{Pl}(29, 0, 0, 11, 1, 0)_{3764} \\
\ell_{549} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{304544} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{304544} = \mathbf{Pl}(9, 0, 0, 11, 1, 0)_{3744} \\
\ell_{550} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{778528} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{778528} = \mathbf{Pl}(2, 0, 0, 11, 1, 0)_{3737} \\
\ell_{551} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{474400} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{474400} = \mathbf{Pl}(31, 0, 0, 11, 1, 0)_{3766} \\
\ell_{552} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{406848} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{406848} = \mathbf{Pl}(20, 0, 0, 11, 1, 0)_{3755} \\
\ell_{553} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{744192} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{744192} = \mathbf{Pl}(18, 0, 0, 11, 1, 0)_{3753} \\
\ell_{554} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{135616} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{135616} = \mathbf{Pl}(25, 0, 0, 11, 1, 0)_{3760} \\
\ell_{555} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{845888} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{845888} = \mathbf{Pl}(4, 0, 0, 11, 1, 0)_{3739} \\
\ell_{556} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{541600} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{541600} = \mathbf{Pl}(15, 0, 0, 11, 1, 0)_{3750} \\
\ell_{557} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{237760} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{237760} = \mathbf{Pl}(27, 0, 0, 11, 1, 0)_{3762} \\
\ell_{558} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{507712} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{507712} = \mathbf{Pl}(16, 0, 0, 11, 1, 0)_{3751} \\
\ell_{559} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{203424} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{203424} = \mathbf{Pl}(13, 0, 0, 11, 1, 0)_{3748} \\
\ell_{560} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{440160} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{440160} = \mathbf{Pl}(6, 0, 0, 11, 1, 0)_{3741} \\
\ell_{561} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{372096} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{372096} = \mathbf{Pl}(1, 0, 0, 11, 1, 0)_{3736} \\
\ell_{562} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{812576} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{812576} = \mathbf{Pl}(10, 0, 0, 11, 1, 0)_{3745} \\
\ell_{563} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{67808} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{67808} = \mathbf{Pl}(23, 0, 0, 11, 1, 0)_{3758} \\
\ell_{564} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{980992} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{980992} = \mathbf{Pl}(28, 0, 0, 11, 1, 0)_{3763} \\
\ell_{565} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{1015424} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{1015424} = \mathbf{Pl}(8, 0, 0, 11, 1, 0)_{3743} \\
\ell_{566} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{880320} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{880320} = \mathbf{Pl}(3, 0, 0, 11, 1, 0)_{3738} \\
\ell_{567} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{271232} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{271232} = \mathbf{Pl}(30, 0, 0, 11, 1, 0)_{3765}
\end{aligned}$$

$$\begin{aligned}
\ell_{568} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{169952} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{169952} = \mathbf{Pl}(21, 0, 0, 11, 1, 0)_{3756} \\
\ell_{569} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{575936} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{575936} = \mathbf{Pl}(19, 0, 0, 11, 1, 0)_{3754} \\
\ell_{570} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{338784} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{338784} = \mathbf{Pl}(24, 0, 0, 11, 1, 0)_{3759} \\
\ell_{571} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{711040} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{711040} = \mathbf{Pl}(5, 0, 0, 11, 1, 0)_{3740} \\
\ell_{572} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{1048736} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{1048736} = \mathbf{Pl}(14, 0, 0, 11, 1, 0)_{3749} \\
\ell_{573} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{102144} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{102144} = \mathbf{Pl}(26, 0, 0, 11, 1, 0)_{3761} \\
\ell_{574} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{643424} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{643424} = \mathbf{Pl}(17, 0, 0, 11, 1, 0)_{3752} \\
\ell_{575} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{676704} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{676704} = \mathbf{Pl}(12, 0, 0, 11, 1, 0)_{3747} \\
\ell_{576} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{913632} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{913632} = \mathbf{Pl}(7, 0, 0, 11, 1, 0)_{3742} \\
\ell_{577} &= \begin{bmatrix} 1 & \eta^{21} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{26424} = \begin{bmatrix} 1 & 24 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{26424} = \mathbf{Pl}(0, 0, 0, 24, 1, 0)_{4554} \\
\ell_{578} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{34368} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{34368} = \mathbf{Pl}(24, 0, 0, 24, 1, 0)_{4578} \\
\ell_{579} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{609664} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{609664} = \mathbf{Pl}(21, 0, 0, 24, 1, 0)_{4575} \\
\ell_{580} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{947552} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{947552} = \mathbf{Pl}(13, 0, 0, 24, 1, 0)_{4567} \\
\ell_{581} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{304832} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{304832} = \mathbf{Pl}(15, 0, 0, 24, 1, 0)_{4569} \\
\ell_{582} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{778112} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{778112} = \mathbf{Pl}(23, 0, 0, 24, 1, 0)_{4577} \\
\ell_{583} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{474208} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{474208} = \mathbf{Pl}(26, 0, 0, 24, 1, 0)_{4580} \\
\ell_{584} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{406464} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{406464} = \mathbf{Pl}(2, 0, 0, 24, 1, 0)_{4556} \\
\ell_{585} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{744768} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{744768} = \mathbf{Pl}(30, 0, 0, 24, 1, 0)_{4584} \\
\ell_{586} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{135744} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{135744} = \mathbf{Pl}(6, 0, 0, 24, 1, 0)_{4560} \\
\ell_{587} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{846112} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{846112} = \mathbf{Pl}(11, 0, 0, 24, 1, 0)_{4565} \\
\ell_{588} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{542112} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{542112} = \mathbf{Pl}(19, 0, 0, 24, 1, 0)_{4573}
\end{aligned}$$

$$\begin{aligned}
\ell_{589} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{237536} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{237536} = \mathbf{Pl}(17, 0, 0, 24, 1, 0)_{4571} \\
\ell_{590} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{507488} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{507488} = \mathbf{Pl}(9, 0, 0, 24, 1, 0)_{4563} \\
\ell_{591} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{203232} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{203232} = \mathbf{Pl}(4, 0, 0, 24, 1, 0)_{4558} \\
\ell_{592} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{439808} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{439808} = \mathbf{Pl}(28, 0, 0, 24, 1, 0)_{4582} \\
\ell_{593} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{372384} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{372384} = \mathbf{Pl}(25, 0, 0, 24, 1, 0)_{4579} \\
\ell_{594} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{811808} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{811808} = \mathbf{Pl}(1, 0, 0, 24, 1, 0)_{4555} \\
\ell_{595} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{67872} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{67872} = \mathbf{Pl}(12, 0, 0, 24, 1, 0)_{4566} \\
\ell_{596} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{981856} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{981856} = \mathbf{Pl}(20, 0, 0, 24, 1, 0)_{4574} \\
\ell_{597} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{1014976} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{1014976} = \mathbf{Pl}(22, 0, 0, 24, 1, 0)_{4576} \\
\ell_{598} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{879616} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{879616} = \mathbf{Pl}(14, 0, 0, 24, 1, 0)_{4568} \\
\ell_{599} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{271488} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{271488} = \mathbf{Pl}(3, 0, 0, 24, 1, 0)_{4557} \\
\ell_{600} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{170112} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{170112} = \mathbf{Pl}(27, 0, 0, 24, 1, 0)_{4581} \\
\ell_{601} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{575392} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{575392} = \mathbf{Pl}(7, 0, 0, 24, 1, 0)_{4561} \\
\ell_{602} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{339104} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{339104} = \mathbf{Pl}(31, 0, 0, 24, 1, 0)_{4585} \\
\ell_{603} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{710368} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{710368} = \mathbf{Pl}(18, 0, 0, 24, 1, 0)_{4572} \\
\ell_{604} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{1049344} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{1049344} = \mathbf{Pl}(10, 0, 0, 24, 1, 0)_{4564} \\
\ell_{605} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{102176} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{102176} = \mathbf{Pl}(8, 0, 0, 24, 1, 0)_{4562} \\
\ell_{606} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{643008} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{643008} = \mathbf{Pl}(16, 0, 0, 24, 1, 0)_{4570} \\
\ell_{607} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{677088} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{677088} = \mathbf{Pl}(29, 0, 0, 24, 1, 0)_{4583} \\
\ell_{608} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{913984} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{913984} = \mathbf{Pl}(5, 0, 0, 24, 1, 0)_{4559} \\
\ell_{609} &= \begin{bmatrix} 1 & \eta & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3170} = \begin{bmatrix} 1 & 2 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{3170} = \mathbf{Pl}(0, 0, 0, 2, 1, 0)_{3168}
\end{aligned}$$

$$\begin{aligned}
\ell_{610} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{34400} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{34400} = \mathbf{Pl}(2, 0, 0, 2, 1, 0)_{3170} \\
\ell_{611} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{609120} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{609120} = \mathbf{Pl}(4, 0, 0, 2, 1, 0)_{3172} \\
\ell_{612} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{947520} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{947520} = \mathbf{Pl}(6, 0, 0, 2, 1, 0)_{3174} \\
\ell_{613} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{305120} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{305120} = \mathbf{Pl}(8, 0, 0, 2, 1, 0)_{3176} \\
\ell_{614} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{778752} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{778752} = \mathbf{Pl}(10, 0, 0, 2, 1, 0)_{3178} \\
\ell_{615} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{473760} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{473760} = \mathbf{Pl}(12, 0, 0, 2, 1, 0)_{3180} \\
\ell_{616} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{406080} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{406080} = \mathbf{Pl}(14, 0, 0, 2, 1, 0)_{3182} \\
\ell_{617} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{744480} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{744480} = \mathbf{Pl}(16, 0, 0, 2, 1, 0)_{3184} \\
\ell_{618} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{135360} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{135360} = \mathbf{Pl}(18, 0, 0, 2, 1, 0)_{3186} \\
\ell_{619} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{846560} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{846560} = \mathbf{Pl}(20, 0, 0, 2, 1, 0)_{3188} \\
\ell_{620} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{541440} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{541440} = \mathbf{Pl}(22, 0, 0, 2, 1, 0)_{3190} \\
\ell_{621} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{237312} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{237312} = \mathbf{Pl}(24, 0, 0, 2, 1, 0)_{3192} \\
\ell_{622} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{508032} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{508032} = \mathbf{Pl}(26, 0, 0, 2, 1, 0)_{3194} \\
\ell_{623} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{203040} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{203040} = \mathbf{Pl}(28, 0, 0, 2, 1, 0)_{3196} \\
\ell_{624} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{440352} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{440352} = \mathbf{Pl}(30, 0, 0, 2, 1, 0)_{3198} \\
\ell_{625} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{372800} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{372800} = \mathbf{Pl}(5, 0, 0, 2, 1, 0)_{3173} \\
\ell_{626} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{812160} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{812160} = \mathbf{Pl}(7, 0, 0, 2, 1, 0)_{3175} \\
\ell_{627} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & 1 \end{bmatrix}_{67680} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{67680} = \mathbf{Pl}(1, 0, 0, 2, 1, 0)_{3169} \\
\ell_{628} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{981792} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{981792} = \mathbf{Pl}(3, 0, 0, 2, 1, 0)_{3171} \\
\ell_{629} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{1015200} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{1015200} = \mathbf{Pl}(13, 0, 0, 2, 1, 0)_{3181} \\
\ell_{630} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{879840} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{879840} = \mathbf{Pl}(15, 0, 0, 2, 1, 0)_{3183}
\end{aligned}$$

