

# Rank-21 over GF(32)

January 15, 2021

## The equation

The equation of the surface is :

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

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

The point rank of the equation over GF(32) is 21

## General information

|                            |             |
|----------------------------|-------------|
| Number of lines            | 1057        |
| Number of points           | 1057        |
| Number of singular points  | 33          |
| Number of Eckardt points   | 0           |
| Number of double points    | 0           |
| Number of single points    | 0           |
| Number of points off lines | 0           |
| Number of Hesse planes     | 0           |
| Number of axes             | 0           |
| Type of points on lines    | $33^{1057}$ |
| Type of lines on points    | $33^{1057}$ |

## Singular Points

The surface has 33 singular points:

$$0 : P_2 = \mathbf{P}(0, 0, 1, 0) = \mathbf{P}(0, 0, 1, 0)$$

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

$$2 : P_{2082} = \mathbf{P}(0, 0, 1, 1) = \mathbf{P}(0, 0, 1, 1)$$

$$3 : P_{3105} = \mathbf{P}(0, 0, \eta, 1) = \mathbf{P}(0, 0, 2, 1)$$

$$4 : P_{4129} = \mathbf{P}(0, 0, \eta^{18}, 1) = \mathbf{P}(0, 0, 3, 1)$$

$$5 : P_{5153} = \mathbf{P}(0, 0, \eta^2, 1) = \mathbf{P}(0, 0, 4, 1)$$

$$6 : P_{6177} = \mathbf{P}(0, 0, \eta^5, 1) = \mathbf{P}(0, 0, 5, 1)$$

$$7 : P_{7201} = \mathbf{P}(0, 0, \eta^{19}, 1) = \mathbf{P}(0, 0, 6, 1)$$

$$8 : P_{8225} = \mathbf{P}(0, 0, \eta^{11}, 1) = \mathbf{P}(0, 0, 7, 1)$$

$$9 : P_{9249} = \mathbf{P}(0, 0, \eta^3, 1) = \mathbf{P}(0, 0, 8, 1)$$

$$10 : P_{10273} = \mathbf{P}(0, 0, \eta^{29}, 1) = \mathbf{P}(0, 0, 9, 1)$$

$$11 : P_{11297} = \mathbf{P}(0, 0, \eta^6, 1) = \mathbf{P}(0, 0, 10, 1)$$

$$12 : P_{12321} = \mathbf{P}(0, 0, \eta^{27}, 1) = \mathbf{P}(0, 0, 11, 1)$$

$$13 : P_{13345} = \mathbf{P}(0, 0, \eta^{20}, 1) = \mathbf{P}(0, 0, 12, 1)$$

$$14 : P_{14369} = \mathbf{P}(0, 0, \eta^8, 1) = \mathbf{P}(0, 0, 13, 1)$$

$$15 : P_{15393} = \mathbf{P}(0, 0, \eta^{12}, 1) = \mathbf{P}(0, 0, 14, 1)$$

$$16 : P_{16417} = \mathbf{P}(0, 0, \eta^{23}, 1) = \mathbf{P}(0, 0, 15, 1)$$

$$17 : P_{17441} = \mathbf{P}(0, 0, \eta^4, 1) = \mathbf{P}(0, 0, 16, 1)$$

$$\begin{aligned}
18 : P_{18465} &= \mathbf{P}(0, 0, \eta^{10}, 1) = \mathbf{P}(0, 0, 17, 1) \\
19 : P_{19489} &= \mathbf{P}(0, 0, \eta^{30}, 1) = \mathbf{P}(0, 0, 18, 1) \\
20 : P_{20513} &= \mathbf{P}(0, 0, \eta^{17}, 1) = \mathbf{P}(0, 0, 19, 1) \\
21 : P_{21537} &= \mathbf{P}(0, 0, \eta^7, 1) = \mathbf{P}(0, 0, 20, 1) \\
22 : P_{22561} &= \mathbf{P}(0, 0, \eta^{22}, 1) = \mathbf{P}(0, 0, 21, 1) \\
23 : P_{23585} &= \mathbf{P}(0, 0, \eta^{28}, 1) = \mathbf{P}(0, 0, 22, 1) \\
24 : P_{24609} &= \mathbf{P}(0, 0, \eta^{26}, 1) = \mathbf{P}(0, 0, 23, 1) \\
25 : P_{25633} &= \mathbf{P}(0, 0, \eta^{21}, 1) = \mathbf{P}(0, 0, 24, 1)
\end{aligned}$$

$$\begin{aligned}
26 : P_{26657} &= \mathbf{P}(0, 0, \eta^{25}, 1) = \mathbf{P}(0, 0, 25, 1) \\
27 : P_{27681} &= \mathbf{P}(0, 0, \eta^9, 1) = \mathbf{P}(0, 0, 26, 1) \\
28 : P_{28705} &= \mathbf{P}(0, 0, \eta^{16}, 1) = \mathbf{P}(0, 0, 27, 1) \\
29 : P_{29729} &= \mathbf{P}(0, 0, \eta^{13}, 1) = \mathbf{P}(0, 0, 28, 1) \\
30 : P_{30753} &= \mathbf{P}(0, 0, \eta^{14}, 1) = \mathbf{P}(0, 0, 29, 1) \\
31 : P_{31777} &= \mathbf{P}(0, 0, \eta^{24}, 1) = \mathbf{P}(0, 0, 30, 1) \\
32 : P_{32801} &= \mathbf{P}(0, 0, \eta^{15}, 1) = \mathbf{P}(0, 0, 31, 1)
\end{aligned}$$

## The 1057 Lines

The lines and their Pluecker coordinates are:

$$\begin{aligned}
\ell_0 &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{2081} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{2081} = \mathbf{Pl}(0, 0, 1, 0, 0, 1)_{34912} \\
\ell_1 &= \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083424} = \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083424} = \mathbf{Pl}(0, 1, 0, 0, 0, 0)_1 \\
\ell_2 &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{35905} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{35905} = \mathbf{Pl}(0, 1, 1, 0, 0, 1)_{34944} \\
\ell_3 &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{610913} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{610913} = \mathbf{Pl}(0, 18, 1, 0, 0, 1)_{34961} \\
\ell_4 &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{949153} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{949153} = \mathbf{Pl}(0, 28, 1, 0, 0, 1)_{34971} \\
\ell_5 &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{306497} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{306497} = \mathbf{Pl}(0, 9, 1, 0, 0, 1)_{34952} \\
\ell_6 &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{780033} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{780033} = \mathbf{Pl}(0, 23, 1, 0, 0, 1)_{34966} \\
\ell_7 &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{475617} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{475617} = \mathbf{Pl}(0, 14, 1, 0, 0, 1)_{34957} \\
\ell_8 &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{407969} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{407969} = \mathbf{Pl}(0, 12, 1, 0, 0, 1)_{34955} \\
\ell_9 &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{746209} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{746209} = \mathbf{Pl}(0, 22, 1, 0, 0, 1)_{34965} \\
\ell_{10} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{137377} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{137377} = \mathbf{Pl}(0, 4, 1, 0, 0, 1)_{34947} \\
\ell_{11} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{847681} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{847681} = \mathbf{Pl}(0, 25, 1, 0, 0, 1)_{34968} \\
\ell_{12} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{543265} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{543265} = \mathbf{Pl}(0, 16, 1, 0, 0, 1)_{34959} \\
\ell_{13} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{238849} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{238849} = \mathbf{Pl}(0, 7, 1, 0, 0, 1)_{34950} \\
\ell_{14} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{509441} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{509441} = \mathbf{Pl}(0, 15, 1, 0, 0, 1)_{34958} \\
\ell_{15} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{205025} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{205025} = \mathbf{Pl}(0, 6, 1, 0, 0, 1)_{34949}
\end{aligned}$$

$$\begin{aligned}
\ell_{16} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{441793} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{441793} = \mathbf{Pl}(0, 13, 1, 0, 0, 1)_{34956} \\
\ell_{17} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{374145} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{374145} = \mathbf{Pl}(0, 11, 1, 0, 0, 1)_{34954} \\
\ell_{18} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{813857} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{813857} = \mathbf{Pl}(0, 24, 1, 0, 0, 1)_{34967} \\
\ell_{19} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & 0 \end{bmatrix}_{69729} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{69729} = \mathbf{Pl}(0, 2, 1, 0, 0, 1)_{34945} \\
\ell_{20} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{982977} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{982977} = \mathbf{Pl}(0, 29, 1, 0, 0, 1)_{34972} \\
\ell_{21} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1016801} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1016801} = \mathbf{Pl}(0, 30, 1, 0, 0, 1)_{34973} \\
\ell_{22} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{881505} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{881505} = \mathbf{Pl}(0, 26, 1, 0, 0, 1)_{34969} \\
\ell_{23} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{272673} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{272673} = \mathbf{Pl}(0, 8, 1, 0, 0, 1)_{34951} \\
\ell_{24} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{171201} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{171201} = \mathbf{Pl}(0, 5, 1, 0, 0, 1)_{34948} \\
\ell_{25} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{577089} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{577089} = \mathbf{Pl}(0, 17, 1, 0, 0, 1)_{34960} \\
\ell_{26} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{340321} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{340321} = \mathbf{Pl}(0, 10, 1, 0, 0, 1)_{34953} \\
\ell_{27} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{712385} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{712385} = \mathbf{Pl}(0, 21, 1, 0, 0, 1)_{34964} \\
\ell_{28} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1050625} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1050625} = \mathbf{Pl}(0, 31, 1, 0, 0, 1)_{34974} \\
\ell_{29} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{103553} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{103553} = \mathbf{Pl}(0, 3, 1, 0, 0, 1)_{34946} \\
\ell_{30} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{644737} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{644737} = \mathbf{Pl}(0, 19, 1, 0, 0, 1)_{34962} \\
\ell_{31} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{678561} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{678561} = \mathbf{Pl}(0, 20, 1, 0, 0, 1)_{34963} \\
\ell_{32} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{915329} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{915329} = \mathbf{Pl}(0, 27, 1, 0, 0, 1)_{34970} \\
\ell_{33} &= \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_{34} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{2082} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{2082} = \mathbf{Pl}(0, 0, 1, 1, 1, 1)_{70562} \\
\ell_{35} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{2099} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{2099} = \mathbf{Pl}(0, 0, 2, 18, 18, 1)_{627137} \\
\ell_{36} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{2109} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{2109} = \mathbf{Pl}(0, 0, 3, 28, 28, 1)_{954560}
\end{aligned}$$

$$\begin{aligned}
\ell_{37} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{2090} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{2090} = \mathbf{Pl}(0, 0, 4, 9, 9, 1)_{332639} \\
\ell_{38} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{2104} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{2104} = \mathbf{Pl}(0, 0, 5, 23, 23, 1)_{791006} \\
\ell_{39} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{2095} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{2095} = \mathbf{Pl}(0, 0, 6, 14, 14, 1)_{496445} \\
\ell_{40} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{2093} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{2093} = \mathbf{Pl}(0, 0, 7, 12, 12, 1)_{431036} \\
\ell_{41} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{2103} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{2103} = \mathbf{Pl}(0, 0, 8, 22, 22, 1)_{758459} \\
\ell_{42} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{2085} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{2085} = \mathbf{Pl}(0, 0, 9, 4, 4, 1)_{169274} \\
\ell_{43} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{2106} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{2106} = \mathbf{Pl}(0, 0, 10, 25, 25, 1)_{856793} \\
\ell_{44} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{2097} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{2097} = \mathbf{Pl}(0, 0, 11, 16, 16, 1)_{562232} \\
\ell_{45} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{2088} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{2088} = \mathbf{Pl}(0, 0, 12, 7, 7, 1)_{267671} \\
\ell_{46} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{2096} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{2096} = \mathbf{Pl}(0, 0, 13, 15, 15, 1)_{529622} \\
\ell_{47} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{2087} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{2087} = \mathbf{Pl}(0, 0, 14, 6, 6, 1)_{235061} \\
\ell_{48} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{2094} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{2094} = \mathbf{Pl}(0, 0, 15, 13, 13, 1)_{464276} \\
\ell_{49} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{2092} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{2092} = \mathbf{Pl}(0, 0, 16, 11, 11, 1)_{398867} \\
\ell_{50} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{2105} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{2105} = \mathbf{Pl}(0, 0, 17, 24, 24, 1)_{824498} \\
\ell_{51} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{2083} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{2083} = \mathbf{Pl}(0, 0, 18, 2, 2, 1)_{104369} \\
\ell_{52} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{2110} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{2110} = \mathbf{Pl}(0, 0, 19, 29, 29, 1)_{988304} \\
\ell_{53} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{2111} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{2111} = \mathbf{Pl}(0, 0, 20, 30, 30, 1)_{1021103} \\
\ell_{54} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{2107} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{2107} = \mathbf{Pl}(0, 0, 21, 26, 26, 1)_{890222} \\
\ell_{55} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{2089} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{2089} = \mathbf{Pl}(0, 0, 22, 8, 8, 1)_{301037} \\
\ell_{56} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{2086} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{2086} = \mathbf{Pl}(0, 0, 23, 5, 5, 1)_{202892} \\
\ell_{57} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{2098} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{2098} = \mathbf{Pl}(0, 0, 24, 17, 17, 1)_{595787}
\end{aligned}$$

$$\begin{aligned}
\ell_{58} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{2091} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{2091} = \mathbf{Pl}(0, 0, 25, 10, 10, 1)_{366698} \\
\ell_{59} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{2102} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{2102} = \mathbf{Pl}(0, 0, 26, 21, 21, 1)_{726857} \\
\ell_{60} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{2112} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{2112} = \mathbf{Pl}(0, 0, 27, 31, 31, 1)_{1054280} \\
\ell_{61} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{2084} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{2084} = \mathbf{Pl}(0, 0, 28, 3, 3, 1)_{137735} \\
\ell_{62} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{2100} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{2100} = \mathbf{Pl}(0, 0, 29, 19, 19, 1)_{661574} \\
\ell_{63} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{2101} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{2101} = \mathbf{Pl}(0, 0, 30, 20, 20, 1)_{694373} \\
\ell_{64} &= \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{2108} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{2108} = \mathbf{Pl}(0, 0, 31, 27, 27, 1)_{923588} \\
\ell_{65} &= \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_{66} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{35906} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{35906} = \mathbf{Pl}(0, 1, 1, 1, 1, 1)_{70594} \\
\ell_{67} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{610931} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{610931} = \mathbf{Pl}(0, 18, 2, 18, 18, 1)_{627186} \\
\ell_{68} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{949181} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{949181} = \mathbf{Pl}(0, 28, 3, 28, 28, 1)_{954619} \\
\ell_{69} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{306506} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{306506} = \mathbf{Pl}(0, 9, 4, 9, 9, 1)_{332679} \\
\ell_{70} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{780056} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{780056} = \mathbf{Pl}(0, 23, 5, 23, 23, 1)_{791060} \\
\ell_{71} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{475631} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{475631} = \mathbf{Pl}(0, 14, 6, 14, 14, 1)_{496490} \\
\ell_{72} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{407981} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{407981} = \mathbf{Pl}(0, 12, 7, 12, 12, 1)_{431079} \\
\ell_{73} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{746231} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{746231} = \mathbf{Pl}(0, 22, 8, 22, 22, 1)_{758512} \\
\ell_{74} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{137381} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{137381} = \mathbf{Pl}(0, 4, 9, 4, 4, 1)_{169309} \\
\ell_{75} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{847706} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{847706} = \mathbf{Pl}(0, 25, 10, 25, 25, 1)_{856849} \\
\ell_{76} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{543281} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{543281} = \mathbf{Pl}(0, 16, 11, 16, 16, 1)_{562279} \\
\ell_{77} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{238856} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{238856} = \mathbf{Pl}(0, 7, 12, 7, 7, 1)_{267709} \\
\ell_{78} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{509456} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{509456} = \mathbf{Pl}(0, 15, 13, 15, 15, 1)_{529668}
\end{aligned}$$

$$\begin{aligned}
\ell_{79} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{205031} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{205031} = \mathbf{Pl}(0, 6, 14, 6, 6, 1)_{235098} \\
\ell_{80} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{441806} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{441806} = \mathbf{Pl}(0, 13, 15, 13, 13, 1)_{464320} \\
\ell_{81} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{374156} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{374156} = \mathbf{Pl}(0, 11, 16, 11, 11, 1)_{398909} \\
\ell_{82} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{813881} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{813881} = \mathbf{Pl}(0, 24, 17, 24, 24, 1)_{824553} \\
\ell_{83} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta \end{bmatrix}_{69731} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{69731} = \mathbf{Pl}(0, 2, 18, 2, 2, 1)_{104402} \\
\ell_{84} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{983006} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{983006} = \mathbf{Pl}(0, 29, 19, 29, 29, 1)_{988364} \\
\ell_{85} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1016831} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1016831} = \mathbf{Pl}(0, 30, 20, 30, 30, 1)_{1021164} \\
\ell_{86} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{881531} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{881531} = \mathbf{Pl}(0, 26, 21, 26, 26, 1)_{890279} \\
\ell_{87} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{272681} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{272681} = \mathbf{Pl}(0, 8, 22, 8, 8, 1)_{301076} \\
\ell_{88} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{171206} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{171206} = \mathbf{Pl}(0, 5, 23, 5, 5, 1)_{202928} \\
\ell_{89} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{577106} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{577106} = \mathbf{Pl}(0, 17, 24, 17, 17, 1)_{595835} \\
\ell_{90} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{340331} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{340331} = \mathbf{Pl}(0, 10, 25, 10, 10, 1)_{366739} \\
\ell_{91} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{712406} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{712406} = \mathbf{Pl}(0, 21, 26, 21, 21, 1)_{726909} \\
\ell_{92} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1050656} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1050656} = \mathbf{Pl}(0, 31, 27, 31, 31, 1)_{1054342} \\
\ell_{93} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{103556} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{103556} = \mathbf{Pl}(0, 3, 28, 3, 3, 1)_{137769} \\
\ell_{94} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{644756} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{644756} = \mathbf{Pl}(0, 19, 29, 19, 19, 1)_{661624} \\
\ell_{95} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{678581} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{678581} = \mathbf{Pl}(0, 20, 30, 20, 20, 1)_{694424} \\
\ell_{96} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{915356} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{915356} = \mathbf{Pl}(0, 27, 31, 27, 27, 1)_{923646} \\
\ell_{97} &= \begin{bmatrix} 1 & 1 & \eta^{30} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{610945} = \begin{bmatrix} 1 & 1 & 18 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{610945} = \mathbf{Pl}(0, 18, 0, 1, 1, 0)_{3154} \\
\ell_{98} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{949182} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{949182} = \mathbf{Pl}(0, 28, 19, 29, 29, 1)_{988363} \\
\ell_{99} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{35907} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{35907} = \mathbf{Pl}(0, 1, 18, 2, 2, 1)_{104401}
\end{aligned}$$

$$\begin{aligned}
\ell_{100} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{610914} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{610914} = \mathbf{Pl}(0, 18, 1, 1, 1, 1)_{70611} \\
\ell_{101} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{306515} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{306515} = \mathbf{Pl}(0, 9, 2, 18, 18, 1)_{627177} \\
\ell_{102} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{780044} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{780044} = \mathbf{Pl}(0, 23, 16, 11, 11, 1)_{398921} \\
\ell_{103} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{475645} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{475645} = \mathbf{Pl}(0, 14, 3, 28, 28, 1)_{954605} \\
\ell_{104} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{407993} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{407993} = \mathbf{Pl}(0, 12, 17, 24, 24, 1)_{824541} \\
\ell_{105} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{746218} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{746218} = \mathbf{Pl}(0, 22, 4, 9, 9, 1)_{332692} \\
\ell_{106} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{137385} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{137385} = \mathbf{Pl}(0, 4, 22, 8, 8, 1)_{301072} \\
\ell_{107} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{847704} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{847704} = \mathbf{Pl}(0, 25, 5, 23, 23, 1)_{791062} \\
\ell_{108} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{543270} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{543270} = \mathbf{Pl}(0, 16, 23, 5, 5, 1)_{202939} \\
\ell_{109} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{238863} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{238863} = \mathbf{Pl}(0, 7, 6, 14, 14, 1)_{496483} \\
\ell_{110} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{509471} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{509471} = \mathbf{Pl}(0, 15, 20, 30, 30, 1)_{1021149} \\
\ell_{111} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{205037} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{205037} = \mathbf{Pl}(0, 6, 7, 12, 12, 1)_{431073} \\
\ell_{112} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{441819} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{441819} = \mathbf{Pl}(0, 13, 21, 26, 26, 1)_{890266} \\
\ell_{113} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{374167} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{374167} = \mathbf{Pl}(0, 11, 8, 22, 22, 1)_{758501} \\
\ell_{114} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{813878} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{813878} = \mathbf{Pl}(0, 24, 26, 21, 21, 1)_{726912} \\
\ell_{115} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{69733} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{69733} = \mathbf{Pl}(0, 2, 9, 4, 4, 1)_{169307} \\
\ell_{116} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{983008} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{983008} = \mathbf{Pl}(0, 29, 27, 31, 31, 1)_{1054340} \\
\ell_{117} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1016826} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1016826} = \mathbf{Pl}(0, 30, 10, 25, 25, 1)_{856854} \\
\ell_{118} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{881522} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{881522} = \mathbf{Pl}(0, 26, 24, 17, 17, 1)_{595844} \\
\ell_{119} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{272689} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{272689} = \mathbf{Pl}(0, 8, 11, 16, 16, 1)_{562271} \\
\ell_{120} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{171211} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{171211} = \mathbf{Pl}(0, 5, 25, 10, 10, 1)_{366734}
\end{aligned}$$

$$\begin{aligned}
\ell_{121} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{577096} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{577096} = \mathbf{Pl}(0, 17, 12, 7, 7, 1)_{267719} \\
\ell_{122} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{340341} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{340341} = \mathbf{Pl}(0, 10, 30, 20, 20, 1)_{694414} \\
\ell_{123} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{712400} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{712400} = \mathbf{Pl}(0, 21, 13, 15, 15, 1)_{529674} \\
\ell_{124} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1050652} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1050652} = \mathbf{Pl}(0, 31, 31, 27, 27, 1)_{923650} \\
\ell_{125} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{103559} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{103559} = \mathbf{Pl}(0, 3, 14, 6, 6, 1)_{235095} \\
\ell_{126} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{644740} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{644740} = \mathbf{Pl}(0, 19, 28, 3, 3, 1)_{137785} \\
\ell_{127} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{678574} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{678574} = \mathbf{Pl}(0, 20, 15, 13, 13, 1)_{464327} \\
\ell_{128} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{915348} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{915348} = \mathbf{Pl}(0, 27, 29, 19, 19, 1)_{661632} \\
\ell_{129} &= \begin{bmatrix} 1 & 1 & \eta^{13} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{949185} = \begin{bmatrix} 1 & 1 & 28 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{949185} = \mathbf{Pl}(0, 28, 0, 1, 1, 0)_{3164} \\
\ell_{130} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{610932} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{610932} = \mathbf{Pl}(0, 18, 29, 19, 19, 1)_{661623} \\
\ell_{131} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{35908} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{35908} = \mathbf{Pl}(0, 1, 28, 3, 3, 1)_{137767} \\
\ell_{132} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{949154} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{949154} = \mathbf{Pl}(0, 28, 1, 1, 1, 1)_{70621} \\
\ell_{133} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{306524} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{306524} = \mathbf{Pl}(0, 9, 31, 27, 27, 1)_{923628} \\
\ell_{134} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{780061} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{780061} = \mathbf{Pl}(0, 23, 3, 28, 28, 1)_{954614} \\
\ell_{135} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{475635} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{475635} = \mathbf{Pl}(0, 14, 2, 18, 18, 1)_{627182} \\
\ell_{136} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{407989} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{407989} = \mathbf{Pl}(0, 12, 30, 20, 20, 1)_{694416} \\
\ell_{137} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{746240} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{746240} = \mathbf{Pl}(0, 22, 27, 31, 31, 1)_{1054333} \\
\ell_{138} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{137389} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{137389} = \mathbf{Pl}(0, 4, 7, 12, 12, 1)_{431071} \\
\ell_{139} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{847695} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{847695} = \mathbf{Pl}(0, 25, 6, 14, 14, 1)_{496501} \\
\ell_{140} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{543286} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{543286} = \mathbf{Pl}(0, 16, 26, 21, 21, 1)_{726904} \\
\ell_{141} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{238858} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{238858} = \mathbf{Pl}(0, 7, 4, 9, 9, 1)_{332677}
\end{aligned}$$



$$\begin{aligned}
\ell_{142} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{509458} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{509458} = \mathbf{Pl}(0, 15, 24, 17, 17, 1)_{595833} \\
\ell_{143} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{205035} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{205035} = \mathbf{Pl}(0, 6, 25, 10, 10, 1)_{366735} \\
\ell_{144} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{441816} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{441816} = \mathbf{Pl}(0, 13, 5, 23, 23, 1)_{791050} \\
\ell_{145} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{374174} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{374174} = \mathbf{Pl}(0, 11, 19, 29, 29, 1)_{988346} \\
\ell_{146} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{813870} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{813870} = \mathbf{Pl}(0, 24, 15, 13, 13, 1)_{464331} \\
\ell_{147} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{69735} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{69735} = \mathbf{Pl}(0, 2, 14, 6, 6, 1)_{235094} \\
\ell_{148} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{982979} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{982979} = \mathbf{Pl}(0, 29, 18, 2, 2, 1)_{104429} \\
\ell_{149} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1016808} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1016808} = \mathbf{Pl}(0, 30, 12, 7, 7, 1)_{267732} \\
\ell_{150} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{881516} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{881516} = \mathbf{Pl}(0, 26, 16, 11, 11, 1)_{398924} \\
\ell_{151} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{272697} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{272697} = \mathbf{Pl}(0, 8, 17, 24, 24, 1)_{824537} \\
\ell_{152} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{171216} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{171216} = \mathbf{Pl}(0, 5, 13, 15, 15, 1)_{529658} \\
\ell_{153} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{577111} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{577111} = \mathbf{Pl}(0, 17, 8, 22, 22, 1)_{758507} \\
\ell_{154} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{340351} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{340351} = \mathbf{Pl}(0, 10, 20, 30, 30, 1)_{1021144} \\
\ell_{155} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{712411} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{712411} = \mathbf{Pl}(0, 21, 21, 26, 26, 1)_{890274} \\
\ell_{156} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1050629} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1050629} = \mathbf{Pl}(0, 31, 9, 4, 4, 1)_{169336} \\
\ell_{157} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{103558} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{103558} = \mathbf{Pl}(0, 3, 23, 5, 5, 1)_{202926} \\
\ell_{158} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{644753} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{644753} = \mathbf{Pl}(0, 19, 11, 16, 16, 1)_{562282} \\
\ell_{159} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{678586} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{678586} = \mathbf{Pl}(0, 20, 10, 25, 25, 1)_{856844} \\
\ell_{160} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{915337} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{915337} = \mathbf{Pl}(0, 27, 22, 8, 8, 1)_{301095} \\
\ell_{161} &= \begin{bmatrix} 1 & 1 & \eta^{29} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{306529} = \begin{bmatrix} 1 & 1 & 9 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{306529} = \mathbf{Pl}(0, 9, 0, 1, 1, 0)_{3145} \\
\ell_{162} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{780055} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{780055} = \mathbf{Pl}(0, 23, 8, 22, 22, 1)_{758513}
\end{aligned}$$