$$\begin{aligned}
\ell_{631} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{270720} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{270720} = \mathbf{Pl}(9, 0, 0, 2, 1, 0)_{3177} \\
\ell_{632} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{169632} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{169632} = \mathbf{Pl}(11, 0, 0, 2, 1, 0)_{3179} \\
\ell_{633} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{575840} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{575840} = \mathbf{Pl}(21, 0, 0, 2, 1, 0)_{3189} \\
\ell_{634} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{338400} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{338400} = \mathbf{Pl}(23, 0, 0, 2, 1, 0)_{3191} \\
\ell_{635} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{711072} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{711072} = \mathbf{Pl}(17, 0, 0, 2, 1, 0)_{3185} \\
\ell_{636} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{1049472} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{1049472} = \mathbf{Pl}(19, 0, 0, 2, 1, 0)_{3187} \\
\ell_{637} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{102080} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{102080} = \mathbf{Pl}(29, 0, 0, 2, 1, 0)_{3197} \\
\ell_{638} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{643520} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{643520} = \mathbf{Pl}(31, 0, 0, 2, 1, 0)_{3199} \\
\ell_{639} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{676800} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{676800} = \mathbf{Pl}(25, 0, 0, 2, 1, 0)_{3193} \\
\ell_{640} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{914240} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{914240} = \mathbf{Pl}(27, 0, 0, 2, 1, 0)_{3195} \\
\ell_{641} &= \begin{bmatrix} 1 & \eta^{14} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{31709} = \begin{bmatrix} 1 & 29 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{31709} = \mathbf{Pl}(0, 0, 0, 29, 1, 0)_{4869} \\
\ell_{642} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{34432} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{34432} = \mathbf{Pl}(29, 0, 0, 29, 1, 0)_{4898} \\
\ell_{643} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{609696} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{609696} = \mathbf{Pl}(31, 0, 0, 29, 1, 0)_{4900} \\
\ell_{644} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{947648} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{947648} = \mathbf{Pl}(2, 0, 0, 29, 1, 0)_{4871} \\
\ell_{645} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{305408} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{305408} = \mathbf{Pl}(27, 0, 0, 29, 1, 0)_{4896} \\
\ell_{646} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{778400} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{778400} = \mathbf{Pl}(6, 0, 0, 29, 1, 0)_{4875} \\
\ell_{647} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{473824} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{473824} = \mathbf{Pl}(4, 0, 0, 29, 1, 0)_{4873} \\
\ell_{648} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{406208} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{406208} = \mathbf{Pl}(25, 0, 0, 29, 1, 0)_{4894} \\
\ell_{649} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{745056} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{745056} = \mathbf{Pl}(19, 0, 0, 29, 1, 0)_{4888} \\
\ell_{650} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{135488} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{135488} = \mathbf{Pl}(14, 0, 0, 29, 1, 0)_{4883} \\
\ell_{651} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{845824} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{845824} = \mathbf{Pl}(12, 0, 0, 29, 1, 0)_{4881}
\end{aligned}$$



$$\begin{aligned}
\ell_{652} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{541952} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{541952} = \mathbf{Pl}(17, 0, 0, 29, 1, 0)_{4886} \\
\ell_{653} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{237472} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{237472} = \mathbf{Pl}(8, 0, 0, 29, 1, 0)_{4877} \\
\ell_{654} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{508192} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{508192} = \mathbf{Pl}(21, 0, 0, 29, 1, 0)_{4890} \\
\ell_{655} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{203104} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{203104} = \mathbf{Pl}(23, 0, 0, 29, 1, 0)_{4892} \\
\ell_{656} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{440512} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{440512} = \mathbf{Pl}(10, 0, 0, 29, 1, 0)_{4879} \\
\ell_{657} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{372960} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{372960} = \mathbf{Pl}(3, 0, 0, 29, 1, 0)_{4872} \\
\ell_{658} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{812416} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{812416} = \mathbf{Pl}(30, 0, 0, 29, 1, 0)_{4899} \\
\ell_{659} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{67744} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{67744} = \mathbf{Pl}(28, 0, 0, 29, 1, 0)_{4897} \\
\ell_{660} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{980928} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{980928} = \mathbf{Pl}(1, 0, 0, 29, 1, 0)_{4870} \\
\ell_{661} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{1015264} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{1015264} = \mathbf{Pl}(24, 0, 0, 29, 1, 0)_{4893} \\
\ell_{662} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{880160} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{880160} = \mathbf{Pl}(5, 0, 0, 29, 1, 0)_{4874} \\
\ell_{663} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{270976} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{270976} = \mathbf{Pl}(7, 0, 0, 29, 1, 0)_{4876} \\
\ell_{664} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{169792} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{169792} = \mathbf{Pl}(26, 0, 0, 29, 1, 0)_{4895} \\
\ell_{665} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{575360} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{575360} = \mathbf{Pl}(16, 0, 0, 29, 1, 0)_{4885} \\
\ell_{666} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{338720} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{338720} = \mathbf{Pl}(13, 0, 0, 29, 1, 0)_{4882} \\
\ell_{667} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{710720} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{710720} = \mathbf{Pl}(15, 0, 0, 29, 1, 0)_{4884} \\
\ell_{668} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{1048608} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{1048608} = \mathbf{Pl}(18, 0, 0, 29, 1, 0)_{4887} \\
\ell_{669} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{101984} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{101984} = \mathbf{Pl}(11, 0, 0, 29, 1, 0)_{4880} \\
\ell_{670} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{642912} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{642912} = \mathbf{Pl}(22, 0, 0, 29, 1, 0)_{4891} \\
\ell_{671} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{677440} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{677440} = \mathbf{Pl}(20, 0, 0, 29, 1, 0)_{4889} \\
\ell_{672} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{913376} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{913376} = \mathbf{Pl}(9, 0, 0, 29, 1, 0)_{4878}
\end{aligned}$$

$$\begin{aligned}
\ell_{673} &= \begin{bmatrix} 1 & \eta^{24} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{32766} = \begin{bmatrix} 1 & 30 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{32766} = \mathbf{Pl}(0, 0, 0, 30, 1, 0)_{4932} \\
\ell_{674} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{34464} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{34464} = \mathbf{Pl}(30, 0, 0, 30, 1, 0)_{4962} \\
\ell_{675} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{609152} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{609152} = \mathbf{Pl}(25, 0, 0, 30, 1, 0)_{4957} \\
\ell_{676} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{947456} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{947456} = \mathbf{Pl}(7, 0, 0, 30, 1, 0)_{4939} \\
\ell_{677} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{304576} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{304576} = \mathbf{Pl}(23, 0, 0, 30, 1, 0)_{4955} \\
\ell_{678} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{778080} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{778080} = \mathbf{Pl}(9, 0, 0, 30, 1, 0)_{4941} \\
\ell_{679} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{473728} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{473728} = \mathbf{Pl}(14, 0, 0, 30, 1, 0)_{4946} \\
\ell_{680} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{406240} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{406240} = \mathbf{Pl}(16, 0, 0, 30, 1, 0)_{4948} \\
\ell_{681} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{744640} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{744640} = \mathbf{Pl}(11, 0, 0, 30, 1, 0)_{4943} \\
\ell_{682} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{136128} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{136128} = \mathbf{Pl}(21, 0, 0, 30, 1, 0)_{4953} \\
\ell_{683} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{845664} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{845664} = \mathbf{Pl}(18, 0, 0, 30, 1, 0)_{4950} \\
\ell_{684} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{541408} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{541408} = \mathbf{Pl}(12, 0, 0, 30, 1, 0)_{4944} \\
\ell_{685} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{236864} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{236864} = \mathbf{Pl}(28, 0, 0, 30, 1, 0)_{4960} \\
\ell_{686} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{507936} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{507936} = \mathbf{Pl}(2, 0, 0, 30, 1, 0)_{4934} \\
\ell_{687} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{203680} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{203680} = \mathbf{Pl}(5, 0, 0, 30, 1, 0)_{4937} \\
\ell_{688} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{440704} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{440704} = \mathbf{Pl}(27, 0, 0, 30, 1, 0)_{4959} \\
\ell_{689} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{372320} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{372320} = \mathbf{Pl}(22, 0, 0, 30, 1, 0)_{4954} \\
\ell_{690} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{812480} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{812480} = \mathbf{Pl}(8, 0, 0, 30, 1, 0)_{4940} \\
\ell_{691} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{68064} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{68064} = \mathbf{Pl}(15, 0, 0, 30, 1, 0)_{4947} \\
\ell_{692} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{981664} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{981664} = \mathbf{Pl}(17, 0, 0, 30, 1, 0)_{4949} \\
\ell_{693} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{1014752} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{1014752} = \mathbf{Pl}(1, 0, 0, 30, 1, 0)_{4933}
\end{aligned}$$