$$\begin{aligned}
\ell_{163} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{35909} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{35909} = \mathbf{Pl}(0, 1, 9, 4, 4, 1)_{169306} \\
\ell_{164} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{610915} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{610915} = \mathbf{Pl}(0, 18, 18, 2, 2, 1)_{104418} \\
\ell_{165} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{949184} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{949184} = \mathbf{Pl}(0, 28, 27, 31, 31, 1)_{1054339} \\
\ell_{166} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{306498} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{306498} = \mathbf{Pl}(0, 9, 1, 1, 1, 1)_{70602} \\
\ell_{167} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{475646} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{475646} = \mathbf{Pl}(0, 14, 19, 29, 29, 1)_{988349} \\
\ell_{168} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{407990} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{407990} = \mathbf{Pl}(0, 12, 26, 21, 21, 1)_{726900} \\
\ell_{169} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{746227} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{746227} = \mathbf{Pl}(0, 22, 2, 18, 18, 1)_{627190} \\
\ell_{170} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{137393} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{137393} = \mathbf{Pl}(0, 4, 11, 16, 16, 1)_{562267} \\
\ell_{171} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{847692} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{847692} = \mathbf{Pl}(0, 25, 16, 11, 11, 1)_{398923} \\
\ell_{172} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{543275} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{543275} = \mathbf{Pl}(0, 16, 25, 10, 10, 1)_{366745} \\
\ell_{173} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{238877} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{238877} = \mathbf{Pl}(0, 7, 3, 28, 28, 1)_{954598} \\
\ell_{174} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{509466} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{509466} = \mathbf{Pl}(0, 15, 10, 25, 25, 1)_{856839} \\
\ell_{175} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{205049} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{205049} = \mathbf{Pl}(0, 6, 17, 24, 24, 1)_{824535} \\
\ell_{176} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{441810} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{441810} = \mathbf{Pl}(0, 13, 24, 17, 17, 1)_{595831} \\
\ell_{177} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{374154} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{374154} = \mathbf{Pl}(0, 11, 4, 9, 9, 1)_{332681} \\
\ell_{178} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{813872} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{813872} = \mathbf{Pl}(0, 24, 13, 15, 15, 1)_{529677} \\
\ell_{179} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{69737} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{69737} = \mathbf{Pl}(0, 2, 22, 8, 8, 1)_{301070} \\
\ell_{180} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{983004} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{983004} = \mathbf{Pl}(0, 29, 31, 27, 27, 1)_{923648} \\
\ell_{181} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1016824} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1016824} = \mathbf{Pl}(0, 30, 5, 23, 23, 1)_{791067} \\
\ell_{182} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{881512} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{881512} = \mathbf{Pl}(0, 26, 12, 7, 7, 1)_{267728} \\
\ell_{183} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{272678} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{272678} = \mathbf{Pl}(0, 8, 23, 5, 5, 1)_{202931}
\end{aligned}$$

$$\begin{aligned}
\ell_{184} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{171221} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{171221} = \mathbf{Pl}(0, 5, 30, 20, 20, 1)_{694409} \\
\ell_{185} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{577103} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{577103} = \mathbf{Pl}(0, 17, 6, 14, 14, 1)_{496493} \\
\ell_{186} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{340334} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{340334} = \mathbf{Pl}(0, 10, 15, 13, 13, 1)_{464317} \\
\ell_{187} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{712415} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{712415} = \mathbf{Pl}(0, 21, 20, 30, 30, 1)_{1021155} \\
\ell_{188} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1050644} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1050644} = \mathbf{Pl}(0, 31, 29, 19, 19, 1)_{661636} \\
\ell_{189} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{103565} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{103565} = \mathbf{Pl}(0, 3, 7, 12, 12, 1)_{431070} \\
\ell_{190} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{644743} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{644743} = \mathbf{Pl}(0, 19, 14, 6, 6, 1)_{235111} \\
\ell_{191} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{678587} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{678587} = \mathbf{Pl}(0, 20, 21, 26, 26, 1)_{890273} \\
\ell_{192} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{915332} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{915332} = \mathbf{Pl}(0, 27, 28, 3, 3, 1)_{137793} \\
\ell_{193} &= \begin{bmatrix} 1 & 1 & \eta^{26} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{780065} = \begin{bmatrix} 1 & 1 & 23 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{780065} = \mathbf{Pl}(0, 23, 0, 1, 1, 0)_{3159} \\
\ell_{194} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{306505} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{306505} = \mathbf{Pl}(0, 9, 22, 8, 8, 1)_{301077} \\
\ell_{195} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{35910} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{35910} = \mathbf{Pl}(0, 1, 23, 5, 5, 1)_{202924} \\
\ell_{196} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{610929} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{610929} = \mathbf{Pl}(0, 18, 11, 16, 16, 1)_{562281} \\
\ell_{197} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{949156} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{949156} = \mathbf{Pl}(0, 28, 28, 3, 3, 1)_{137794} \\
\ell_{198} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{780034} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{780034} = \mathbf{Pl}(0, 23, 1, 1, 1, 1)_{70616} \\
\ell_{199} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{475636} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{475636} = \mathbf{Pl}(0, 14, 29, 19, 19, 1)_{661619} \\
\ell_{200} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{407994} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{407994} = \mathbf{Pl}(0, 12, 10, 25, 25, 1)_{856836} \\
\ell_{201} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{746213} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{746213} = \mathbf{Pl}(0, 22, 9, 4, 4, 1)_{169327} \\
\ell_{202} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{137397} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{137397} = \mathbf{Pl}(0, 4, 30, 20, 20, 1)_{694408} \\
\ell_{203} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{847699} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{847699} = \mathbf{Pl}(0, 25, 2, 18, 18, 1)_{627193} \\
\ell_{204} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{543291} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{543291} = \mathbf{Pl}(0, 16, 21, 26, 26, 1)_{890269}
\end{aligned}$$

$$\begin{aligned}
\ell_{205} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{238876} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{238876} = \mathbf{Pl}(0, 7, 31, 27, 27, 1)_{923626} \\
\ell_{206} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{509463} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{509463} = \mathbf{Pl}(0, 15, 8, 22, 22, 1)_{758505} \\
\ell_{207} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{205055} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{205055} = \mathbf{Pl}(0, 6, 20, 30, 30, 1)_{1021140} \\
\ell_{208} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{441821} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{441821} = \mathbf{Pl}(0, 13, 3, 28, 28, 1)_{954604} \\
\ell_{209} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{374147} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{374147} = \mathbf{Pl}(0, 11, 18, 2, 2, 1)_{104411} \\
\ell_{210} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{813880} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{813880} = \mathbf{Pl}(0, 24, 5, 23, 23, 1)_{791061} \\
\ell_{211} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{69739} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{69739} = \mathbf{Pl}(0, 2, 25, 10, 10, 1)_{366731} \\
\ell_{212} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{982983} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{982983} = \mathbf{Pl}(0, 29, 14, 6, 6, 1)_{235121} \\
\ell_{213} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1016810} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1016810} = \mathbf{Pl}(0, 30, 4, 9, 9, 1)_{332700} \\
\ell_{214} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{881534} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{881534} = \mathbf{Pl}(0, 26, 19, 29, 29, 1)_{988361} \\
\ell_{215} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{272686} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{272686} = \mathbf{Pl}(0, 8, 15, 13, 13, 1)_{464315} \\
\ell_{216} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{171218} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{171218} = \mathbf{Pl}(0, 5, 24, 17, 17, 1)_{595823} \\
\ell_{217} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{577120} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{577120} = \mathbf{Pl}(0, 17, 27, 31, 31, 1)_{1054328} \\
\ell_{218} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{340328} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{340328} = \mathbf{Pl}(0, 10, 12, 7, 7, 1)_{267712} \\
\ell_{219} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{712396} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{712396} = \mathbf{Pl}(0, 21, 16, 11, 11, 1)_{398919} \\
\ell_{220} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1050637} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1050637} = \mathbf{Pl}(0, 31, 7, 12, 12, 1)_{431098} \\
\ell_{221} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{103568} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{103568} = \mathbf{Pl}(0, 3, 13, 15, 15, 1)_{529656} \\
\ell_{222} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{644758} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{644758} = \mathbf{Pl}(0, 19, 26, 21, 21, 1)_{726907} \\
\ell_{223} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{678575} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{678575} = \mathbf{Pl}(0, 20, 6, 14, 14, 1)_{496496} \\
\ell_{224} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{915353} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{915353} = \mathbf{Pl}(0, 27, 17, 24, 24, 1)_{824556} \\
\ell_{225} &= \begin{bmatrix} 1 & 1 & \eta^{12} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{475649} = \begin{bmatrix} 1 & 1 & 14 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{475649} = \mathbf{Pl}(0, 14, 0, 1, 1, 0)_{3150}
\end{aligned}$$

$$\begin{aligned}
\ell_{226} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{407982} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{407982} = \mathbf{Pl}(0, 12, 15, 13, 13, 1)_{464319} \\
\ell_{227} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{35911} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{35911} = \mathbf{Pl}(0, 1, 14, 6, 6, 1)_{235093} \\
\ell_{228} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{610916} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{610916} = \mathbf{Pl}(0, 18, 28, 3, 3, 1)_{137784} \\
\ell_{229} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{949155} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{949155} = \mathbf{Pl}(0, 28, 18, 2, 2, 1)_{104428} \\
\ell_{230} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{306516} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{306516} = \mathbf{Pl}(0, 9, 29, 19, 19, 1)_{661614} \\
\ell_{231} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{780062} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{780062} = \mathbf{Pl}(0, 23, 19, 29, 29, 1)_{988358} \\
\ell_{232} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{475618} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{475618} = \mathbf{Pl}(0, 14, 1, 1, 1, 1)_{70607} \\
\ell_{233} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{746236} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{746236} = \mathbf{Pl}(0, 22, 31, 27, 27, 1)_{923641} \\
\ell_{234} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{137401} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{137401} = \mathbf{Pl}(0, 4, 17, 24, 24, 1)_{824533} \\
\ell_{235} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{847709} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{847709} = \mathbf{Pl}(0, 25, 3, 28, 28, 1)_{954616} \\
\ell_{236} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{543280} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{543280} = \mathbf{Pl}(0, 16, 13, 15, 15, 1)_{529669} \\
\ell_{237} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{238867} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{238867} = \mathbf{Pl}(0, 7, 2, 18, 18, 1)_{627175} \\
\ell_{238} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{509448} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{509448} = \mathbf{Pl}(0, 15, 12, 7, 7, 1)_{267717} \\
\ell_{239} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{205045} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{205045} = \mathbf{Pl}(0, 6, 30, 20, 20, 1)_{694410} \\
\ell_{240} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{441804} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{441804} = \mathbf{Pl}(0, 13, 16, 11, 11, 1)_{398911} \\
\ell_{241} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{374176} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{374176} = \mathbf{Pl}(0, 11, 27, 31, 31, 1)_{1054322} \\
\ell_{242} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{813883} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{813883} = \mathbf{Pl}(0, 24, 21, 26, 26, 1)_{890277} \\
\ell_{243} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{69741} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{69741} = \mathbf{Pl}(0, 2, 7, 12, 12, 1)_{431069} \\
\ell_{244} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{982981} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{982981} = \mathbf{Pl}(0, 29, 9, 4, 4, 1)_{169334} \\
\ell_{245} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1016815} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1016815} = \mathbf{Pl}(0, 30, 6, 14, 14, 1)_{496506} \\
\ell_{246} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{881527} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{881527} = \mathbf{Pl}(0, 26, 8, 22, 22, 1)_{758516}
\end{aligned}$$

$$\begin{aligned}
\ell_{247} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{272694} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{272694} = \mathbf{Pl}(0, 8, 26, 21, 21, 1)_{726896} \\
\ell_{248} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{171231} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{171231} = \mathbf{Pl}(0, 5, 20, 30, 30, 1)_{1021139} \\
\ell_{249} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{577098} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{577098} = \mathbf{Pl}(0, 17, 4, 9, 9, 1)_{332687} \\
\ell_{250} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{340346} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{340346} = \mathbf{Pl}(0, 10, 10, 25, 25, 1)_{856834} \\
\ell_{251} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{712402} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{712402} = \mathbf{Pl}(0, 21, 24, 17, 17, 1)_{595839} \\
\ell_{252} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1050633} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1050633} = \mathbf{Pl}(0, 31, 22, 8, 8, 1)_{301099} \\
\ell_{253} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{103563} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{103563} = \mathbf{Pl}(0, 3, 25, 10, 10, 1)_{366732} \\
\ell_{254} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{644742} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{644742} = \mathbf{Pl}(0, 19, 23, 5, 5, 1)_{202942} \\
\ell_{255} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{678584} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{678584} = \mathbf{Pl}(0, 20, 5, 23, 23, 1)_{791057} \\
\ell_{256} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{915345} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{915345} = \mathbf{Pl}(0, 27, 11, 16, 16, 1)_{562290} \\
\ell_{257} &= \begin{bmatrix} 1 & 1 & \eta^{20} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{408001} = \begin{bmatrix} 1 & 1 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{408001} = \mathbf{Pl}(0, 12, 0, 1, 1, 0)_{3148} \\
\ell_{258} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{475632} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{475632} = \mathbf{Pl}(0, 14, 13, 15, 15, 1)_{529667} \\
\ell_{259} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{35912} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{35912} = \mathbf{Pl}(0, 1, 12, 7, 7, 1)_{267703} \\
\ell_{260} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{610930} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{610930} = \mathbf{Pl}(0, 18, 24, 17, 17, 1)_{595836} \\
\ell_{261} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{949183} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{949183} = \mathbf{Pl}(0, 28, 20, 30, 30, 1)_{1021162} \\
\ell_{262} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{306523} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{306523} = \mathbf{Pl}(0, 9, 21, 26, 26, 1)_{890262} \\
\ell_{263} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{780043} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{780043} = \mathbf{Pl}(0, 23, 25, 10, 10, 1)_{366752} \\
\ell_{264} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{407970} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{407970} = \mathbf{Pl}(0, 12, 1, 1, 1, 1)_{70605} \\
\ell_{265} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{746222} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{746222} = \mathbf{Pl}(0, 22, 15, 13, 13, 1)_{464329} \\
\ell_{266} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{137405} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{137405} = \mathbf{Pl}(0, 4, 3, 28, 28, 1)_{954595} \\
\ell_{267} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{847686} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{847686} = \mathbf{Pl}(0, 25, 23, 5, 5, 1)_{202948}
\end{aligned}$$

$$\begin{aligned}
\ell_{268} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{543296} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{543296} = \mathbf{Pl}(0, 16, 27, 31, 31, 1)_{1054327} \\
\ell_{269} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{238870} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{238870} = \mathbf{Pl}(0, 7, 26, 21, 21, 1)_{726895} \\
\ell_{270} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{509449} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{509449} = \mathbf{Pl}(0, 15, 22, 8, 8, 1)_{301083} \\
\ell_{271} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{205043} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{205043} = \mathbf{Pl}(0, 6, 2, 18, 18, 1)_{627174} \\
\ell_{272} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{441799} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{441799} = \mathbf{Pl}(0, 13, 14, 6, 6, 1)_{235105} \\
\ell_{273} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{374165} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{374165} = \mathbf{Pl}(0, 11, 30, 20, 20, 1)_{694415} \\
\ell_{274} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{813859} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{813859} = \mathbf{Pl}(0, 24, 18, 2, 2, 1)_{104424} \\
\ell_{275} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{69743} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{69743} = \mathbf{Pl}(0, 2, 6, 14, 14, 1)_{496478} \\
\ell_{276} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{983002} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{983002} = \mathbf{Pl}(0, 29, 10, 25, 25, 1)_{856853} \\
\ell_{277} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1016817} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1016817} = \mathbf{Pl}(0, 30, 11, 16, 16, 1)_{562293} \\
\ell_{278} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{881517} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{881517} = \mathbf{Pl}(0, 26, 7, 12, 12, 1)_{431093} \\
\ell_{279} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{272702} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{272702} = \mathbf{Pl}(0, 8, 19, 29, 29, 1)_{988343} \\
\ell_{280} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{171228} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{171228} = \mathbf{Pl}(0, 5, 31, 27, 27, 1)_{923624} \\
\ell_{281} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{577113} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{577113} = \mathbf{Pl}(0, 17, 17, 24, 24, 1)_{824546} \\
\ell_{282} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{340340} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{340340} = \mathbf{Pl}(0, 10, 29, 19, 19, 1)_{661615} \\
\ell_{283} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{712389} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{712389} = \mathbf{Pl}(0, 21, 9, 4, 4, 1)_{169326} \\
\ell_{284} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1050648} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1050648} = \mathbf{Pl}(0, 31, 5, 23, 23, 1)_{791068} \\
\ell_{285} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{103562} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{103562} = \mathbf{Pl}(0, 3, 4, 9, 9, 1)_{332673} \\
\ell_{286} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{644759} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{644759} = \mathbf{Pl}(0, 19, 8, 22, 22, 1)_{758509} \\
\ell_{287} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{678564} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{678564} = \mathbf{Pl}(0, 20, 28, 3, 3, 1)_{137786} \\
\ell_{288} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{915340} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{915340} = \mathbf{Pl}(0, 27, 16, 11, 11, 1)_{398925}
\end{aligned}$$

$$\begin{aligned}
\ell_{289} &= \begin{bmatrix} 1 & 1 & \eta^{28} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{746241} = \begin{bmatrix} 1 & 1 & 22 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{746241} = \mathbf{Pl}(0, 22, 0, 1, 1, 0)_{3158} \\
\ell_{290} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{137382} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{137382} = \mathbf{Pl}(0, 4, 23, 5, 5, 1)_{202927} \\
\ell_{291} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{35913} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{35913} = \mathbf{Pl}(0, 1, 22, 8, 8, 1)_{301069} \\
\ell_{292} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{610917} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{610917} = \mathbf{Pl}(0, 18, 9, 4, 4, 1)_{169323} \\
\ell_{293} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{949180} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{949180} = \mathbf{Pl}(0, 28, 31, 27, 27, 1)_{923647} \\
\ell_{294} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{306499} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{306499} = \mathbf{Pl}(0, 9, 18, 2, 2, 1)_{104409} \\
\ell_{295} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{780042} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{780042} = \mathbf{Pl}(0, 23, 4, 9, 9, 1)_{332693} \\
\ell_{296} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{475648} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{475648} = \mathbf{Pl}(0, 14, 27, 31, 31, 1)_{1054325} \\
\ell_{297} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{407984} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{407984} = \mathbf{Pl}(0, 12, 13, 15, 15, 1)_{529665} \\
\ell_{298} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{746210} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{746210} = \mathbf{Pl}(0, 22, 1, 1, 1, 1)_{70615} \\
\ell_{299} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{847703} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{847703} = \mathbf{Pl}(0, 25, 8, 22, 22, 1)_{758515} \\
\ell_{300} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{543285} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{543285} = \mathbf{Pl}(0, 16, 30, 20, 20, 1)_{694420} \\
\ell_{301} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{238878} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{238878} = \mathbf{Pl}(0, 7, 19, 29, 29, 1)_{988342} \\
\ell_{302} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{509464} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{509464} = \mathbf{Pl}(0, 15, 5, 23, 23, 1)_{791052} \\
\ell_{303} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{205046} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{205046} = \mathbf{Pl}(0, 6, 26, 21, 21, 1)_{726894} \\
\ell_{304} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{441800} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{441800} = \mathbf{Pl}(0, 13, 12, 7, 7, 1)_{267715} \\
\ell_{305} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{374163} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{374163} = \mathbf{Pl}(0, 11, 2, 18, 18, 1)_{627179} \\
\ell_{306} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{813887} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{813887} = \mathbf{Pl}(0, 24, 20, 30, 30, 1)_{1021158} \\
\ell_{307} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{69745} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{69745} = \mathbf{Pl}(0, 2, 11, 16, 16, 1)_{562265} \\
\ell_{308} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{982996} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{982996} = \mathbf{Pl}(0, 29, 29, 19, 19, 1)_{661634} \\
\ell_{309} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1016812} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1016812} = \mathbf{Pl}(0, 30, 16, 11, 11, 1)_{398928}
\end{aligned}$$



$$\begin{aligned}
\ell_{310} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{881519} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{881519} = \mathbf{Pl}(0, 26, 6, 14, 14, 1)_{496502} \\
\ell_{311} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{272683} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{272683} = \mathbf{Pl}(0, 8, 25, 10, 10, 1)_{366737} \\
\ell_{312} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{171214} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{171214} = \mathbf{Pl}(0, 5, 15, 13, 13, 1)_{464312} \\
\ell_{313} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{577117} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{577117} = \mathbf{Pl}(0, 17, 3, 28, 28, 1)_{954608} \\
\ell_{314} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{340347} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{340347} = \mathbf{Pl}(0, 10, 21, 26, 26, 1)_{890263} \\
\ell_{315} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{712410} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{712410} = \mathbf{Pl}(0, 21, 10, 25, 25, 1)_{856845} \\
\ell_{316} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1050628} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1050628} = \mathbf{Pl}(0, 31, 28, 3, 3, 1)_{137797} \\
\ell_{317} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{103577} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{103577} = \mathbf{Pl}(0, 3, 17, 24, 24, 1)_{824532} \\
\ell_{318} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{644749} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{644749} = \mathbf{Pl}(0, 19, 7, 12, 12, 1)_{431086} \\
\ell_{319} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{678578} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{678578} = \mathbf{Pl}(0, 20, 24, 17, 17, 1)_{595838} \\
\ell_{320} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{915335} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{915335} = \mathbf{Pl}(0, 27, 14, 6, 6, 1)_{235119} \\
\ell_{321} &= \begin{bmatrix} 1 & 1 & \eta^2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{137409} = \begin{bmatrix} 1 & 1 & 4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{137409} = \mathbf{Pl}(0, 4, 0, 1, 1, 0)_{3140} \\
\ell_{322} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{746232} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{746232} = \mathbf{Pl}(0, 22, 5, 23, 23, 1)_{791059} \\
\ell_{323} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{35914} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{35914} = \mathbf{Pl}(0, 1, 4, 9, 9, 1)_{332671} \\
\ell_{324} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{610935} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{610935} = \mathbf{Pl}(0, 18, 8, 22, 22, 1)_{758508} \\
\ell_{325} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{949160} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{949160} = \mathbf{Pl}(0, 28, 12, 7, 7, 1)_{267730} \\
\ell_{326} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{306508} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{306508} = \mathbf{Pl}(0, 9, 16, 11, 11, 1)_{398907} \\
\ell_{327} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{780063} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{780063} = \mathbf{Pl}(0, 23, 20, 30, 30, 1)_{1021157} \\
\ell_{328} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{475634} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{475634} = \mathbf{Pl}(0, 14, 24, 17, 17, 1)_{595832} \\
\ell_{329} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{407972} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{407972} = \mathbf{Pl}(0, 12, 28, 3, 3, 1)_{137778} \\
\ell_{330} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{137378} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{137378} = \mathbf{Pl}(0, 4, 1, 1, 1, 1)_{70597}
\end{aligned}$$

$$\begin{aligned}
\ell_{331} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{847696} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{847696} = \mathbf{Pl}(0, 25, 13, 15, 15, 1)_{529678} \\
\ell_{332} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{543269} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{543269} = \mathbf{Pl}(0, 16, 9, 4, 4, 1)_{169321} \\
\ell_{333} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{238875} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{238875} = \mathbf{Pl}(0, 7, 21, 26, 26, 1)_{890260} \\
\ell_{334} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{509465} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{509465} = \mathbf{Pl}(0, 15, 17, 24, 24, 1)_{824544} \\
\ell_{335} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{205044} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{205044} = \mathbf{Pl}(0, 6, 29, 19, 19, 1)_{661611} \\
\ell_{336} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{441803} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{441803} = \mathbf{Pl}(0, 13, 25, 10, 10, 1)_{366742} \\
\ell_{337} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{374170} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{374170} = \mathbf{Pl}(0, 11, 10, 25, 25, 1)_{856835} \\
\ell_{338} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{813863} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{813863} = \mathbf{Pl}(0, 24, 14, 6, 6, 1)_{235116} \\
\ell_{339} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{69747} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{69747} = \mathbf{Pl}(0, 2, 2, 18, 18, 1)_{627170} \\
\ell_{340} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{982991} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{982991} = \mathbf{Pl}(0, 29, 6, 14, 14, 1)_{496505} \\
\ell_{341} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1016822} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1016822} = \mathbf{Pl}(0, 30, 26, 21, 21, 1)_{726918} \\
\ell_{342} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{881525} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{881525} = \mathbf{Pl}(0, 26, 30, 20, 20, 1)_{694430} \\
\ell_{343} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{272675} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{272675} = \mathbf{Pl}(0, 8, 18, 2, 2, 1)_{104408} \\
\ell_{344} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{171209} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{171209} = \mathbf{Pl}(0, 5, 22, 8, 8, 1)_{301073} \\
\ell_{345} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{577102} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{577102} = \mathbf{Pl}(0, 17, 15, 13, 13, 1)_{464324} \\
\ell_{346} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{340337} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{340337} = \mathbf{Pl}(0, 10, 11, 16, 16, 1)_{562273} \\
\ell_{347} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{712397} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{712397} = \mathbf{Pl}(0, 21, 7, 12, 12, 1)_{431088} \\
\ell_{348} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1050653} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1050653} = \mathbf{Pl}(0, 31, 3, 28, 28, 1)_{954622} \\
\ell_{349} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{103580} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{103580} = \mathbf{Pl}(0, 3, 31, 27, 27, 1)_{923622} \\
\ell_{350} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{644768} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{644768} = \mathbf{Pl}(0, 19, 27, 31, 31, 1)_{1054330} \\
\ell_{351} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{678566} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{678566} = \mathbf{Pl}(0, 20, 23, 5, 5, 1)_{202943}
\end{aligned}$$