$$\begin{aligned}
\ell_{694} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{880288} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{880288} = \mathbf{Pl}(31, 0, 0, 30, 1, 0)_{4963} \\
\ell_{695} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{271136} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{271136} = \mathbf{Pl}(24, 0, 0, 30, 1, 0)_{4956} \\
\ell_{696} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{169568} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{169568} = \mathbf{Pl}(6, 0, 0, 30, 1, 0)_{4938} \\
\ell_{697} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{575616} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{575616} = \mathbf{Pl}(29, 0, 0, 30, 1, 0)_{4961} \\
\ell_{698} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{339136} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{339136} = \mathbf{Pl}(3, 0, 0, 30, 1, 0)_{4935} \\
\ell_{699} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{710592} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{710592} = \mathbf{Pl}(4, 0, 0, 30, 1, 0)_{4936} \\
\ell_{700} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{1049216} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{1049216} = \mathbf{Pl}(26, 0, 0, 30, 1, 0)_{4958} \\
\ell_{701} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{102272} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{102272} = \mathbf{Pl}(10, 0, 0, 30, 1, 0)_{4942} \\
\ell_{702} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{643616} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{643616} = \mathbf{Pl}(20, 0, 0, 30, 1, 0)_{4952} \\
\ell_{703} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{677408} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{677408} = \mathbf{Pl}(19, 0, 0, 30, 1, 0)_{4951} \\
\ell_{704} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{913728} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{913728} = \mathbf{Pl}(13, 0, 0, 30, 1, 0)_{4945} \\
\ell_{705} &= \begin{bmatrix} 1 & \eta^9 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{28538} = \begin{bmatrix} 1 & 26 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{28538} = \mathbf{Pl}(0, 0, 0, 26, 1, 0)_{4680} \\
\ell_{706} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{34496} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{34496} = \mathbf{Pl}(26, 0, 0, 26, 1, 0)_{4706} \\
\ell_{707} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{609600} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{609600} = \mathbf{Pl}(17, 0, 0, 26, 1, 0)_{4697} \\
\ell_{708} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{947584} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{947584} = \mathbf{Pl}(11, 0, 0, 26, 1, 0)_{4691} \\
\ell_{709} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{304800} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{304800} = \mathbf{Pl}(7, 0, 0, 26, 1, 0)_{4687} \\
\ell_{710} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{778560} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{778560} = \mathbf{Pl}(29, 0, 0, 26, 1, 0)_{4709} \\
\ell_{711} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{473792} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{473792} = \mathbf{Pl}(22, 0, 0, 26, 1, 0)_{4702} \\
\ell_{712} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{406112} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{406112} = \mathbf{Pl}(12, 0, 0, 26, 1, 0)_{4692} \\
\ell_{713} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{744320} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{744320} = \mathbf{Pl}(14, 0, 0, 26, 1, 0)_{4694} \\
\ell_{714} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{136256} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{136256} = \mathbf{Pl}(20, 0, 0, 26, 1, 0)_{4700}
\end{aligned}$$

$$\begin{aligned}
\ell_{715} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{846464} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{846464} = \mathbf{Pl}(31, 0, 0, 26, 1, 0)_{4711} \\
\ell_{716} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{541920} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{541920} = \mathbf{Pl}(5, 0, 0, 26, 1, 0)_{4685} \\
\ell_{717} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{236896} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{236896} = \mathbf{Pl}(9, 0, 0, 26, 1, 0)_{4689} \\
\ell_{718} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{508288} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{508288} = \mathbf{Pl}(19, 0, 0, 26, 1, 0)_{4699} \\
\ell_{719} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{203488} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{203488} = \mathbf{Pl}(24, 0, 0, 26, 1, 0)_{4704} \\
\ell_{720} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{440288} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{440288} = \mathbf{Pl}(2, 0, 0, 26, 1, 0)_{4682} \\
\ell_{721} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{372160} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{372160} = \mathbf{Pl}(28, 0, 0, 26, 1, 0)_{4708} \\
\ell_{722} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{812224} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{812224} = \mathbf{Pl}(6, 0, 0, 26, 1, 0)_{4686} \\
\ell_{723} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{68128} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{68128} = \mathbf{Pl}(13, 0, 0, 26, 1, 0)_{4693} \\
\ell_{724} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{981056} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{981056} = \mathbf{Pl}(23, 0, 0, 26, 1, 0)_{4703} \\
\ell_{725} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{1015712} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{1015712} = \mathbf{Pl}(27, 0, 0, 26, 1, 0)_{4707} \\
\ell_{726} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{879456} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{879456} = \mathbf{Pl}(1, 0, 0, 26, 1, 0)_{4681} \\
\ell_{727} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{271392} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{271392} = \mathbf{Pl}(10, 0, 0, 26, 1, 0)_{4690} \\
\ell_{728} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{169472} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{169472} = \mathbf{Pl}(16, 0, 0, 26, 1, 0)_{4696} \\
\ell_{729} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{575072} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{575072} = \mathbf{Pl}(18, 0, 0, 26, 1, 0)_{4698} \\
\ell_{730} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{338944} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{338944} = \mathbf{Pl}(8, 0, 0, 26, 1, 0)_{4688} \\
\ell_{731} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{711200} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{711200} = \mathbf{Pl}(3, 0, 0, 26, 1, 0)_{4683} \\
\ell_{732} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{1048864} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{1048864} = \mathbf{Pl}(25, 0, 0, 26, 1, 0)_{4705} \\
\ell_{733} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{102304} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{102304} = \mathbf{Pl}(21, 0, 0, 26, 1, 0)_{4701} \\
\ell_{734} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{643072} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{643072} = \mathbf{Pl}(15, 0, 0, 26, 1, 0)_{4695} \\
\ell_{735} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{676768} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{676768} = \mathbf{Pl}(4, 0, 0, 26, 1, 0)_{4684}
\end{aligned}$$

$$\begin{aligned}
\ell_{736} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{913888} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{913888} = \mathbf{Pl}(30, 0, 0, 26, 1, 0)_{4710} \\
\ell_{737} &= \begin{bmatrix} 1 & \eta^3 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9512} = \begin{bmatrix} 1 & 8 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{9512} = \mathbf{Pl}(0, 0, 0, 8, 1, 0)_{3546} \\
\ell_{738} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{34528} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{34528} = \mathbf{Pl}(8, 0, 0, 8, 1, 0)_{3554} \\
\ell_{739} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{609184} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{609184} = \mathbf{Pl}(16, 0, 0, 8, 1, 0)_{3562} \\
\ell_{740} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{947616} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{947616} = \mathbf{Pl}(24, 0, 0, 8, 1, 0)_{3570} \\
\ell_{741} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{305152} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{305152} = \mathbf{Pl}(5, 0, 0, 8, 1, 0)_{3551} \\
\ell_{742} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{778432} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{778432} = \mathbf{Pl}(13, 0, 0, 8, 1, 0)_{3559} \\
\ell_{743} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{474368} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{474368} = \mathbf{Pl}(21, 0, 0, 8, 1, 0)_{3567} \\
\ell_{744} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{406496} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{406496} = \mathbf{Pl}(29, 0, 0, 8, 1, 0)_{3575} \\
\ell_{745} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{744928} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{744928} = \mathbf{Pl}(10, 0, 0, 8, 1, 0)_{3556} \\
\ell_{746} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{135872} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{135872} = \mathbf{Pl}(2, 0, 0, 8, 1, 0)_{3548} \\
\ell_{747} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{846272} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{846272} = \mathbf{Pl}(26, 0, 0, 8, 1, 0)_{3572} \\
\ell_{748} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{541248} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{541248} = \mathbf{Pl}(18, 0, 0, 8, 1, 0)_{3564} \\
\ell_{749} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{237184} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{237184} = \mathbf{Pl}(15, 0, 0, 8, 1, 0)_{3561} \\
\ell_{750} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{507744} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{507744} = \mathbf{Pl}(7, 0, 0, 8, 1, 0)_{3553} \\
\ell_{751} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{203808} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{203808} = \mathbf{Pl}(31, 0, 0, 8, 1, 0)_{3577} \\
\ell_{752} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{439872} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{439872} = \mathbf{Pl}(23, 0, 0, 8, 1, 0)_{3569} \\
\ell_{753} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{373024} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{373024} = \mathbf{Pl}(20, 0, 0, 8, 1, 0)_{3566} \\
\ell_{754} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{811872} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{811872} = \mathbf{Pl}(28, 0, 0, 8, 1, 0)_{3574} \\
\ell_{755} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{67936} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{67936} = \mathbf{Pl}(4, 0, 0, 8, 1, 0)_{3550} \\
\ell_{756} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{981120} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{981120} = \mathbf{Pl}(12, 0, 0, 8, 1, 0)_{3558}
\end{aligned}$$

$$\begin{aligned}
\ell_{757} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{1015488} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{1015488} = \mathbf{Pl}(17, 0, 0, 8, 1, 0)_{3563} \\
\ell_{758} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{879744} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{879744} = \mathbf{Pl}(25, 0, 0, 8, 1, 0)_{3571} \\
\ell_{759} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{270624} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{270624} = \mathbf{Pl}(1, 0, 0, 8, 1, 0)_{3547} \\
\ell_{760} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{169248} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{169248} = \mathbf{Pl}(9, 0, 0, 8, 1, 0)_{3555} \\
\ell_{761} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{575648} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{575648} = \mathbf{Pl}(30, 0, 0, 8, 1, 0)_{3576} \\
\ell_{762} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{338496} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{338496} = \mathbf{Pl}(22, 0, 0, 8, 1, 0)_{3568} \\
\ell_{763} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{710496} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{710496} = \mathbf{Pl}(14, 0, 0, 8, 1, 0)_{3560} \\
\ell_{764} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{1048992} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{1048992} = \mathbf{Pl}(6, 0, 0, 8, 1, 0)_{3552} \\
\ell_{765} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{102464} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{102464} = \mathbf{Pl}(27, 0, 0, 8, 1, 0)_{3573} \\
\ell_{766} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{643584} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{643584} = \mathbf{Pl}(19, 0, 0, 8, 1, 0)_{3565} \\
\ell_{767} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{676992} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{676992} = \mathbf{Pl}(11, 0, 0, 8, 1, 0)_{3557} \\
\ell_{768} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{914144} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{914144} = \mathbf{Pl}(3, 0, 0, 8, 1, 0)_{3549} \\
\ell_{769} &= \begin{bmatrix} 1 & \eta^5 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6341} = \begin{bmatrix} 1 & 5 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{6341} = \mathbf{Pl}(0, 0, 0, 5, 1, 0)_{3357} \\
\ell_{770} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{34560} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{34560} = \mathbf{Pl}(5, 0, 0, 5, 1, 0)_{3362} \\
\ell_{771} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{609632} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{609632} = \mathbf{Pl}(10, 0, 0, 5, 1, 0)_{3367} \\
\ell_{772} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{947488} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{947488} = \mathbf{Pl}(15, 0, 0, 5, 1, 0)_{3372} \\
\ell_{773} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{305376} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{305376} = \mathbf{Pl}(20, 0, 0, 5, 1, 0)_{3377} \\
\ell_{774} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{778720} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{778720} = \mathbf{Pl}(17, 0, 0, 5, 1, 0)_{3374} \\
\ell_{775} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{474176} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{474176} = \mathbf{Pl}(30, 0, 0, 5, 1, 0)_{3387} \\
\ell_{776} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{406880} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{406880} = \mathbf{Pl}(27, 0, 0, 5, 1, 0)_{3384} \\
\ell_{777} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{744608} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{744608} = \mathbf{Pl}(13, 0, 0, 5, 1, 0)_{3370}
\end{aligned}$$