$$\begin{aligned}
\ell_{352} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{915358} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{915358} = \mathbf{Pl}(0, 27, 19, 29, 29, 1)_{988362} \\
\ell_{353} &= \begin{bmatrix} 1 & 1 & \eta^{25} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{847713} = \begin{bmatrix} 1 & 1 & 25 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{847713} = \mathbf{Pl}(0, 25, 0, 1, 1, 0)_{3161} \\
\ell_{354} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{543282} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{543282} = \mathbf{Pl}(0, 16, 24, 17, 17, 1)_{595834} \\
\ell_{355} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{35915} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{35915} = \mathbf{Pl}(0, 1, 25, 10, 10, 1)_{366730} \\
\ell_{356} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{610918} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{610918} = \mathbf{Pl}(0, 18, 23, 5, 5, 1)_{202941} \\
\ell_{357} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{949159} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{949159} = \mathbf{Pl}(0, 28, 14, 6, 6, 1)_{235120} \\
\ell_{358} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{306513} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{306513} = \mathbf{Pl}(0, 9, 11, 16, 16, 1)_{562272} \\
\ell_{359} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{780035} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{780035} = \mathbf{Pl}(0, 23, 18, 2, 2, 1)_{104423} \\
\ell_{360} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{475620} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{475620} = \mathbf{Pl}(0, 14, 28, 3, 3, 1)_{137780} \\
\ell_{361} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{407992} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{407992} = \mathbf{Pl}(0, 12, 5, 23, 23, 1)_{791049} \\
\ell_{362} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{746217} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{746217} = \mathbf{Pl}(0, 22, 22, 8, 8, 1)_{301090} \\
\ell_{363} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{137390} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{137390} = \mathbf{Pl}(0, 4, 15, 13, 13, 1)_{464311} \\
\ell_{364} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{847682} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{847682} = \mathbf{Pl}(0, 25, 1, 1, 1, 1)_{70618} \\
\ell_{365} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{238868} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{238868} = \mathbf{Pl}(0, 7, 29, 19, 19, 1)_{661612} \\
\ell_{366} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{509450} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{509450} = \mathbf{Pl}(0, 15, 4, 9, 9, 1)_{332685} \\
\ell_{367} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{205050} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{205050} = \mathbf{Pl}(0, 6, 10, 25, 25, 1)_{856830} \\
\ell_{368} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{441822} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{441822} = \mathbf{Pl}(0, 13, 19, 29, 29, 1)_{988348} \\
\ell_{369} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{374149} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{374149} = \mathbf{Pl}(0, 11, 9, 4, 4, 1)_{169316} \\
\ell_{370} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{813868} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{813868} = \mathbf{Pl}(0, 24, 16, 11, 11, 1)_{398922} \\
\ell_{371} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{69749} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{69749} = \mathbf{Pl}(0, 2, 30, 20, 20, 1)_{694406} \\
\ell_{372} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{982989} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{982989} = \mathbf{Pl}(0, 29, 7, 12, 12, 1)_{431096}
\end{aligned}$$

$$\begin{aligned}
\ell_{373} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1016819} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1016819} = \mathbf{Pl}(0, 30, 2, 18, 18, 1)_{627198} \\
\ell_{374} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{881536} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{881536} = \mathbf{Pl}(0, 26, 27, 31, 31, 1)_{1054337} \\
\ell_{375} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{272699} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{272699} = \mathbf{Pl}(0, 8, 21, 26, 26, 1)_{890261} \\
\ell_{376} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{171208} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{171208} = \mathbf{Pl}(0, 5, 12, 7, 7, 1)_{267707} \\
\ell_{377} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{577116} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{577116} = \mathbf{Pl}(0, 17, 31, 27, 27, 1)_{923636} \\
\ell_{378} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{340335} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{340335} = \mathbf{Pl}(0, 10, 6, 14, 14, 1)_{496486} \\
\ell_{379} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{712407} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{712407} = \mathbf{Pl}(0, 21, 8, 22, 22, 1)_{758511} \\
\ell_{380} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1050649} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1050649} = \mathbf{Pl}(0, 31, 17, 24, 24, 1)_{824560} \\
\ell_{381} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{103583} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{103583} = \mathbf{Pl}(0, 3, 20, 30, 30, 1)_{1021137} \\
\ell_{382} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{644752} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{644752} = \mathbf{Pl}(0, 19, 13, 15, 15, 1)_{529672} \\
\ell_{383} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{678589} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{678589} = \mathbf{Pl}(0, 20, 3, 28, 28, 1)_{954611} \\
\ell_{384} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{915350} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{915350} = \mathbf{Pl}(0, 27, 26, 21, 21, 1)_{726915} \\
\ell_{385} &= \begin{bmatrix} 1 & 1 & \eta^4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{543297} = \begin{bmatrix} 1 & 1 & 16 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{543297} = \mathbf{Pl}(0, 16, 0, 1, 1, 0)_{3152} \\
\ell_{386} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{847705} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{847705} = \mathbf{Pl}(0, 25, 17, 24, 24, 1)_{824554} \\
\ell_{387} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{35916} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{35916} = \mathbf{Pl}(0, 1, 16, 11, 11, 1)_{398899} \\
\ell_{388} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{610936} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{610936} = \mathbf{Pl}(0, 18, 5, 23, 23, 1)_{791055} \\
\ell_{389} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{949179} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{949179} = \mathbf{Pl}(0, 28, 21, 26, 26, 1)_{890281} \\
\ell_{390} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{306522} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{306522} = \mathbf{Pl}(0, 9, 10, 25, 25, 1)_{856833} \\
\ell_{391} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{780054} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{780054} = \mathbf{Pl}(0, 23, 26, 21, 21, 1)_{726911} \\
\ell_{392} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{475630} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{475630} = \mathbf{Pl}(0, 14, 15, 13, 13, 1)_{464321} \\
\ell_{393} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{407996} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{407996} = \mathbf{Pl}(0, 12, 31, 27, 27, 1)_{923631}
\end{aligned}$$

$$\begin{aligned}
\ell_{394} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{746239} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{746239} = \mathbf{Pl}(0, 22, 20, 30, 30, 1)_{1021156} \\
\ell_{395} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{137386} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{137386} = \mathbf{Pl}(0, 4, 4, 9, 9, 1)_{332674} \\
\ell_{396} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{543266} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{543266} = \mathbf{Pl}(0, 16, 1, 1, 1, 1)_{70609} \\
\ell_{397} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{238869} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{238869} = \mathbf{Pl}(0, 7, 30, 20, 20, 1)_{694411} \\
\ell_{398} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{509447} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{509447} = \mathbf{Pl}(0, 15, 14, 6, 6, 1)_{235107} \\
\ell_{399} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{205056} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{205056} = \mathbf{Pl}(0, 6, 27, 31, 31, 1)_{1054317} \\
\ell_{400} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{441809} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{441809} = \mathbf{Pl}(0, 13, 11, 16, 16, 1)_{562276} \\
\ell_{401} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{374160} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{374160} = \mathbf{Pl}(0, 11, 13, 15, 15, 1)_{529664} \\
\ell_{402} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{813876} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{813876} = \mathbf{Pl}(0, 24, 29, 19, 19, 1)_{661629} \\
\ell_{403} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{69751} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{69751} = \mathbf{Pl}(0, 2, 8, 22, 22, 1)_{758492} \\
\ell_{404} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{982994} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{982994} = \mathbf{Pl}(0, 29, 24, 17, 17, 1)_{595847} \\
\ell_{405} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1016813} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1016813} = \mathbf{Pl}(0, 30, 7, 12, 12, 1)_{431097} \\
\ell_{406} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{881510} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{881510} = \mathbf{Pl}(0, 26, 23, 5, 5, 1)_{202949} \\
\ell_{407} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{272691} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{272691} = \mathbf{Pl}(0, 8, 2, 18, 18, 1)_{627176} \\
\ell_{408} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{171203} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{171203} = \mathbf{Pl}(0, 5, 18, 2, 2, 1)_{104405} \\
\ell_{409} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{577099} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{577099} = \mathbf{Pl}(0, 17, 25, 10, 10, 1)_{366746} \\
\ell_{410} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{340325} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{340325} = \mathbf{Pl}(0, 10, 9, 4, 4, 1)_{169315} \\
\ell_{411} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{712388} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{712388} = \mathbf{Pl}(0, 21, 28, 3, 3, 1)_{137787} \\
\ell_{412} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1050632} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1050632} = \mathbf{Pl}(0, 31, 12, 7, 7, 1)_{267733} \\
\ell_{413} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{103582} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{103582} = \mathbf{Pl}(0, 3, 19, 29, 29, 1)_{988338} \\
\ell_{414} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{644765} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{644765} = \mathbf{Pl}(0, 19, 3, 28, 28, 1)_{954610}
\end{aligned}$$

$$\begin{aligned}
\ell_{415} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{678569} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{678569} = \mathbf{Pl}(0, 20, 22, 8, 8, 1)_{301088} \\
\ell_{416} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{915343} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{915343} = \mathbf{Pl}(0, 27, 6, 14, 14, 1)_{496503} \\
\ell_{417} &= \begin{bmatrix} 1 & 1 & \eta^{11} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{238881} = \begin{bmatrix} 1 & 1 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{238881} = \mathbf{Pl}(0, 7, 0, 1, 1, 0)_{3143} \\
\ell_{418} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{509455} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{509455} = \mathbf{Pl}(0, 15, 6, 14, 14, 1)_{496491} \\
\ell_{419} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{35917} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{35917} = \mathbf{Pl}(0, 1, 7, 12, 12, 1)_{431068} \\
\ell_{420} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{610919} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{610919} = \mathbf{Pl}(0, 18, 14, 6, 6, 1)_{235110} \\
\ell_{421} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{949157} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{949157} = \mathbf{Pl}(0, 28, 9, 4, 4, 1)_{169333} \\
\ell_{422} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{306500} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{306500} = \mathbf{Pl}(0, 9, 28, 3, 3, 1)_{137775} \\
\ell_{423} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{780064} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{780064} = \mathbf{Pl}(0, 23, 27, 31, 31, 1)_{1054334} \\
\ell_{424} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{475619} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{475619} = \mathbf{Pl}(0, 14, 18, 2, 2, 1)_{104414} \\
\ell_{425} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{407995} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{407995} = \mathbf{Pl}(0, 12, 21, 26, 26, 1)_{890265} \\
\ell_{426} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{746228} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{746228} = \mathbf{Pl}(0, 22, 29, 19, 19, 1)_{661627} \\
\ell_{427} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{137398} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{137398} = \mathbf{Pl}(0, 4, 26, 21, 21, 1)_{726892} \\
\ell_{428} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{847710} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{847710} = \mathbf{Pl}(0, 25, 19, 29, 29, 1)_{988360} \\
\ell_{429} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{543295} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{543295} = \mathbf{Pl}(0, 16, 20, 30, 30, 1)_{1021150} \\
\ell_{430} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{238850} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{238850} = \mathbf{Pl}(0, 7, 1, 1, 1, 1)_{70600} \\
\ell_{431} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{205038} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{205038} = \mathbf{Pl}(0, 6, 15, 13, 13, 1)_{464313} \\
\ell_{432} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{441815} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{441815} = \mathbf{Pl}(0, 13, 8, 22, 22, 1)_{758503} \\
\ell_{433} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{374172} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{374172} = \mathbf{Pl}(0, 11, 31, 27, 27, 1)_{923630} \\
\ell_{434} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{813874} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{813874} = \mathbf{Pl}(0, 24, 24, 17, 17, 1)_{595842} \\
\ell_{435} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{69753} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{69753} = \mathbf{Pl}(0, 2, 17, 24, 24, 1)_{824531}
\end{aligned}$$

$$\begin{aligned}
\ell_{436} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{982985} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{982985} = \mathbf{Pl}(0, 29, 22, 8, 8, 1)_{301097} \\
\ell_{437} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1016829} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1016829} = \mathbf{Pl}(0, 30, 3, 28, 28, 1)_{954621} \\
\ell_{438} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{881514} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{881514} = \mathbf{Pl}(0, 26, 4, 9, 9, 1)_{332696} \\
\ell_{439} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{272688} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{272688} = \mathbf{Pl}(0, 8, 13, 15, 15, 1)_{529661} \\
\ell_{440} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{171226} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{171226} = \mathbf{Pl}(0, 5, 10, 25, 25, 1)_{856829} \\
\ell_{441} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{577107} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{577107} = \mathbf{Pl}(0, 17, 2, 18, 18, 1)_{627185} \\
\ell_{442} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{340344} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{340344} = \mathbf{Pl}(0, 10, 5, 23, 23, 1)_{791047} \\
\ell_{443} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{712392} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{712392} = \mathbf{Pl}(0, 21, 12, 7, 7, 1)_{267723} \\
\ell_{444} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1050641} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1050641} = \mathbf{Pl}(0, 31, 11, 16, 16, 1)_{562294} \\
\ell_{445} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{103573} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{103573} = \mathbf{Pl}(0, 3, 30, 20, 20, 1)_{694407} \\
\ell_{446} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{644747} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{644747} = \mathbf{Pl}(0, 19, 25, 10, 10, 1)_{366748} \\
\ell_{447} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{678572} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{678572} = \mathbf{Pl}(0, 20, 16, 11, 11, 1)_{398918} \\
\ell_{448} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{915334} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{915334} = \mathbf{Pl}(0, 27, 23, 5, 5, 1)_{202950} \\
\ell_{449} &= \begin{bmatrix} 1 & 1 & \eta^{23} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{509473} = \begin{bmatrix} 1 & 1 & 15 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{509473} = \mathbf{Pl}(0, 15, 0, 1, 1, 0)_{3151} \\
\ell_{450} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{238855} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{238855} = \mathbf{Pl}(0, 7, 14, 6, 6, 1)_{235099} \\
\ell_{451} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{35918} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{35918} = \mathbf{Pl}(0, 1, 15, 13, 13, 1)_{464308} \\
\ell_{452} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{610933} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{610933} = \mathbf{Pl}(0, 18, 30, 20, 20, 1)_{694422} \\
\ell_{453} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{949177} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{949177} = \mathbf{Pl}(0, 28, 17, 24, 24, 1)_{824557} \\
\ell_{454} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{306507} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{306507} = \mathbf{Pl}(0, 9, 25, 10, 10, 1)_{366738} \\
\ell_{455} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{780041} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{780041} = \mathbf{Pl}(0, 23, 22, 8, 8, 1)_{301091} \\
\ell_{456} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{475629} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{475629} = \mathbf{Pl}(0, 14, 7, 12, 12, 1)_{431081}
\end{aligned}$$

$$\begin{aligned}
\ell_{457} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{407991} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{407991} = \mathbf{Pl}(0, 12, 8, 22, 22, 1)_{758502} \\
\ell_{458} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{746214} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{746214} = \mathbf{Pl}(0, 22, 23, 5, 5, 1)_{202945} \\
\ell_{459} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{137394} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{137394} = \mathbf{Pl}(0, 4, 24, 17, 17, 1)_{595822} \\
\ell_{460} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{847685} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{847685} = \mathbf{Pl}(0, 25, 9, 4, 4, 1)_{169330} \\
\ell_{461} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{543279} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{543279} = \mathbf{Pl}(0, 16, 6, 14, 14, 1)_{496492} \\
\ell_{462} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{509442} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{509442} = \mathbf{Pl}(0, 15, 1, 1, 1, 1)_{70608} \\
\ell_{463} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{205036} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{205036} = \mathbf{Pl}(0, 6, 16, 11, 11, 1)_{398904} \\
\ell_{464} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{441820} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{441820} = \mathbf{Pl}(0, 13, 31, 27, 27, 1)_{923632} \\
\ell_{465} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{374161} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{374161} = \mathbf{Pl}(0, 11, 11, 16, 16, 1)_{562274} \\
\ell_{466} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{813866} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{813866} = \mathbf{Pl}(0, 24, 4, 9, 9, 1)_{332694} \\
\ell_{467} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{69755} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{69755} = \mathbf{Pl}(0, 2, 21, 26, 26, 1)_{890255} \\
\ell_{468} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{982998} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{982998} = \mathbf{Pl}(0, 29, 26, 21, 21, 1)_{726917} \\
\ell_{469} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1016803} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1016803} = \mathbf{Pl}(0, 30, 18, 2, 2, 1)_{104430} \\
\ell_{470} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{881524} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{881524} = \mathbf{Pl}(0, 26, 29, 19, 19, 1)_{661631} \\
\ell_{471} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{272680} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{272680} = \mathbf{Pl}(0, 8, 12, 7, 7, 1)_{267710} \\
\ell_{472} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{171229} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{171229} = \mathbf{Pl}(0, 5, 3, 28, 28, 1)_{954596} \\
\ell_{473} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{577092} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{577092} = \mathbf{Pl}(0, 17, 28, 3, 3, 1)_{137783} \\
\ell_{474} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{340350} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{340350} = \mathbf{Pl}(0, 10, 19, 29, 29, 1)_{988345} \\
\ell_{475} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{712403} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{712403} = \mathbf{Pl}(0, 21, 2, 18, 18, 1)_{627189} \\
\ell_{476} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1050640} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1050640} = \mathbf{Pl}(0, 31, 13, 15, 15, 1)_{529684} \\
\ell_{477} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{103576} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{103576} = \mathbf{Pl}(0, 3, 5, 23, 23, 1)_{791040}
\end{aligned}$$



$$\begin{aligned}
\ell_{478} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{644762} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{644762} = \mathbf{Pl}(0, 19, 10, 25, 25, 1)_{856843} \\
\ell_{479} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{678592} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{678592} = \mathbf{Pl}(0, 20, 27, 31, 31, 1)_{1054331} \\
\ell_{480} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{915359} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{915359} = \mathbf{Pl}(0, 27, 20, 30, 30, 1)_{1021161} \\
\ell_{481} &= \begin{bmatrix} 1 & 1 & \eta^{19} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{205057} = \begin{bmatrix} 1 & 1 & 6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{205057} = \mathbf{Pl}(0, 6, 0, 1, 1, 0)_{3142} \\
\ell_{482} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{441805} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{441805} = \mathbf{Pl}(0, 13, 7, 12, 12, 1)_{431080} \\
\ell_{483} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{35919} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{35919} = \mathbf{Pl}(0, 1, 6, 14, 14, 1)_{496477} \\
\ell_{484} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{610920} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{610920} = \mathbf{Pl}(0, 18, 12, 7, 7, 1)_{267720} \\
\ell_{485} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{949178} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{949178} = \mathbf{Pl}(0, 28, 10, 25, 25, 1)_{856852} \\
\ell_{486} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{306514} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{306514} = \mathbf{Pl}(0, 9, 24, 17, 17, 1)_{595827} \\
\ell_{487} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{780053} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{780053} = \mathbf{Pl}(0, 23, 30, 20, 20, 1)_{694427} \\
\ell_{488} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{475647} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{475647} = \mathbf{Pl}(0, 14, 20, 30, 30, 1)_{1021148} \\
\ell_{489} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{407971} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{407971} = \mathbf{Pl}(0, 12, 18, 2, 2, 1)_{104412} \\
\ell_{490} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{746235} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{746235} = \mathbf{Pl}(0, 22, 21, 26, 26, 1)_{890275} \\
\ell_{491} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{137406} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{137406} = \mathbf{Pl}(0, 4, 19, 29, 29, 1)_{988339} \\
\ell_{492} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{847691} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{847691} = \mathbf{Pl}(0, 25, 25, 10, 10, 1)_{366754} \\
\ell_{493} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{543292} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{543292} = \mathbf{Pl}(0, 16, 31, 27, 27, 1)_{923635} \\
\ell_{494} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{238864} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{238864} = \mathbf{Pl}(0, 7, 13, 15, 15, 1)_{529660} \\
\ell_{495} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{509457} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{509457} = \mathbf{Pl}(0, 15, 11, 16, 16, 1)_{562278} \\
\ell_{496} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{205026} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{205026} = \mathbf{Pl}(0, 6, 1, 1, 1, 1)_{70599} \\
\ell_{497} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{374158} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{374158} = \mathbf{Pl}(0, 11, 15, 13, 13, 1)_{464318} \\
\ell_{498} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{813861} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{813861} = \mathbf{Pl}(0, 24, 9, 4, 4, 1)_{169329}
\end{aligned}$$

$$\begin{aligned}
\ell_{499} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{69757} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{69757} = \mathbf{Pl}(0, 2, 3, 28, 28, 1)_{954593} \\
\ell_{500} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{983000} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{983000} = \mathbf{Pl}(0, 29, 5, 23, 23, 1)_{791066} \\
\ell_{501} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1016806} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1016806} = \mathbf{Pl}(0, 30, 23, 5, 5, 1)_{202953} \\
\ell_{502} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{881529} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{881529} = \mathbf{Pl}(0, 26, 17, 24, 24, 1)_{824555} \\
\ell_{503} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{272704} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{272704} = \mathbf{Pl}(0, 8, 27, 31, 31, 1)_{1054319} \\
\ell_{504} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{171220} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{171220} = \mathbf{Pl}(0, 5, 29, 19, 19, 1)_{661610} \\
\ell_{505} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{577110} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{577110} = \mathbf{Pl}(0, 17, 26, 21, 21, 1)_{726905} \\
\ell_{506} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{340324} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{340324} = \mathbf{Pl}(0, 10, 28, 3, 3, 1)_{137776} \\
\ell_{507} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{712393} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{712393} = \mathbf{Pl}(0, 21, 22, 8, 8, 1)_{301089} \\
\ell_{508} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1050636} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1050636} = \mathbf{Pl}(0, 31, 16, 11, 11, 1)_{398929} \\
\ell_{509} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{103571} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{103571} = \mathbf{Pl}(0, 3, 2, 18, 18, 1)_{627171} \\
\ell_{510} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{644746} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{644746} = \mathbf{Pl}(0, 19, 4, 9, 9, 1)_{332689} \\
\ell_{511} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{678567} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{678567} = \mathbf{Pl}(0, 20, 14, 6, 6, 1)_{235112} \\
\ell_{512} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{915351} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{915351} = \mathbf{Pl}(0, 27, 8, 22, 22, 1)_{758517} \\
\ell_{513} &= \begin{bmatrix} 1 & 1 & \eta^8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{441825} = \begin{bmatrix} 1 & 1 & 13 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{441825} = \mathbf{Pl}(0, 13, 0, 1, 1, 0)_{3149} \\
\ell_{514} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{205032} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{205032} = \mathbf{Pl}(0, 6, 12, 7, 7, 1)_{267708} \\
\ell_{515} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{35920} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{35920} = \mathbf{Pl}(0, 1, 13, 15, 15, 1)_{529654} \\
\ell_{516} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{610934} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{610934} = \mathbf{Pl}(0, 18, 26, 21, 21, 1)_{726906} \\
\ell_{517} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{949158} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{949158} = \mathbf{Pl}(0, 28, 23, 5, 5, 1)_{202951} \\
\ell_{518} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{306521} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{306521} = \mathbf{Pl}(0, 9, 17, 24, 24, 1)_{824538} \\
\ell_{519} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{780036} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{780036} = \mathbf{Pl}(0, 23, 28, 3, 3, 1)_{137789}
\end{aligned}$$

$$\begin{aligned}
\ell_{520} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{475633} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{475633} = \mathbf{Pl}(0, 14, 11, 16, 16, 1)_{562277} \\
\ell_{521} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{407983} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{407983} = \mathbf{Pl}(0, 12, 6, 14, 14, 1)_{496488} \\
\ell_{522} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{746221} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{746221} = \mathbf{Pl}(0, 22, 7, 12, 12, 1)_{431089} \\
\ell_{523} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{137402} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{137402} = \mathbf{Pl}(0, 4, 10, 25, 25, 1)_{856828} \\
\ell_{524} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{847700} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{847700} = \mathbf{Pl}(0, 25, 29, 19, 19, 1)_{661630} \\
\ell_{525} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{543276} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{543276} = \mathbf{Pl}(0, 16, 16, 11, 11, 1)_{398914} \\
\ell_{526} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{238857} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{238857} = \mathbf{Pl}(0, 7, 22, 8, 8, 1)_{301075} \\
\ell_{527} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{509472} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{509472} = \mathbf{Pl}(0, 15, 27, 31, 31, 1)_{1054326} \\
\ell_{528} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{441794} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{441794} = \mathbf{Pl}(0, 13, 1, 1, 1, 1)_{70606} \\
\ell_{529} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{374151} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{374151} = \mathbf{Pl}(0, 11, 14, 6, 6, 1)_{235103} \\
\ell_{530} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{813885} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{813885} = \mathbf{Pl}(0, 24, 3, 28, 28, 1)_{954615} \\
\ell_{531} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{69759} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{69759} = \mathbf{Pl}(0, 2, 20, 30, 30, 1)_{1021136} \\
\ell_{532} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{982987} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{982987} = \mathbf{Pl}(0, 29, 25, 10, 10, 1)_{366758} \\
\ell_{533} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1016828} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1016828} = \mathbf{Pl}(0, 30, 31, 27, 27, 1)_{923649} \\
\ell_{534} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{881507} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{881507} = \mathbf{Pl}(0, 26, 18, 2, 2, 1)_{104426} \\
\ell_{535} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{272696} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{272696} = \mathbf{Pl}(0, 8, 5, 23, 23, 1)_{791045} \\
\ell_{536} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{171223} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{171223} = \mathbf{Pl}(0, 5, 8, 22, 22, 1)_{758495} \\
\ell_{537} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{577093} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{577093} = \mathbf{Pl}(0, 17, 9, 4, 4, 1)_{169322} \\
\ell_{538} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{340330} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{340330} = \mathbf{Pl}(0, 10, 4, 9, 9, 1)_{332680} \\
\ell_{539} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{712414} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{712414} = \mathbf{Pl}(0, 21, 19, 29, 29, 1)_{988356} \\
\ell_{540} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1050645} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1050645} = \mathbf{Pl}(0, 31, 30, 20, 20, 1)_{694435}
\end{aligned}$$

$$\begin{aligned}
\ell_{541} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{103570} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{103570} = \mathbf{Pl}(0, 3, 24, 17, 17, 1)_{595821} \\
\ell_{542} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{644763} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{644763} = \mathbf{Pl}(0, 19, 21, 26, 26, 1)_{890272} \\
\ell_{543} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{678579} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{678579} = \mathbf{Pl}(0, 20, 2, 18, 18, 1)_{627188} \\
\ell_{544} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{915342} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{915342} = \mathbf{Pl}(0, 27, 15, 13, 13, 1)_{464334} \\
\ell_{545} &= \begin{bmatrix} 1 & 1 & \eta^{27} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{374177} = \begin{bmatrix} 1 & 1 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{374177} = \mathbf{Pl}(0, 11, 0, 1, 1, 0)_{3147} \\
\ell_{546} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{813882} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{813882} = \mathbf{Pl}(0, 24, 10, 25, 25, 1)_{856848} \\
\ell_{547} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{35921} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{35921} = \mathbf{Pl}(0, 1, 11, 16, 16, 1)_{562264} \\
\ell_{548} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{610921} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{610921} = \mathbf{Pl}(0, 18, 22, 8, 8, 1)_{301086} \\
\ell_{549} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{949172} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{949172} = \mathbf{Pl}(0, 28, 29, 19, 19, 1)_{661633} \\
\ell_{550} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{306501} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{306501} = \mathbf{Pl}(0, 9, 9, 4, 4, 1)_{169314} \\
\ell_{551} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{780051} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{780051} = \mathbf{Pl}(0, 23, 2, 18, 18, 1)_{627191} \\
\ell_{552} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{475644} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{475644} = \mathbf{Pl}(0, 14, 31, 27, 27, 1)_{923633} \\
\ell_{553} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{407999} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{407999} = \mathbf{Pl}(0, 12, 20, 30, 30, 1)_{1021146} \\
\ell_{554} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{746211} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{746211} = \mathbf{Pl}(0, 22, 18, 2, 2, 1)_{104422} \\
\ell_{555} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{137387} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{137387} = \mathbf{Pl}(0, 4, 25, 10, 10, 1)_{366733} \\
\ell_{556} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{847690} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{847690} = \mathbf{Pl}(0, 25, 4, 9, 9, 1)_{332695} \\
\ell_{557} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{543278} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{543278} = \mathbf{Pl}(0, 16, 15, 13, 13, 1)_{464323} \\
\ell_{558} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{238880} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{238880} = \mathbf{Pl}(0, 7, 27, 31, 31, 1)_{1054318} \\
\ell_{559} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{509452} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{509452} = \mathbf{Pl}(0, 15, 16, 11, 11, 1)_{398913} \\
\ell_{560} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{205040} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{205040} = \mathbf{Pl}(0, 6, 13, 15, 15, 1)_{529659} \\
\ell_{561} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{441807} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{441807} = \mathbf{Pl}(0, 13, 6, 14, 14, 1)_{496489}
\end{aligned}$$