$$\begin{aligned}
\ell_{778} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{136000} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{136000} = \mathbf{Pl}(8, 0, 0, 5, 1, 0)_{3365} \\
\ell_{779} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{845984} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{845984} = \mathbf{Pl}(7, 0, 0, 5, 1, 0)_{3364} \\
\ell_{780} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{541760} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{541760} = \mathbf{Pl}(2, 0, 0, 5, 1, 0)_{3359} \\
\ell_{781} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{237088} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{237088} = \mathbf{Pl}(25, 0, 0, 5, 1, 0)_{3382} \\
\ell_{782} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{507456} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{507456} = \mathbf{Pl}(28, 0, 0, 5, 1, 0)_{3385} \\
\ell_{783} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{203872} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{203872} = \mathbf{Pl}(19, 0, 0, 5, 1, 0)_{3376} \\
\ell_{784} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{439968} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{439968} = \mathbf{Pl}(22, 0, 0, 5, 1, 0)_{3379} \\
\ell_{785} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{372736} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{372736} = \mathbf{Pl}(26, 0, 0, 5, 1, 0)_{3383} \\
\ell_{786} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{812640} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{812640} = \mathbf{Pl}(31, 0, 0, 5, 1, 0)_{3388} \\
\ell_{787} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{68000} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{68000} = \mathbf{Pl}(16, 0, 0, 5, 1, 0)_{3373} \\
\ell_{788} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{981728} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{981728} = \mathbf{Pl}(21, 0, 0, 5, 1, 0)_{3378} \\
\ell_{789} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{1014912} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{1014912} = \mathbf{Pl}(14, 0, 0, 5, 1, 0)_{3371} \\
\ell_{790} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{879936} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{879936} = \mathbf{Pl}(11, 0, 0, 5, 1, 0)_{3368} \\
\ell_{791} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{270880} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{270880} = \mathbf{Pl}(4, 0, 0, 5, 1, 0)_{3361} \\
\ell_{792} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{169152} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{169152} = \mathbf{Pl}(1, 0, 0, 5, 1, 0)_{3358} \\
\ell_{793} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{575168} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{575168} = \mathbf{Pl}(23, 0, 0, 5, 1, 0)_{3380} \\
\ell_{794} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{338304} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{338304} = \mathbf{Pl}(18, 0, 0, 5, 1, 0)_{3375} \\
\ell_{795} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{710912} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{710912} = \mathbf{Pl}(29, 0, 0, 5, 1, 0)_{3386} \\
\ell_{796} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{1049088} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{1049088} = \mathbf{Pl}(24, 0, 0, 5, 1, 0)_{3381} \\
\ell_{797} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{102368} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{102368} = \mathbf{Pl}(3, 0, 0, 5, 1, 0)_{3360} \\
\ell_{798} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{643104} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{643104} = \mathbf{Pl}(6, 0, 0, 5, 1, 0)_{3363}
\end{aligned}$$

$$\begin{aligned}
\ell_{799} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{676608} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{676608} = \mathbf{Pl}(9, 0, 0, 5, 1, 0)_{3366} \\
\ell_{800} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{913472} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{913472} = \mathbf{Pl}(12, 0, 0, 5, 1, 0)_{3369} \\
\ell_{801} &= \begin{bmatrix} 1 & \eta^{10} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{19025} = \begin{bmatrix} 1 & 17 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{19025} = \mathbf{Pl}(0, 0, 0, 17, 1, 0)_{4113} \\
\ell_{802} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{34592} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{34592} = \mathbf{Pl}(17, 0, 0, 17, 1, 0)_{4130} \\
\ell_{803} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{609216} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{609216} = \mathbf{Pl}(7, 0, 0, 17, 1, 0)_{4120} \\
\ell_{804} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{947328} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{947328} = \mathbf{Pl}(22, 0, 0, 17, 1, 0)_{4135} \\
\ell_{805} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{304608} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{304608} = \mathbf{Pl}(14, 0, 0, 17, 1, 0)_{4127} \\
\ell_{806} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{778816} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{778816} = \mathbf{Pl}(31, 0, 0, 17, 1, 0)_{4144} \\
\ell_{807} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{473664} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{473664} = \mathbf{Pl}(9, 0, 0, 17, 1, 0)_{4122} \\
\ell_{808} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{406432} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{406432} = \mathbf{Pl}(24, 0, 0, 17, 1, 0)_{4137} \\
\ell_{809} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{744224} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{744224} = \mathbf{Pl}(28, 0, 0, 17, 1, 0)_{4141} \\
\ell_{810} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{135776} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{135776} = \mathbf{Pl}(13, 0, 0, 17, 1, 0)_{4126} \\
\ell_{811} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{846592} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{846592} = \mathbf{Pl}(27, 0, 0, 17, 1, 0)_{4140} \\
\ell_{812} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{541984} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{541984} = \mathbf{Pl}(10, 0, 0, 17, 1, 0)_{4123} \\
\ell_{813} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{236832} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{236832} = \mathbf{Pl}(18, 0, 0, 17, 1, 0)_{4131} \\
\ell_{814} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{508256} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{508256} = \mathbf{Pl}(3, 0, 0, 17, 1, 0)_{4116} \\
\ell_{815} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{203776} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{203776} = \mathbf{Pl}(21, 0, 0, 17, 1, 0)_{4134} \\
\ell_{816} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{440000} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{440000} = \mathbf{Pl}(4, 0, 0, 17, 1, 0)_{4117} \\
\ell_{817} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{372672} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{372672} = \mathbf{Pl}(29, 0, 0, 17, 1, 0)_{4142} \\
\ell_{818} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{812000} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{812000} = \mathbf{Pl}(12, 0, 0, 17, 1, 0)_{4125} \\
\ell_{819} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{68320} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{68320} = \mathbf{Pl}(26, 0, 0, 17, 1, 0)_{4139}
\end{aligned}$$



$$\begin{aligned}
\ell_{820} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{981408} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{981408} = \mathbf{Pl}(11, 0, 0, 17, 1, 0)_{4124} \\
\ell_{821} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{1015648} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{1015648} = \mathbf{Pl}(19, 0, 0, 17, 1, 0)_{4132} \\
\ell_{822} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{880000} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{880000} = \mathbf{Pl}(2, 0, 0, 17, 1, 0)_{4115} \\
\ell_{823} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{271552} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{271552} = \mathbf{Pl}(20, 0, 0, 17, 1, 0)_{4133} \\
\ell_{824} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{169856} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{169856} = \mathbf{Pl}(5, 0, 0, 17, 1, 0)_{4118} \\
\ell_{825} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{575040} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{575040} = \mathbf{Pl}(1, 0, 0, 17, 1, 0)_{4114} \\
\ell_{826} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{338592} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{338592} = \mathbf{Pl}(16, 0, 0, 17, 1, 0)_{4129} \\
\ell_{827} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{710752} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{710752} = \mathbf{Pl}(6, 0, 0, 17, 1, 0)_{4119} \\
\ell_{828} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{1048704} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{1048704} = \mathbf{Pl}(23, 0, 0, 17, 1, 0)_{4136} \\
\ell_{829} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{101888} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{101888} = \mathbf{Pl}(15, 0, 0, 17, 1, 0)_{4128} \\
\ell_{830} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{643296} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{643296} = \mathbf{Pl}(30, 0, 0, 17, 1, 0)_{4143} \\
\ell_{831} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{677184} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{677184} = \mathbf{Pl}(8, 0, 0, 17, 1, 0)_{4121} \\
\ell_{832} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{913568} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{913568} = \mathbf{Pl}(25, 0, 0, 17, 1, 0)_{4138} \\
\ell_{833} &= \begin{bmatrix} 1 & \eta^6 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{11626} = \begin{bmatrix} 1 & 10 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{11626} = \mathbf{Pl}(0, 0, 0, 10, 1, 0)_{3672} \\
\ell_{834} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{34624} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{34624} = \mathbf{Pl}(10, 0, 0, 10, 1, 0)_{3682} \\
\ell_{835} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{609792} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{609792} = \mathbf{Pl}(20, 0, 0, 10, 1, 0)_{3692} \\
\ell_{836} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{947712} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{947712} = \mathbf{Pl}(30, 0, 0, 10, 1, 0)_{3702} \\
\ell_{837} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{304896} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{304896} = \mathbf{Pl}(13, 0, 0, 10, 1, 0)_{3685} \\
\ell_{838} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{778336} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{778336} = \mathbf{Pl}(7, 0, 0, 10, 1, 0)_{3679} \\
\ell_{839} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{473856} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{473856} = \mathbf{Pl}(25, 0, 0, 10, 1, 0)_{3697} \\
\ell_{840} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{406816} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{406816} = \mathbf{Pl}(19, 0, 0, 10, 1, 0)_{3691}
\end{aligned}$$

$$\begin{aligned}
\ell_{841} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{744800} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{744800} = \mathbf{Pl}(26, 0, 0, 10, 1, 0)_{3698} \\
\ell_{842} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{135648} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{135648} = \mathbf{Pl}(16, 0, 0, 10, 1, 0)_{3688} \\
\ell_{843} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{845792} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{845792} = \mathbf{Pl}(14, 0, 0, 10, 1, 0)_{3686} \\
\ell_{844} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{541472} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{541472} = \mathbf{Pl}(4, 0, 0, 10, 1, 0)_{3676} \\
\ell_{845} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{236928} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{236928} = \mathbf{Pl}(23, 0, 0, 10, 1, 0)_{3695} \\
\ell_{846} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{507968} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{507968} = \mathbf{Pl}(29, 0, 0, 10, 1, 0)_{3701} \\
\ell_{847} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{203840} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{203840} = \mathbf{Pl}(3, 0, 0, 10, 1, 0)_{3675} \\
\ell_{848} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{439840} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{439840} = \mathbf{Pl}(9, 0, 0, 10, 1, 0)_{3681} \\
\ell_{849} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{372832} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{372832} = \mathbf{Pl}(17, 0, 0, 10, 1, 0)_{3689} \\
\ell_{850} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{812768} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{812768} = \mathbf{Pl}(27, 0, 0, 10, 1, 0)_{3699} \\
\ell_{851} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{68384} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{68384} = \mathbf{Pl}(5, 0, 0, 10, 1, 0)_{3677} \\
\ell_{852} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{981312} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{981312} = \mathbf{Pl}(15, 0, 0, 10, 1, 0)_{3687} \\
\ell_{853} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{1014816} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{1014816} = \mathbf{Pl}(28, 0, 0, 10, 1, 0)_{3700} \\
\ell_{854} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{879680} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{879680} = \mathbf{Pl}(22, 0, 0, 10, 1, 0)_{3694} \\
\ell_{855} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{271296} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{271296} = \mathbf{Pl}(8, 0, 0, 10, 1, 0)_{3680} \\
\ell_{856} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{169696} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{169696} = \mathbf{Pl}(2, 0, 0, 10, 1, 0)_{3674} \\
\ell_{857} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{575520} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{575520} = \mathbf{Pl}(11, 0, 0, 10, 1, 0)_{3683} \\
\ell_{858} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{338272} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{338272} = \mathbf{Pl}(1, 0, 0, 10, 1, 0)_{3673} \\
\ell_{859} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{711168} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{711168} = \mathbf{Pl}(31, 0, 0, 10, 1, 0)_{3703} \\
\ell_{860} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{1049376} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{1049376} = \mathbf{Pl}(21, 0, 0, 10, 1, 0)_{3693} \\
\ell_{861} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{101920} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{101920} = \mathbf{Pl}(6, 0, 0, 10, 1, 0)_{3678}
\end{aligned}$$

$$\begin{aligned}
\ell_{862} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{642880} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{642880} = \mathbf{Pl}(12, 0, 0, 10, 1, 0)_{3684} \\
\ell_{863} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{676544} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{676544} = \mathbf{Pl}(18, 0, 0, 10, 1, 0)_{3690} \\
\ell_{864} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{913792} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{913792} = \mathbf{Pl}(24, 0, 0, 10, 1, 0)_{3696} \\
\ell_{865} &= \begin{bmatrix} 1 & \eta^{22} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{23253} = \begin{bmatrix} 1 & 21 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{23253} = \mathbf{Pl}(0, 0, 0, 21, 1, 0)_{4365} \\
\ell_{866} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{34656} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{34656} = \mathbf{Pl}(21, 0, 0, 21, 1, 0)_{4386} \\
\ell_{867} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{609248} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{609248} = \mathbf{Pl}(15, 0, 0, 21, 1, 0)_{4380} \\
\ell_{868} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{947744} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{947744} = \mathbf{Pl}(26, 0, 0, 21, 1, 0)_{4391} \\
\ell_{869} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{305056} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{305056} = \mathbf{Pl}(30, 0, 0, 21, 1, 0)_{4395} \\
\ell_{870} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{778464} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{778464} = \mathbf{Pl}(11, 0, 0, 21, 1, 0)_{4376} \\
\ell_{871} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{474304} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{474304} = \mathbf{Pl}(17, 0, 0, 21, 1, 0)_{4382} \\
\ell_{872} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{406176} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{406176} = \mathbf{Pl}(4, 0, 0, 21, 1, 0)_{4369} \\
\ell_{873} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{744448} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{744448} = \mathbf{Pl}(25, 0, 0, 21, 1, 0)_{4390} \\
\ell_{874} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{135520} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{135520} = \mathbf{Pl}(12, 0, 0, 21, 1, 0)_{4377} \\
\ell_{875} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{845856} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{845856} = \mathbf{Pl}(22, 0, 0, 21, 1, 0)_{4387} \\
\ell_{876} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{542080} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{542080} = \mathbf{Pl}(3, 0, 0, 21, 1, 0)_{4368} \\
\ell_{877} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{237152} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{237152} = \mathbf{Pl}(7, 0, 0, 21, 1, 0)_{4372} \\
\ell_{878} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{507424} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{507424} = \mathbf{Pl}(18, 0, 0, 21, 1, 0)_{4383} \\
\ell_{879} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{203648} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{203648} = \mathbf{Pl}(8, 0, 0, 21, 1, 0)_{4373} \\
\ell_{880} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{440320} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{440320} = \mathbf{Pl}(29, 0, 0, 21, 1, 0)_{4394} \\
\ell_{881} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{372224} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{372224} = \mathbf{Pl}(23, 0, 0, 21, 1, 0)_{4388} \\
\ell_{882} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{812352} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{812352} = \mathbf{Pl}(2, 0, 0, 21, 1, 0)_{4367}
\end{aligned}$$

$$\begin{aligned}
\ell_{883} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{68192} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{68192} = \mathbf{Pl}(24, 0, 0, 21, 1, 0)_{4389} \\
\ell_{884} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{981376} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{981376} = \mathbf{Pl}(13, 0, 0, 21, 1, 0)_{4378} \\
\ell_{885} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{1014848} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{1014848} = \mathbf{Pl}(9, 0, 0, 21, 1, 0)_{4374} \\
\ell_{886} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{879520} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{879520} = \mathbf{Pl}(28, 0, 0, 21, 1, 0)_{4393} \\
\ell_{887} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{271040} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{271040} = \mathbf{Pl}(6, 0, 0, 21, 1, 0)_{4371} \\
\ell_{888} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{170048} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{170048} = \mathbf{Pl}(19, 0, 0, 21, 1, 0)_{4384} \\
\ell_{889} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{575200} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{575200} = \mathbf{Pl}(14, 0, 0, 21, 1, 0)_{4379} \\
\ell_{890} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{339232} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{339232} = \mathbf{Pl}(27, 0, 0, 21, 1, 0)_{4392} \\
\ell_{891} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{710336} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{710336} = \mathbf{Pl}(1, 0, 0, 21, 1, 0)_{4366} \\
\ell_{892} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{1049504} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{1049504} = \mathbf{Pl}(20, 0, 0, 21, 1, 0)_{4385} \\
\ell_{893} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{101824} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{101824} = \mathbf{Pl}(16, 0, 0, 21, 1, 0)_{4381} \\
\ell_{894} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{643392} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{643392} = \mathbf{Pl}(5, 0, 0, 21, 1, 0)_{4370} \\
\ell_{895} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{677344} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{677344} = \mathbf{Pl}(31, 0, 0, 21, 1, 0)_{4396} \\
\ell_{896} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{914048} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{914048} = \mathbf{Pl}(10, 0, 0, 21, 1, 0)_{4375} \\
\ell_{897} &= \begin{bmatrix} 1 & \eta^{15} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{33823} = \begin{bmatrix} 1 & 31 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{33823} = \mathbf{Pl}(0, 0, 0, 31, 1, 0)_{4995} \\
\ell_{898} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{34688} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{34688} = \mathbf{Pl}(31, 0, 0, 31, 1, 0)_{5026} \\
\ell_{899} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{609824} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{609824} = \mathbf{Pl}(27, 0, 0, 31, 1, 0)_{5022} \\
\ell_{900} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{947360} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{947360} = \mathbf{Pl}(4, 0, 0, 31, 1, 0)_{4999} \\
\ell_{901} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{305344} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{305344} = \mathbf{Pl}(19, 0, 0, 31, 1, 0)_{5014} \\
\ell_{902} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{778176} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{778176} = \mathbf{Pl}(12, 0, 0, 31, 1, 0)_{5007} \\
\ell_{903} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{474240} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{474240} = \mathbf{Pl}(8, 0, 0, 31, 1, 0)_{5003}
\end{aligned}$$

$$\begin{aligned}
\ell_{904} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{406048} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{406048} = \mathbf{Pl}(23, 0, 0, 31, 1, 0)_{5018} \\
\ell_{905} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{745024} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{745024} = \mathbf{Pl}(3, 0, 0, 31, 1, 0)_{4998} \\
\ell_{906} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{135392} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{135392} = \mathbf{Pl}(28, 0, 0, 31, 1, 0)_{5023} \\
\ell_{907} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{846144} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{846144} = \mathbf{Pl}(24, 0, 0, 31, 1, 0)_{5019} \\
\ell_{908} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{541568} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{541568} = \mathbf{Pl}(7, 0, 0, 31, 1, 0)_{5002} \\
\ell_{909} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{237120} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{237120} = \mathbf{Pl}(16, 0, 0, 31, 1, 0)_{5011} \\
\ell_{910} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{507776} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{507776} = \mathbf{Pl}(15, 0, 0, 31, 1, 0)_{5010} \\
\ell_{911} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{203456} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{203456} = \mathbf{Pl}(11, 0, 0, 31, 1, 0)_{5006} \\
\ell_{912} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{440672} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{440672} = \mathbf{Pl}(20, 0, 0, 31, 1, 0)_{5015} \\
\ell_{913} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{372512} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{372512} = \mathbf{Pl}(6, 0, 0, 31, 1, 0)_{5001} \\
\ell_{914} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{812096} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{812096} = \mathbf{Pl}(25, 0, 0, 31, 1, 0)_{5020} \\
\ell_{915} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{68256} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{68256} = \mathbf{Pl}(29, 0, 0, 31, 1, 0)_{5024} \\
\ell_{916} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{981472} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{981472} = \mathbf{Pl}(2, 0, 0, 31, 1, 0)_{4997} \\
\ell_{917} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{1015552} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{1015552} = \mathbf{Pl}(21, 0, 0, 31, 1, 0)_{5016} \\
\ell_{918} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{880224} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{880224} = \mathbf{Pl}(10, 0, 0, 31, 1, 0)_{5005} \\
\ell_{919} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{270784} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{270784} = \mathbf{Pl}(14, 0, 0, 31, 1, 0)_{5009} \\
\ell_{920} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{169888} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{169888} = \mathbf{Pl}(17, 0, 0, 31, 1, 0)_{5012} \\
\ell_{921} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{575744} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{575744} = \mathbf{Pl}(5, 0, 0, 31, 1, 0)_{5000} \\
\ell_{922} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{338912} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{338912} = \mathbf{Pl}(26, 0, 0, 31, 1, 0)_{5021} \\
\ell_{923} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{710944} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{710944} = \mathbf{Pl}(30, 0, 0, 31, 1, 0)_{5025} \\
\ell_{924} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{1048576} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{1048576} = \mathbf{Pl}(1, 0, 0, 31, 1, 0)_{4996}
\end{aligned}$$

$$\begin{aligned}
\ell_{925} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{101728} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{101728} = \mathbf{Pl}(22, 0, 0, 31, 1, 0)_{5017} \\
\ell_{926} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{642784} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{642784} = \mathbf{Pl}(9, 0, 0, 31, 1, 0)_{5004} \\
\ell_{927} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{676960} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{676960} = \mathbf{Pl}(13, 0, 0, 31, 1, 0)_{5008} \\
\ell_{928} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{913312} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{913312} = \mathbf{Pl}(18, 0, 0, 31, 1, 0)_{5013} \\
\ell_{929} &= \begin{bmatrix} 1 & \eta^{18} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4227} = \begin{bmatrix} 1 & 3 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{4227} = \mathbf{Pl}(0, 0, 0, 3, 1, 0)_{3231} \\
\ell_{930} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{34720} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{34720} = \mathbf{Pl}(3, 0, 0, 3, 1, 0)_{3234} \\
\ell_{931} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{609280} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{609280} = \mathbf{Pl}(6, 0, 0, 3, 1, 0)_{3237} \\
\ell_{932} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{947808} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{947808} = \mathbf{Pl}(5, 0, 0, 3, 1, 0)_{3236} \\
\ell_{933} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{304640} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{304640} = \mathbf{Pl}(12, 0, 0, 3, 1, 0)_{3243} \\
\ell_{934} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{778368} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{778368} = \mathbf{Pl}(15, 0, 0, 3, 1, 0)_{3246} \\
\ell_{935} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{474336} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{474336} = \mathbf{Pl}(10, 0, 0, 3, 1, 0)_{3241} \\
\ell_{936} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{406016} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{406016} = \mathbf{Pl}(9, 0, 0, 3, 1, 0)_{3240} \\
\ell_{937} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{744672} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{744672} = \mathbf{Pl}(24, 0, 0, 3, 1, 0)_{3255} \\
\ell_{938} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{136288} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{136288} = \mathbf{Pl}(27, 0, 0, 3, 1, 0)_{3258} \\
\ell_{939} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{846240} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{846240} = \mathbf{Pl}(30, 0, 0, 3, 1, 0)_{3261} \\
\ell_{940} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{541792} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{541792} = \mathbf{Pl}(29, 0, 0, 3, 1, 0)_{3260} \\
\ell_{941} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{237728} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{237728} = \mathbf{Pl}(20, 0, 0, 3, 1, 0)_{3251} \\
\ell_{942} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{507520} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{507520} = \mathbf{Pl}(23, 0, 0, 3, 1, 0)_{3254} \\
\ell_{943} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{203008} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{203008} = \mathbf{Pl}(18, 0, 0, 3, 1, 0)_{3249} \\
\ell_{944} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{440480} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{440480} = \mathbf{Pl}(17, 0, 0, 3, 1, 0)_{3248} \\
\ell_{945} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{372896} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{372896} = \mathbf{Pl}(21, 0, 0, 3, 1, 0)_{3252}
\end{aligned}$$