$$\begin{aligned}
\ell_{562} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{374146} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{374146} = \mathbf{Pl}(0, 11, 1, 1, 1, 1)_{70604} \\
\ell_{563} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{69734} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{69734} = \mathbf{Pl}(0, 2, 23, 5, 5, 1)_{202925} \\
\ell_{564} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{982980} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{982980} = \mathbf{Pl}(0, 29, 28, 3, 3, 1)_{137795} \\
\ell_{565} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1016823} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1016823} = \mathbf{Pl}(0, 30, 8, 22, 22, 1)_{758520} \\
\ell_{566} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{881533} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{881533} = \mathbf{Pl}(0, 26, 3, 28, 28, 1)_{954617} \\
\ell_{567} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{272693} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{272693} = \mathbf{Pl}(0, 8, 30, 20, 20, 1)_{694412} \\
\ell_{568} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{171227} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{171227} = \mathbf{Pl}(0, 5, 21, 26, 26, 1)_{890258} \\
\ell_{569} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{577118} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{577118} = \mathbf{Pl}(0, 17, 19, 29, 29, 1)_{988352} \\
\ell_{570} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{340338} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{340338} = \mathbf{Pl}(0, 10, 24, 17, 17, 1)_{595828} \\
\ell_{571} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{712408} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{712408} = \mathbf{Pl}(0, 21, 5, 23, 23, 1)_{791058} \\
\ell_{572} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1050631} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1050631} = \mathbf{Pl}(0, 31, 14, 6, 6, 1)_{235123} \\
\ell_{573} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{103574} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{103574} = \mathbf{Pl}(0, 3, 26, 21, 21, 1)_{726891} \\
\ell_{574} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{644761} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{644761} = \mathbf{Pl}(0, 19, 17, 24, 24, 1)_{824548} \\
\ell_{575} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{678568} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{678568} = \mathbf{Pl}(0, 20, 12, 7, 7, 1)_{267722} \\
\ell_{576} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{915341} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{915341} = \mathbf{Pl}(0, 27, 7, 12, 12, 1)_{431094} \\
\ell_{577} &= \begin{bmatrix} 1 & 1 & \eta^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{813889} = \begin{bmatrix} 1 & 1 & 24 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{813889} = \mathbf{Pl}(0, 24, 0, 1, 1, 0)_{3160} \\
\ell_{578} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{374155} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{374155} = \mathbf{Pl}(0, 11, 25, 10, 10, 1)_{366740} \\
\ell_{579} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{35922} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{35922} = \mathbf{Pl}(0, 1, 24, 17, 17, 1)_{595819} \\
\ell_{580} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{610939} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{610939} = \mathbf{Pl}(0, 18, 21, 26, 26, 1)_{890271} \\
\ell_{581} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{949168} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{949168} = \mathbf{Pl}(0, 28, 13, 15, 15, 1)_{529681} \\
\ell_{582} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{306510} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{306510} = \mathbf{Pl}(0, 9, 15, 13, 13, 1)_{464316}
\end{aligned}$$

$$\begin{aligned}
\ell_{583} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{780038} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{780038} = \mathbf{Pl}(0, 23, 23, 5, 5, 1)_{202946} \\
\ell_{584} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{475638} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{475638} = \mathbf{Pl}(0, 14, 26, 21, 21, 1)_{726902} \\
\ell_{585} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{407987} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{407987} = \mathbf{Pl}(0, 12, 2, 18, 18, 1)_{627180} \\
\ell_{586} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{746229} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{746229} = \mathbf{Pl}(0, 22, 30, 20, 20, 1)_{694426} \\
\ell_{587} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{137391} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{137391} = \mathbf{Pl}(0, 4, 6, 14, 14, 1)_{496480} \\
\ell_{588} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{847697} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{847697} = \mathbf{Pl}(0, 25, 11, 16, 16, 1)_{562288} \\
\ell_{589} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{543294} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{543294} = \mathbf{Pl}(0, 16, 19, 29, 29, 1)_{988351} \\
\ell_{590} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{238873} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{238873} = \mathbf{Pl}(0, 7, 17, 24, 24, 1)_{824536} \\
\ell_{591} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{509445} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{509445} = \mathbf{Pl}(0, 15, 9, 4, 4, 1)_{169320} \\
\ell_{592} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{205034} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{205034} = \mathbf{Pl}(0, 6, 4, 9, 9, 1)_{332676} \\
\ell_{593} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{441796} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{441796} = \mathbf{Pl}(0, 13, 28, 3, 3, 1)_{137779} \\
\ell_{594} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{813858} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{813858} = \mathbf{Pl}(0, 24, 1, 1, 1, 1)_{70617} \\
\ell_{595} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{69736} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{69736} = \mathbf{Pl}(0, 2, 12, 7, 7, 1)_{267704} \\
\ell_{596} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{983007} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{983007} = \mathbf{Pl}(0, 29, 20, 30, 30, 1)_{1021163} \\
\ell_{597} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1016809} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1016809} = \mathbf{Pl}(0, 30, 22, 8, 8, 1)_{301098} \\
\ell_{598} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{881511} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{881511} = \mathbf{Pl}(0, 26, 14, 6, 6, 1)_{235118} \\
\ell_{599} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{272701} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{272701} = \mathbf{Pl}(0, 8, 3, 28, 28, 1)_{954599} \\
\ell_{600} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{171232} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{171232} = \mathbf{Pl}(0, 5, 27, 31, 31, 1)_{1054316} \\
\ell_{601} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{577101} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{577101} = \mathbf{Pl}(0, 17, 7, 12, 12, 1)_{431084} \\
\ell_{602} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{340348} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{340348} = \mathbf{Pl}(0, 10, 31, 27, 27, 1)_{923629} \\
\ell_{603} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{712387} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{712387} = \mathbf{Pl}(0, 21, 18, 2, 2, 1)_{104421}
\end{aligned}$$

$$\begin{aligned}
\ell_{604} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1050650} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1050650} = \mathbf{Pl}(0, 31, 10, 25, 25, 1)_{856855} \\
\ell_{605} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{103575} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{103575} = \mathbf{Pl}(0, 3, 8, 22, 22, 1)_{758493} \\
\ell_{606} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{644748} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{644748} = \mathbf{Pl}(0, 19, 16, 11, 11, 1)_{398917} \\
\ell_{607} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{678580} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{678580} = \mathbf{Pl}(0, 20, 29, 19, 19, 1)_{661625} \\
\ell_{608} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{915352} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{915352} = \mathbf{Pl}(0, 27, 5, 23, 23, 1)_{791064} \\
\ell_{609} &= \begin{bmatrix} 1 & 1 & \eta & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{69761} = \begin{bmatrix} 1 & 1 & 2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{69761} = \mathbf{Pl}(0, 2, 0, 1, 1, 0)_{3138} \\
\ell_{610} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{983005} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{983005} = \mathbf{Pl}(0, 29, 3, 28, 28, 1)_{954620} \\
\ell_{611} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{35923} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{35923} = \mathbf{Pl}(0, 1, 2, 18, 18, 1)_{627169} \\
\ell_{612} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{610922} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{610922} = \mathbf{Pl}(0, 18, 4, 9, 9, 1)_{332688} \\
\ell_{613} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{949167} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{949167} = \mathbf{Pl}(0, 28, 6, 14, 14, 1)_{496504} \\
\ell_{614} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{306519} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{306519} = \mathbf{Pl}(0, 9, 8, 22, 22, 1)_{758499} \\
\ell_{615} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{780058} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{780058} = \mathbf{Pl}(0, 23, 10, 25, 25, 1)_{856847} \\
\ell_{616} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{475624} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{475624} = \mathbf{Pl}(0, 14, 12, 7, 7, 1)_{267716} \\
\ell_{617} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{407975} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{407975} = \mathbf{Pl}(0, 12, 14, 6, 6, 1)_{235104} \\
\ell_{618} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{746220} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{746220} = \mathbf{Pl}(0, 22, 16, 11, 11, 1)_{398920} \\
\ell_{619} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{137379} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{137379} = \mathbf{Pl}(0, 4, 18, 2, 2, 1)_{104404} \\
\ell_{620} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{847711} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{847711} = \mathbf{Pl}(0, 25, 20, 30, 30, 1)_{1021159} \\
\ell_{621} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{543273} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{543273} = \mathbf{Pl}(0, 16, 22, 8, 8, 1)_{301084} \\
\ell_{622} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{238866} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{238866} = \mathbf{Pl}(0, 7, 24, 17, 17, 1)_{595825} \\
\ell_{623} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{509462} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{509462} = \mathbf{Pl}(0, 15, 26, 21, 21, 1)_{726903} \\
\ell_{624} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{205028} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{205028} = \mathbf{Pl}(0, 6, 28, 3, 3, 1)_{137772}
\end{aligned}$$

$$\begin{aligned}
\ell_{625} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{441813} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{441813} = \mathbf{Pl}(0, 13, 30, 20, 20, 1)_{694417} \\
\ell_{626} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{374168} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{374168} = \mathbf{Pl}(0, 11, 5, 23, 23, 1)_{791048} \\
\ell_{627} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{813869} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{813869} = \mathbf{Pl}(0, 24, 7, 12, 12, 1)_{431091} \\
\ell_{628} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & 1 \end{bmatrix}_{69730} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{69730} = \mathbf{Pl}(0, 2, 1, 1, 1, 1)_{70595} \\
\ell_{629} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1016816} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1016816} = \mathbf{Pl}(0, 30, 13, 15, 15, 1)_{529683} \\
\ell_{630} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{881518} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{881518} = \mathbf{Pl}(0, 26, 15, 13, 13, 1)_{464333} \\
\ell_{631} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{272677} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{272677} = \mathbf{Pl}(0, 8, 9, 4, 4, 1)_{169313} \\
\ell_{632} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{171217} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{171217} = \mathbf{Pl}(0, 5, 11, 16, 16, 1)_{562268} \\
\ell_{633} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{577115} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{577115} = \mathbf{Pl}(0, 17, 21, 26, 26, 1)_{890270} \\
\ell_{634} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{340326} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{340326} = \mathbf{Pl}(0, 10, 23, 5, 5, 1)_{202933} \\
\ell_{635} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{712409} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{712409} = \mathbf{Pl}(0, 21, 17, 24, 24, 1)_{824550} \\
\ell_{636} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1050654} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1050654} = \mathbf{Pl}(0, 31, 19, 29, 29, 1)_{988366} \\
\ell_{637} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{103572} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{103572} = \mathbf{Pl}(0, 3, 29, 19, 19, 1)_{661608} \\
\ell_{638} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{644764} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{644764} = \mathbf{Pl}(0, 19, 31, 27, 27, 1)_{923638} \\
\ell_{639} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{678571} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{678571} = \mathbf{Pl}(0, 20, 25, 10, 10, 1)_{366749} \\
\ell_{640} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{915360} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{915360} = \mathbf{Pl}(0, 27, 27, 31, 31, 1)_{1054338} \\
\ell_{641} &= \begin{bmatrix} 1 & 1 & \eta^{14} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{983009} = \begin{bmatrix} 1 & 1 & 29 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{983009} = \mathbf{Pl}(0, 29, 0, 1, 1, 0)_{3165} \\
\ell_{642} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{69732} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{69732} = \mathbf{Pl}(0, 2, 28, 3, 3, 1)_{137768} \\
\ell_{643} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{35924} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{35924} = \mathbf{Pl}(0, 1, 29, 19, 19, 1)_{661606} \\
\ell_{644} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{610940} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{610940} = \mathbf{Pl}(0, 18, 31, 27, 27, 1)_{923637} \\
\ell_{645} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{949171} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{949171} = \mathbf{Pl}(0, 28, 2, 18, 18, 1)_{627196}
\end{aligned}$$



$$\begin{aligned}
\ell_{646} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{306528} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{306528} = \mathbf{Pl}(0, 9, 27, 31, 31, 1)_{1054320} \\
\ell_{647} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{780047} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{780047} = \mathbf{Pl}(0, 23, 6, 14, 14, 1)_{496499} \\
\ell_{648} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{475626} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{475626} = \mathbf{Pl}(0, 14, 4, 9, 9, 1)_{332684} \\
\ell_{649} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{407979} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{407979} = \mathbf{Pl}(0, 12, 25, 10, 10, 1)_{366741} \\
\ell_{650} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{746238} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{746238} = \mathbf{Pl}(0, 22, 19, 29, 29, 1)_{988357} \\
\ell_{651} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{137383} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{137383} = \mathbf{Pl}(0, 4, 14, 6, 6, 1)_{235096} \\
\ell_{652} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{847688} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{847688} = \mathbf{Pl}(0, 25, 12, 7, 7, 1)_{267727} \\
\ell_{653} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{543289} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{543289} = \mathbf{Pl}(0, 16, 17, 24, 24, 1)_{824545} \\
\ell_{654} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{238871} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{238871} = \mathbf{Pl}(0, 7, 8, 22, 22, 1)_{758497} \\
\ell_{655} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{509467} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{509467} = \mathbf{Pl}(0, 15, 21, 26, 26, 1)_{890268} \\
\ell_{656} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{205030} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{205030} = \mathbf{Pl}(0, 6, 23, 5, 5, 1)_{202929} \\
\ell_{657} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{441818} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{441818} = \mathbf{Pl}(0, 13, 10, 25, 25, 1)_{856837} \\
\ell_{658} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{374173} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{374173} = \mathbf{Pl}(0, 11, 3, 28, 28, 1)_{954602} \\
\ell_{659} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{813877} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{813877} = \mathbf{Pl}(0, 24, 30, 20, 20, 1)_{694428} \\
\ell_{660} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{982978} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{982978} = \mathbf{Pl}(0, 29, 1, 1, 1, 1)_{70622} \\
\ell_{661} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1016818} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1016818} = \mathbf{Pl}(0, 30, 24, 17, 17, 1)_{595848} \\
\ell_{662} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{881528} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{881528} = \mathbf{Pl}(0, 26, 5, 23, 23, 1)_{791063} \\
\ell_{663} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{272685} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{272685} = \mathbf{Pl}(0, 8, 7, 12, 12, 1)_{431075} \\
\ell_{664} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{171222} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{171222} = \mathbf{Pl}(0, 5, 26, 21, 21, 1)_{726893} \\
\ell_{665} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{577100} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{577100} = \mathbf{Pl}(0, 17, 16, 11, 11, 1)_{398915} \\
\ell_{666} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{340336} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{340336} = \mathbf{Pl}(0, 10, 13, 15, 15, 1)_{529663}
\end{aligned}$$