$$\begin{aligned}
\ell_{946} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{812032} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{812032} = \mathbf{Pl}(22, 0, 0, 3, 1, 0)_{3253} \\
\ell_{947} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{68576} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{68576} = \mathbf{Pl}(19, 0, 0, 3, 1, 0)_{3250} \\
\ell_{948} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{981248} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{981248} = \mathbf{Pl}(16, 0, 0, 3, 1, 0)_{3247} \\
\ell_{949} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{1015040} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{1015040} = \mathbf{Pl}(25, 0, 0, 3, 1, 0)_{3256} \\
\ell_{950} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{880096} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{880096} = \mathbf{Pl}(26, 0, 0, 3, 1, 0)_{3257} \\
\ell_{951} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{271456} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{271456} = \mathbf{Pl}(31, 0, 0, 3, 1, 0)_{3262} \\
\ell_{952} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{169216} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{169216} = \mathbf{Pl}(28, 0, 0, 3, 1, 0)_{3259} \\
\ell_{953} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{575488} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{575488} = \mathbf{Pl}(13, 0, 0, 3, 1, 0)_{3244} \\
\ell_{954} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{338432} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{338432} = \mathbf{Pl}(14, 0, 0, 3, 1, 0)_{3245} \\
\ell_{955} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{710816} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{710816} = \mathbf{Pl}(11, 0, 0, 3, 1, 0)_{3242} \\
\ell_{956} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{1049248} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{1049248} = \mathbf{Pl}(8, 0, 0, 3, 1, 0)_{3239} \\
\ell_{957} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{101504} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{101504} = \mathbf{Pl}(1, 0, 0, 3, 1, 0)_{3232} \\
\ell_{958} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{643232} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{643232} = \mathbf{Pl}(2, 0, 0, 3, 1, 0)_{3233} \\
\ell_{959} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{676864} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{676864} = \mathbf{Pl}(7, 0, 0, 3, 1, 0)_{3238} \\
\ell_{960} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{913536} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{913536} = \mathbf{Pl}(4, 0, 0, 3, 1, 0)_{3235} \\
\ell_{961} &= \begin{bmatrix} 1 & \eta^{17} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{21139} = \begin{bmatrix} 1 & 19 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{21139} = \mathbf{Pl}(0, 0, 0, 19, 1, 0)_{4239} \\
\ell_{962} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{34752} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{34752} = \mathbf{Pl}(19, 0, 0, 19, 1, 0)_{4258} \\
\ell_{963} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{609728} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{609728} = \mathbf{Pl}(3, 0, 0, 19, 1, 0)_{4242} \\
\ell_{964} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{947424} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{947424} = \mathbf{Pl}(16, 0, 0, 19, 1, 0)_{4255} \\
\ell_{965} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{304864} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{304864} = \mathbf{Pl}(6, 0, 0, 19, 1, 0)_{4245} \\
\ell_{966} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{778784} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{778784} = \mathbf{Pl}(21, 0, 0, 19, 1, 0)_{4260}
\end{aligned}$$

$$\begin{aligned}
\ell_{967} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{474272} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{474272} = \mathbf{Pl}(5, 0, 0, 19, 1, 0)_{4244} \\
\ell_{968} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{406144} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{406144} = \mathbf{Pl}(22, 0, 0, 19, 1, 0)_{4261} \\
\ell_{969} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{744352} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{744352} = \mathbf{Pl}(12, 0, 0, 19, 1, 0)_{4251} \\
\ell_{970} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{136160} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{136160} = \mathbf{Pl}(31, 0, 0, 19, 1, 0)_{4270} \\
\ell_{971} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{846016} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{846016} = \mathbf{Pl}(15, 0, 0, 19, 1, 0)_{4254} \\
\ell_{972} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{541280} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{541280} = \mathbf{Pl}(28, 0, 0, 19, 1, 0)_{4267} \\
\ell_{973} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{237568} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{237568} = \mathbf{Pl}(10, 0, 0, 19, 1, 0)_{4249} \\
\ell_{974} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{507680} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{507680} = \mathbf{Pl}(25, 0, 0, 19, 1, 0)_{4264} \\
\ell_{975} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{203072} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{203072} = \mathbf{Pl}(9, 0, 0, 19, 1, 0)_{4248} \\
\ell_{976} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{440384} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{440384} = \mathbf{Pl}(26, 0, 0, 19, 1, 0)_{4265} \\
\ell_{977} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{372608} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{372608} = \mathbf{Pl}(24, 0, 0, 19, 1, 0)_{4263} \\
\ell_{978} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{812288} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{812288} = \mathbf{Pl}(11, 0, 0, 19, 1, 0)_{4250} \\
\ell_{979} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{68640} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{68640} = \mathbf{Pl}(27, 0, 0, 19, 1, 0)_{4266} \\
\ell_{980} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{981600} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{981600} = \mathbf{Pl}(8, 0, 0, 19, 1, 0)_{4247} \\
\ell_{981} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{1015360} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{1015360} = \mathbf{Pl}(30, 0, 0, 19, 1, 0)_{4269} \\
\ell_{982} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{879904} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{879904} = \mathbf{Pl}(13, 0, 0, 19, 1, 0)_{4252} \\
\ell_{983} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{271200} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{271200} = \mathbf{Pl}(29, 0, 0, 19, 1, 0)_{4268} \\
\ell_{984} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{169312} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{169312} = \mathbf{Pl}(14, 0, 0, 19, 1, 0)_{4253} \\
\ell_{985} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{575968} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{575968} = \mathbf{Pl}(20, 0, 0, 19, 1, 0)_{4259} \\
\ell_{986} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{338624} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{338624} = \mathbf{Pl}(7, 0, 0, 19, 1, 0)_{4246} \\
\ell_{987} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{710464} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{710464} = \mathbf{Pl}(23, 0, 0, 19, 1, 0)_{4262}
\end{aligned}$$



$$\begin{aligned}
\ell_{988} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{1048832} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{1048832} = \mathbf{Pl}(4, 0, 0, 19, 1, 0)_{4243} \\
\ell_{989} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{101536} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{101536} = \mathbf{Pl}(18, 0, 0, 19, 1, 0)_{4257} \\
\ell_{990} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{642688} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{642688} = \mathbf{Pl}(1, 0, 0, 19, 1, 0)_{4240} \\
\ell_{991} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{677248} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{677248} = \mathbf{Pl}(17, 0, 0, 19, 1, 0)_{4256} \\
\ell_{992} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{913824} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{913824} = \mathbf{Pl}(2, 0, 0, 19, 1, 0)_{4241} \\
\ell_{993} &= \begin{bmatrix} 1 & \eta^7 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{22196} = \begin{bmatrix} 1 & 20 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{22196} = \mathbf{Pl}(0, 0, 0, 20, 1, 0)_{4302} \\
\ell_{994} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{34784} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{34784} = \mathbf{Pl}(20, 0, 0, 20, 1, 0)_{4322} \\
\ell_{995} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{609312} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{609312} = \mathbf{Pl}(13, 0, 0, 20, 1, 0)_{4315} \\
\ell_{996} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{947392} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{947392} = \mathbf{Pl}(25, 0, 0, 20, 1, 0)_{4327} \\
\ell_{997} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{305088} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{305088} = \mathbf{Pl}(26, 0, 0, 20, 1, 0)_{4328} \\
\ell_{998} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{778144} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{778144} = \mathbf{Pl}(14, 0, 0, 20, 1, 0)_{4316} \\
\ell_{999} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{473696} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{473696} = \mathbf{Pl}(23, 0, 0, 20, 1, 0)_{4325} \\
\ell_{1000} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{406784} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{406784} = \mathbf{Pl}(3, 0, 0, 20, 1, 0)_{4305} \\
\ell_{1001} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{744896} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{744896} = \mathbf{Pl}(17, 0, 0, 20, 1, 0)_{4319} \\
\ell_{1002} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{136032} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{136032} = \mathbf{Pl}(5, 0, 0, 20, 1, 0)_{4307} \\
\ell_{1003} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{845696} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{845696} = \mathbf{Pl}(28, 0, 0, 20, 1, 0)_{4330} \\
\ell_{1004} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{541888} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{541888} = \mathbf{Pl}(8, 0, 0, 20, 1, 0)_{4310} \\
\ell_{1005} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{237280} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{237280} = \mathbf{Pl}(11, 0, 0, 20, 1, 0)_{4313} \\
\ell_{1006} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{508224} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{508224} = \mathbf{Pl}(31, 0, 0, 20, 1, 0)_{4333} \\
\ell_{1007} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{203392} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{203392} = \mathbf{Pl}(6, 0, 0, 20, 1, 0)_{4308} \\
\ell_{1008} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta \end{bmatrix}_{439776} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{439776} = \mathbf{Pl}(18, 0, 0, 20, 1, 0)_{4320}
\end{aligned}$$

$$\begin{aligned}
\ell_{1009} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{372448} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{372448} = \mathbf{PI}(7, 0, 0, 20, 1, 0)_{4309} \\
\ell_{1010} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{812704} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{812704} = \mathbf{PI}(19, 0, 0, 20, 1, 0)_{4321} \\
\ell_{1011} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{68448} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{68448} = \mathbf{PI}(10, 0, 0, 20, 1, 0)_{4312} \\
\ell_{1012} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{981536} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{981536} = \mathbf{PI}(30, 0, 0, 20, 1, 0)_{4332} \\
\ell_{1013} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{1015328} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{1015328} = \mathbf{PI}(29, 0, 0, 20, 1, 0)_{4331} \\
\ell_{1014} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{879552} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{879552} = \mathbf{PI}(9, 0, 0, 20, 1, 0)_{4311} \\
\ell_{1015} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{270944} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{270944} = \mathbf{PI}(16, 0, 0, 20, 1, 0)_{4318} \\
\ell_{1016} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{169408} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{169408} = \mathbf{PI}(4, 0, 0, 20, 1, 0)_{4306} \\
\ell_{1017} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{575264} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{575264} = \mathbf{PI}(22, 0, 0, 20, 1, 0)_{4324} \\
\ell_{1018} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{338816} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{338816} = \mathbf{PI}(2, 0, 0, 20, 1, 0)_{4304} \\
\ell_{1019} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{711296} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{711296} = \mathbf{PI}(27, 0, 0, 20, 1, 0)_{4329} \\
\ell_{1020} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{1048960} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{1048960} = \mathbf{PI}(15, 0, 0, 20, 1, 0)_{4317} \\
\ell_{1021} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{101696} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{101696} = \mathbf{PI}(12, 0, 0, 20, 1, 0)_{4314} \\
\ell_{1022} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{643200} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{643200} = \mathbf{PI}(24, 0, 0, 20, 1, 0)_{4326} \\
\ell_{1023} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{676512} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{676512} = \mathbf{PI}(1, 0, 0, 20, 1, 0)_{4303} \\
\ell_{1024} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{914080} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{914080} = \mathbf{PI}(21, 0, 0, 20, 1, 0)_{4323} \\
\ell_{1025} &= \begin{bmatrix} 1 & \eta^{16} & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{29595} = \begin{bmatrix} 1 & 27 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{29595} = \mathbf{PI}(0, 0, 0, 27, 1, 0)_{4743} \\
\ell_{1026} &= \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & \eta^{15} \end{bmatrix}_{34816} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 31 \end{bmatrix}_{34816} = \mathbf{PI}(27, 0, 0, 27, 1, 0)_{4770} \\
\ell_{1027} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{30} \\ 0 & 1 & 0 & \eta^{14} \end{bmatrix}_{609760} = \begin{bmatrix} 1 & 0 & 0 & 18 \\ 0 & 1 & 0 & 29 \end{bmatrix}_{609760} = \mathbf{PI}(19, 0, 0, 27, 1, 0)_{4762} \\
\ell_{1028} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{13} \\ 0 & 1 & 0 & \eta^{28} \end{bmatrix}_{947776} = \begin{bmatrix} 1 & 0 & 0 & 28 \\ 0 & 1 & 0 & 22 \end{bmatrix}_{947776} = \mathbf{PI}(8, 0, 0, 27, 1, 0)_{4751} \\
\ell_{1029} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{29} \\ 0 & 1 & 0 & \eta^{13} \end{bmatrix}_{305312} = \begin{bmatrix} 1 & 0 & 0 & 9 \\ 0 & 1 & 0 & 28 \end{bmatrix}_{305312} = \mathbf{PI}(3, 0, 0, 27, 1, 0)_{4746}
\end{aligned}$$

$$\begin{aligned}
\ell_{1030} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{26} \\ 0 & 1 & 0 & \eta^{10} \end{bmatrix}_{778496} = \begin{bmatrix} 1 & 0 & 0 & 23 \\ 0 & 1 & 0 & 17 \end{bmatrix}_{778496} = \mathbf{PI}(24, 0, 0, 27, 1, 0)_{4767} \\
\ell_{1031} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{12} \\ 0 & 1 & 0 & \eta^{27} \end{bmatrix}_{473888} = \begin{bmatrix} 1 & 0 & 0 & 14 \\ 0 & 1 & 0 & 11 \end{bmatrix}_{473888} = \mathbf{PI}(16, 0, 0, 27, 1, 0)_{4759} \\
\ell_{1032} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{20} \\ 0 & 1 & 0 & \eta^4 \end{bmatrix}_{406400} = \begin{bmatrix} 1 & 0 & 0 & 12 \\ 0 & 1 & 0 & 16 \end{bmatrix}_{406400} = \mathbf{PI}(11, 0, 0, 27, 1, 0)_{4754} \\
\ell_{1033} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{28} \\ 0 & 1 & 0 & \eta^{12} \end{bmatrix}_{744576} = \begin{bmatrix} 1 & 0 & 0 & 22 \\ 0 & 1 & 0 & 14 \end{bmatrix}_{744576} = \mathbf{PI}(6, 0, 0, 27, 1, 0)_{4749} \\
\ell_{1034} &= \begin{bmatrix} 1 & 0 & 0 & \eta^2 \\ 0 & 1 & 0 & \eta^{17} \end{bmatrix}_{135904} = \begin{bmatrix} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 19 \end{bmatrix}_{135904} = \mathbf{PI}(29, 0, 0, 27, 1, 0)_{4772} \\
\ell_{1035} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{25} \\ 0 & 1 & 0 & \eta^9 \end{bmatrix}_{846432} = \begin{bmatrix} 1 & 0 & 0 & 25 \\ 0 & 1 & 0 & 26 \end{bmatrix}_{846432} = \mathbf{PI}(21, 0, 0, 27, 1, 0)_{4764} \\
\ell_{1036} &= \begin{bmatrix} 1 & 0 & 0 & \eta^4 \\ 0 & 1 & 0 & \eta^{19} \end{bmatrix}_{541376} = \begin{bmatrix} 1 & 0 & 0 & 16 \\ 0 & 1 & 0 & 6 \end{bmatrix}_{541376} = \mathbf{PI}(14, 0, 0, 27, 1, 0)_{4757} \\
\ell_{1037} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{11} \\ 0 & 1 & 0 & \eta^{26} \end{bmatrix}_{237504} = \begin{bmatrix} 1 & 0 & 0 & 7 \\ 0 & 1 & 0 & 23 \end{bmatrix}_{237504} = \mathbf{PI}(5, 0, 0, 27, 1, 0)_{4748} \\
\ell_{1038} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{23} \\ 0 & 1 & 0 & \eta^7 \end{bmatrix}_{508000} = \begin{bmatrix} 1 & 0 & 0 & 15 \\ 0 & 1 & 0 & 20 \end{bmatrix}_{508000} = \mathbf{PI}(30, 0, 0, 27, 1, 0)_{4773} \\
\ell_{1039} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{19} \\ 0 & 1 & 0 & \eta^3 \end{bmatrix}_{203200} = \begin{bmatrix} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 8 \end{bmatrix}_{203200} = \mathbf{PI}(22, 0, 0, 27, 1, 0)_{4765} \\
\ell_{1040} &= \begin{bmatrix} 1 & 0 & 0 & \eta^8 \\ 0 & 1 & 0 & \eta^{23} \end{bmatrix}_{440192} = \begin{bmatrix} 1 & 0 & 0 & 13 \\ 0 & 1 & 0 & 15 \end{bmatrix}_{440192} = \mathbf{PI}(13, 0, 0, 27, 1, 0)_{4756} \\
\ell_{1041} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{27} \\ 0 & 1 & 0 & \eta^{11} \end{bmatrix}_{372288} = \begin{bmatrix} 1 & 0 & 0 & 11 \\ 0 & 1 & 0 & 7 \end{bmatrix}_{372288} = \mathbf{PI}(12, 0, 0, 27, 1, 0)_{4755} \\
\ell_{1042} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{21} \\ 0 & 1 & 0 & \eta^5 \end{bmatrix}_{811936} = \begin{bmatrix} 1 & 0 & 0 & 24 \\ 0 & 1 & 0 & 5 \end{bmatrix}_{811936} = \mathbf{PI}(23, 0, 0, 27, 1, 0)_{4766} \\
\ell_{1043} &= \begin{bmatrix} 1 & 0 & 0 & \eta \\ 0 & 1 & 0 & \eta^{16} \end{bmatrix}_{68512} = \begin{bmatrix} 1 & 0 & 0 & 2 \\ 0 & 1 & 0 & 27 \end{bmatrix}_{68512} = \mathbf{PI}(31, 0, 0, 27, 1, 0)_{4774} \\
\ell_{1044} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{14} \\ 0 & 1 & 0 & \eta^{29} \end{bmatrix}_{981184} = \begin{bmatrix} 1 & 0 & 0 & 29 \\ 0 & 1 & 0 & 9 \end{bmatrix}_{981184} = \mathbf{PI}(4, 0, 0, 27, 1, 0)_{4747} \\
\ell_{1045} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{24} \\ 0 & 1 & 0 & \eta^8 \end{bmatrix}_{1015136} = \begin{bmatrix} 1 & 0 & 0 & 30 \\ 0 & 1 & 0 & 13 \end{bmatrix}_{1015136} = \mathbf{PI}(15, 0, 0, 27, 1, 0)_{4758} \\
\ell_{1046} &= \begin{bmatrix} 1 & 0 & 0 & \eta^9 \\ 0 & 1 & 0 & \eta^{24} \end{bmatrix}_{880384} = \begin{bmatrix} 1 & 0 & 0 & 26 \\ 0 & 1 & 0 & 30 \end{bmatrix}_{880384} = \mathbf{PI}(20, 0, 0, 27, 1, 0)_{4763} \\
\ell_{1047} &= \begin{bmatrix} 1 & 0 & 0 & \eta^3 \\ 0 & 1 & 0 & \eta^{18} \end{bmatrix}_{270688} = \begin{bmatrix} 1 & 0 & 0 & 8 \\ 0 & 1 & 0 & 3 \end{bmatrix}_{270688} = \mathbf{PI}(28, 0, 0, 27, 1, 0)_{4771} \\
\ell_{1048} &= \begin{bmatrix} 1 & 0 & 0 & \eta^5 \\ 0 & 1 & 0 & \eta^{20} \end{bmatrix}_{169504} = \begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 12 \end{bmatrix}_{169504} = \mathbf{PI}(7, 0, 0, 27, 1, 0)_{4750} \\
\ell_{1049} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{10} \\ 0 & 1 & 0 & \eta^{25} \end{bmatrix}_{575808} = \begin{bmatrix} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & 25 \end{bmatrix}_{575808} = \mathbf{PI}(10, 0, 0, 27, 1, 0)_{4753} \\
\ell_{1050} &= \begin{bmatrix} 1 & 0 & 0 & \eta^6 \\ 0 & 1 & 0 & \eta^{21} \end{bmatrix}_{339008} = \begin{bmatrix} 1 & 0 & 0 & 10 \\ 0 & 1 & 0 & 24 \end{bmatrix}_{339008} = \mathbf{PI}(17, 0, 0, 27, 1, 0)_{4760}
\end{aligned}$$

$$\begin{aligned}
\ell_{1051} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{22} \\ 0 & 1 & 0 & \eta^6 \end{bmatrix}_{710624} = \begin{bmatrix} 1 & 0 & 0 & 21 \\ 0 & 1 & 0 & 10 \end{bmatrix}_{710624} = \mathbf{Pl}(25, 0, 0, 27, 1, 0)_{4768} \\
\ell_{1052} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{15} \\ 0 & 1 & 0 & \eta^{30} \end{bmatrix}_{1049120} = \begin{bmatrix} 1 & 0 & 0 & 31 \\ 0 & 1 & 0 & 18 \end{bmatrix}_{1049120} = \mathbf{Pl}(2, 0, 0, 27, 1, 0)_{4745} \\
\ell_{1053} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{18} \\ 0 & 1 & 0 & \eta^2 \end{bmatrix}_{101600} = \begin{bmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & 4 \end{bmatrix}_{101600} = \mathbf{Pl}(9, 0, 0, 27, 1, 0)_{4752} \\
\ell_{1054} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{17} \\ 0 & 1 & 0 & \eta \end{bmatrix}_{642720} = \begin{bmatrix} 1 & 0 & 0 & 19 \\ 0 & 1 & 0 & 2 \end{bmatrix}_{642720} = \mathbf{Pl}(18, 0, 0, 27, 1, 0)_{4761} \\
\ell_{1055} &= \begin{bmatrix} 1 & 0 & 0 & \eta^7 \\ 0 & 1 & 0 & \eta^{22} \end{bmatrix}_{677152} = \begin{bmatrix} 1 & 0 & 0 & 20 \\ 0 & 1 & 0 & 21 \end{bmatrix}_{677152} = \mathbf{Pl}(26, 0, 0, 27, 1, 0)_{4769} \\
\ell_{1056} &= \begin{bmatrix} 1 & 0 & 0 & \eta^{16} \\ 0 & 1 & 0 & 1 \end{bmatrix}_{913280} = \begin{bmatrix} 1 & 0 & 0 & 27 \\ 0 & 1 & 0 & 1 \end{bmatrix}_{913280} = \mathbf{Pl}(1, 0, 0, 27, 1, 0)_{4744} \\
\ell_{1057} &= \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{34880} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{34880} = \mathbf{Pl}(0, 1, 0, 0, 1, 0)_{1121} \\
\ell_{1058} &= \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082433} = \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082433} = \mathbf{Pl}(0, 1, 0, 1, 0, 0)_{97} \\
\ell_{1059} &= \begin{bmatrix} 1 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{35937} = \begin{bmatrix} 1 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{35937} = \mathbf{Pl}(0, 1, 0, 1, 1, 0)_{3137} \\
\ell_{1060} &= \begin{bmatrix} 1 & \eta^{11} & \eta^{24} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1023175} = \begin{bmatrix} 1 & 7 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1023175} = \mathbf{Pl}(0, 30, 0, 7, 1, 0)_{3544} \\
\ell_{1061} &= \begin{bmatrix} 1 & \eta^{23} & \eta^5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{186031} = \begin{bmatrix} 1 & 15 & 5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{186031} = \mathbf{Pl}(0, 5, 0, 15, 1, 0)_{4023} \\
\ell_{1062} &= \begin{bmatrix} 1 & \eta^{15} & \eta^{10} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{608831} = \begin{bmatrix} 1 & 31 & 17 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{608831} = \mathbf{Pl}(0, 17, 0, 31, 1, 0)_{5043} \\
\ell_{1063} &= \begin{bmatrix} 1 & \eta^{22} & \eta^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{665909} = \begin{bmatrix} 1 & 21 & 19 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{665909} = \mathbf{Pl}(0, 19, 0, 21, 1, 0)_{4415} \\
\ell_{1064} &= \begin{bmatrix} 1 & \eta^{10} & \eta^{22} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{729329} = \begin{bmatrix} 1 & 17 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{729329} = \mathbf{Pl}(0, 21, 0, 17, 1, 0)_{4165} \\
\ell_{1065} &= \begin{bmatrix} 1 & \eta^6 & \eta^{18} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{113098} = \begin{bmatrix} 1 & 10 & 3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{113098} = \mathbf{Pl}(0, 3, 0, 10, 1, 0)_{3706} \\
\ell_{1066} &= \begin{bmatrix} 1 & \eta & \eta^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{814946} = \begin{bmatrix} 1 & 2 & 24 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{814946} = \mathbf{Pl}(0, 24, 0, 2, 1, 0)_{3223} \\
\ell_{1067} &= \begin{bmatrix} 1 & \eta^{14} & \eta^3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{302301} = \begin{bmatrix} 1 & 29 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{302301} = \mathbf{Pl}(0, 8, 0, 29, 1, 0)_{4908} \\
\ell_{1068} &= \begin{bmatrix} 1 & \eta^{29} & \eta^9 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{889993} = \begin{bmatrix} 1 & 9 & 26 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{889993} = \mathbf{Pl}(0, 26, 0, 9, 1, 0)_{3666} \\
\ell_{1069} &= \begin{bmatrix} 1 & \eta^{26} & \eta^6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{363607} = \begin{bmatrix} 1 & 23 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{363607} = \mathbf{Pl}(0, 10, 0, 23, 1, 0)_{4532} \\
\ell_{1070} &= \begin{bmatrix} 1 & \eta^{30} & \eta^{20} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{425970} = \begin{bmatrix} 1 & 18 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{425970} = \mathbf{Pl}(0, 12, 0, 18, 1, 0)_{4219} \\
\ell_{1071} &= \begin{bmatrix} 1 & \eta^{13} & \eta^3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{301244} = \begin{bmatrix} 1 & 28 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{301244} = \mathbf{Pl}(0, 8, 0, 28, 1, 0)_{4845}
\end{aligned}$$

$$\begin{aligned}
\ell_{1072} &= \begin{bmatrix} 1 & \eta^{20} & \eta^{13} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{960812} = \begin{bmatrix} 1 & 12 & 28 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{960812} = \mathbf{Pl}(0, 28, 0, 12, 1, 0)_{3857} \\
\ell_{1073} &= \begin{bmatrix} 1 & \eta^{12} & \eta^5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{184974} = \begin{bmatrix} 1 & 14 & 5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{184974} = \mathbf{Pl}(0, 5, 0, 14, 1, 0)_{3960} \\
\ell_{1074} &= \begin{bmatrix} 1 & \eta^2 & \eta^{11} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{242052} = \begin{bmatrix} 1 & 4 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{242052} = \mathbf{Pl}(0, 7, 0, 4, 1, 0)_{3332} \\
\ell_{1075} &= \begin{bmatrix} 1 & \eta^{28} & \eta^6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{362550} = \begin{bmatrix} 1 & 22 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{362550} = \mathbf{Pl}(0, 10, 0, 22, 1, 0)_{4469} \\
\ell_{1076} &= \begin{bmatrix} 1 & \eta^{17} & \eta^{20} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{427027} = \begin{bmatrix} 1 & 19 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{427027} = \mathbf{Pl}(0, 12, 0, 19, 1, 0)_{4282} \\
\ell_{1077} &= \begin{bmatrix} 1 & \eta^{18} & \eta^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{816003} = \begin{bmatrix} 1 & 3 & 24 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{816003} = \mathbf{Pl}(0, 24, 0, 3, 1, 0)_{3286} \\
\ell_{1078} &= \begin{bmatrix} 1 & \eta^8 & \eta^{13} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{961869} = \begin{bmatrix} 1 & 13 & 28 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{961869} = \mathbf{Pl}(0, 28, 0, 13, 1, 0)_{3920} \\
\ell_{1079} &= \begin{bmatrix} 1 & \eta^{19} & \eta^{24} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1022118} = \begin{bmatrix} 1 & 6 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1022118} = \mathbf{Pl}(0, 30, 0, 6, 1, 0)_{3481} \\
\ell_{1080} &= \begin{bmatrix} 1 & \eta^{16} & \eta^{26} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{807547} = \begin{bmatrix} 1 & 27 & 23 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{807547} = \mathbf{Pl}(0, 23, 0, 27, 1, 0)_{4797} \\
\ell_{1081} &= \begin{bmatrix} 1 & \eta^7 & \eta^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{664852} = \begin{bmatrix} 1 & 20 & 19 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{664852} = \mathbf{Pl}(0, 19, 0, 20, 1, 0)_{4352} \\
\ell_{1082} &= \begin{bmatrix} 1 & \eta^5 & \eta^{11} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{243109} = \begin{bmatrix} 1 & 5 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{243109} = \mathbf{Pl}(0, 7, 0, 5, 1, 0)_{3395} \\
\ell_{1083} &= \begin{bmatrix} 1 & \eta^3 & \eta^9 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{888936} = \begin{bmatrix} 1 & 8 & 26 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{888936} = \mathbf{Pl}(0, 26, 0, 8, 1, 0)_{3603} \\
\ell_{1084} &= \begin{bmatrix} 1 & \eta^{21} & \eta^{12} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{499960} = \begin{bmatrix} 1 & 24 & 14 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{499960} = \mathbf{Pl}(0, 14, 0, 24, 1, 0)_{4599} \\
\ell_{1085} &= \begin{bmatrix} 1 & \eta^{27} & \eta^{18} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{114155} = \begin{bmatrix} 1 & 11 & 3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{114155} = \mathbf{Pl}(0, 3, 0, 11, 1, 0)_{3769} \\
\ell_{1086} &= \begin{bmatrix} 1 & \eta^{25} & \eta^{12} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{501017} = \begin{bmatrix} 1 & 25 & 14 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{501017} = \mathbf{Pl}(0, 14, 0, 25, 1, 0)_{4662} \\
\ell_{1087} &= \begin{bmatrix} 1 & \eta^4 & \eta^{22} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{728272} = \begin{bmatrix} 1 & 16 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{728272} = \mathbf{Pl}(0, 21, 0, 16, 1, 0)_{4102} \\
\ell_{1088} &= \begin{bmatrix} 1 & \eta^9 & \eta^{26} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{806490} = \begin{bmatrix} 1 & 26 & 23 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{806490} = \mathbf{Pl}(0, 23, 0, 26, 1, 0)_{4734} \\
\ell_{1089} &= \begin{bmatrix} 1 & \eta^{24} & \eta^{10} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{607774} = \begin{bmatrix} 1 & 30 & 17 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{607774} = \mathbf{Pl}(0, 17, 0, 30, 1, 0)_{4980}
\end{aligned}$$

Rank of lines: ( 0, 1056, 32, 576, 896, 288, 736, 448, 384, 704, 128, 800, 512, 224, 480, 192, 416, 352, 768, 64, 928, 960, 832, 256, 160, 544, 320, 672, 992, 96, 608, 640, 864, 1082400, 33824, 608832, 947072, 304416, 777952, 473536, 405888, 744128, 135296, 845600, 541184, 236768, 507360, 202944, 439712, 372064, ...728272, 806490, 607774 )

Rank of points on Klein quadric: ( 0, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, ...4102, 4734, 4980 )

### **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 1056 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**

Too many lines to print.

Neighbor sets in the line intersection graph:

Too many lines to print.

The surface has 2113 points:

Too many to print.