$$\begin{aligned}
\ell_{667} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{712398} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{712398} = \mathbf{Pl}(0, 21, 15, 13, 13, 1)_{464328} \\
\ell_{668} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1050627} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1050627} = \mathbf{Pl}(0, 31, 18, 2, 2, 1)_{104431} \\
\ell_{669} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{103569} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{103569} = \mathbf{Pl}(0, 3, 11, 16, 16, 1)_{562266} \\
\ell_{670} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{644745} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{644745} = \mathbf{Pl}(0, 19, 22, 8, 8, 1)_{301087} \\
\ell_{671} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{678591} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{678591} = \mathbf{Pl}(0, 20, 20, 30, 30, 1)_{1021154} \\
\ell_{672} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{915333} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{915333} = \mathbf{Pl}(0, 27, 9, 4, 4, 1)_{169332} \\
\ell_{673} &= \begin{bmatrix} 1 & 1 & \eta^{24} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1016833} = \begin{bmatrix} 1 & 1 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1016833} = \mathbf{Pl}(0, 30, 0, 1, 1, 0)_{3166} \\
\ell_{674} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{881532} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{881532} = \mathbf{Pl}(0, 26, 31, 27, 27, 1)_{923645} \\
\ell_{675} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{35925} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{35925} = \mathbf{Pl}(0, 1, 30, 20, 20, 1)_{694405} \\
\ell_{676} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{610923} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{610923} = \mathbf{Pl}(0, 18, 25, 10, 10, 1)_{366747} \\
\ell_{677} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{949165} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{949165} = \mathbf{Pl}(0, 28, 7, 12, 12, 1)_{431095} \\
\ell_{678} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{306502} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{306502} = \mathbf{Pl}(0, 9, 23, 5, 5, 1)_{202932} \\
\ell_{679} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{780037} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{780037} = \mathbf{Pl}(0, 23, 9, 4, 4, 1)_{169328} \\
\ell_{680} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{475623} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{475623} = \mathbf{Pl}(0, 14, 14, 6, 6, 1)_{235106} \\
\ell_{681} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{407980} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{407980} = \mathbf{Pl}(0, 12, 16, 11, 11, 1)_{398910} \\
\ell_{682} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{746225} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{746225} = \mathbf{Pl}(0, 22, 11, 16, 16, 1)_{562285} \\
\ell_{683} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{137403} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{137403} = \mathbf{Pl}(0, 4, 21, 26, 26, 1)_{890257} \\
\ell_{684} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{847683} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{847683} = \mathbf{Pl}(0, 25, 18, 2, 2, 1)_{104425} \\
\ell_{685} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{543272} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{543272} = \mathbf{Pl}(0, 16, 12, 7, 7, 1)_{267718} \\
\ell_{686} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{238852} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{238852} = \mathbf{Pl}(0, 7, 28, 3, 3, 1)_{137773} \\
\ell_{687} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{509459} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{509459} = \mathbf{Pl}(0, 15, 2, 18, 18, 1)_{627183}
\end{aligned}$$

$$\begin{aligned}
\ell_{688} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{205048} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{205048} = \mathbf{Pl}(0, 6, 5, 23, 23, 1)_{791043} \\
\ell_{689} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{441824} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{441824} = \mathbf{Pl}(0, 13, 27, 31, 31, 1)_{1054324} \\
\ell_{690} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{374153} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{374153} = \mathbf{Pl}(0, 11, 22, 8, 8, 1)_{301079} \\
\ell_{691} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{813879} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{813879} = \mathbf{Pl}(0, 24, 8, 22, 22, 1)_{758514} \\
\ell_{692} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{69742} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{69742} = \mathbf{Pl}(0, 2, 15, 13, 13, 1)_{464309} \\
\ell_{693} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{983001} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{983001} = \mathbf{Pl}(0, 29, 17, 24, 24, 1)_{824558} \\
\ell_{694} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1016802} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1016802} = \mathbf{Pl}(0, 30, 1, 1, 1, 1)_{70623} \\
\ell_{695} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{272690} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{272690} = \mathbf{Pl}(0, 8, 24, 17, 17, 1)_{595826} \\
\ell_{696} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{171215} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{171215} = \mathbf{Pl}(0, 5, 6, 14, 14, 1)_{496481} \\
\ell_{697} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{577108} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{577108} = \mathbf{Pl}(0, 17, 29, 19, 19, 1)_{661622} \\
\ell_{698} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{340349} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{340349} = \mathbf{Pl}(0, 10, 3, 28, 28, 1)_{954601} \\
\ell_{699} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{712394} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{712394} = \mathbf{Pl}(0, 21, 4, 9, 9, 1)_{332691} \\
\ell_{700} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1050646} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1050646} = \mathbf{Pl}(0, 31, 26, 21, 21, 1)_{726919} \\
\ell_{701} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{103578} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{103578} = \mathbf{Pl}(0, 3, 10, 25, 25, 1)_{856827} \\
\ell_{702} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{644767} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{644767} = \mathbf{Pl}(0, 19, 20, 30, 30, 1)_{1021153} \\
\ell_{703} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{678590} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{678590} = \mathbf{Pl}(0, 20, 19, 29, 29, 1)_{988355} \\
\ell_{704} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{915344} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{915344} = \mathbf{Pl}(0, 27, 13, 15, 15, 1)_{529680} \\
\ell_{705} &= \begin{bmatrix} 1 & 1 & \eta^9 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{881537} = \begin{bmatrix} 1 & 1 & 26 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{881537} = \mathbf{Pl}(0, 26, 0, 1, 1, 0)_{3162} \\
\ell_{706} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1016832} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1016832} = \mathbf{Pl}(0, 30, 27, 31, 31, 1)_{1054341} \\
\ell_{707} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{35926} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{35926} = \mathbf{Pl}(0, 1, 26, 21, 21, 1)_{726889} \\
\ell_{708} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{610937} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{610937} = \mathbf{Pl}(0, 18, 17, 24, 24, 1)_{824547}
\end{aligned}$$

$$\begin{aligned}
\ell_{709} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{949169} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{949169} = \mathbf{Pl}(0, 28, 11, 16, 16, 1)_{562291} \\
\ell_{710} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{306509} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{306509} = \mathbf{Pl}(0, 9, 7, 12, 12, 1)_{431076} \\
\ell_{711} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{780052} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{780052} = \mathbf{Pl}(0, 23, 29, 19, 19, 1)_{661628} \\
\ell_{712} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{475625} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{475625} = \mathbf{Pl}(0, 14, 22, 8, 8, 1)_{301082} \\
\ell_{713} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{407976} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{407976} = \mathbf{Pl}(0, 12, 12, 7, 7, 1)_{267714} \\
\ell_{714} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{746215} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{746215} = \mathbf{Pl}(0, 22, 14, 6, 6, 1)_{235114} \\
\ell_{715} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{137407} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{137407} = \mathbf{Pl}(0, 4, 20, 30, 30, 1)_{1021138} \\
\ell_{716} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{847708} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{847708} = \mathbf{Pl}(0, 25, 31, 27, 27, 1)_{923644} \\
\ell_{717} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{543288} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{543288} = \mathbf{Pl}(0, 16, 5, 23, 23, 1)_{791053} \\
\ell_{718} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{238853} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{238853} = \mathbf{Pl}(0, 7, 9, 4, 4, 1)_{169312} \\
\ell_{719} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{509470} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{509470} = \mathbf{Pl}(0, 15, 19, 29, 29, 1)_{988350} \\
\ell_{720} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{205042} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{205042} = \mathbf{Pl}(0, 6, 24, 17, 17, 1)_{595824} \\
\ell_{721} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{441811} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{441811} = \mathbf{Pl}(0, 13, 2, 18, 18, 1)_{627181} \\
\ell_{722} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{374148} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{374148} = \mathbf{Pl}(0, 11, 28, 3, 3, 1)_{137777} \\
\ell_{723} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{813871} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{813871} = \mathbf{Pl}(0, 24, 6, 14, 14, 1)_{496500} \\
\ell_{724} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{69744} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{69744} = \mathbf{Pl}(0, 2, 13, 15, 15, 1)_{529655} \\
\ell_{725} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{982982} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{982982} = \mathbf{Pl}(0, 29, 23, 5, 5, 1)_{202952} \\
\ell_{726} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{881506} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{881506} = \mathbf{Pl}(0, 26, 1, 1, 1, 1)_{70619} \\
\ell_{727} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{272698} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{272698} = \mathbf{Pl}(0, 8, 10, 25, 25, 1)_{856832} \\
\ell_{728} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{171212} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{171212} = \mathbf{Pl}(0, 5, 16, 11, 11, 1)_{398903} \\
\ell_{729} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{577091} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{577091} = \mathbf{Pl}(0, 17, 18, 2, 2, 1)_{104417}
\end{aligned}$$

$$\begin{aligned}
\ell_{730} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{340343} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{340343} = \mathbf{Pl}(0, 10, 8, 22, 22, 1)_{758500} \\
\ell_{731} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{712413} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{712413} = \mathbf{Pl}(0, 21, 3, 28, 28, 1)_{954612} \\
\ell_{732} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1050635} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1050635} = \mathbf{Pl}(0, 31, 25, 10, 10, 1)_{366760} \\
\ell_{733} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{103579} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{103579} = \mathbf{Pl}(0, 3, 21, 26, 26, 1)_{890256} \\
\ell_{734} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{644750} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{644750} = \mathbf{Pl}(0, 19, 15, 13, 13, 1)_{464326} \\
\ell_{735} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{678570} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{678570} = \mathbf{Pl}(0, 20, 4, 9, 9, 1)_{332690} \\
\ell_{736} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{915349} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{915349} = \mathbf{Pl}(0, 27, 30, 20, 20, 1)_{694431} \\
\ell_{737} &= \begin{bmatrix} 1 & 1 & \eta^3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{272705} = \begin{bmatrix} 1 & 1 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{272705} = \mathbf{Pl}(0, 8, 0, 1, 1, 0)_{3144} \\
\ell_{738} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{171205} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{171205} = \mathbf{Pl}(0, 5, 9, 4, 4, 1)_{169310} \\
\ell_{739} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{35927} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{35927} = \mathbf{Pl}(0, 1, 8, 22, 22, 1)_{758491} \\
\ell_{740} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{610924} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{610924} = \mathbf{Pl}(0, 18, 16, 11, 11, 1)_{398916} \\
\ell_{741} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{949170} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{949170} = \mathbf{Pl}(0, 28, 24, 17, 17, 1)_{595846} \\
\ell_{742} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{306520} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{306520} = \mathbf{Pl}(0, 9, 5, 23, 23, 1)_{791046} \\
\ell_{743} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{780048} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{780048} = \mathbf{Pl}(0, 23, 13, 15, 15, 1)_{529676} \\
\ell_{744} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{475643} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{475643} = \mathbf{Pl}(0, 14, 21, 26, 26, 1)_{890267} \\
\ell_{745} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{407988} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{407988} = \mathbf{Pl}(0, 12, 29, 19, 19, 1)_{661617} \\
\ell_{746} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{746234} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{746234} = \mathbf{Pl}(0, 22, 10, 25, 25, 1)_{856846} \\
\ell_{747} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{137395} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{137395} = \mathbf{Pl}(0, 4, 2, 18, 18, 1)_{627172} \\
\ell_{748} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{847702} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{847702} = \mathbf{Pl}(0, 25, 26, 21, 21, 1)_{726913} \\
\ell_{749} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{543267} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{543267} = \mathbf{Pl}(0, 16, 18, 2, 2, 1)_{104416} \\
\ell_{750} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{238862} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{238862} = \mathbf{Pl}(0, 7, 15, 13, 13, 1)_{464314}
\end{aligned}$$

$$\begin{aligned}
\ell_{751} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{509453} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{509453} = \mathbf{Pl}(0, 15, 7, 12, 12, 1)_{431082} \\
\ell_{752} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{205052} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{205052} = \mathbf{Pl}(0, 6, 31, 27, 27, 1)_{923625} \\
\ell_{753} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{441798} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{441798} = \mathbf{Pl}(0, 13, 23, 5, 5, 1)_{202936} \\
\ell_{754} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{374175} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{374175} = \mathbf{Pl}(0, 11, 20, 30, 30, 1)_{1021145} \\
\ell_{755} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{813860} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{813860} = \mathbf{Pl}(0, 24, 28, 3, 3, 1)_{137790} \\
\ell_{756} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{69738} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{69738} = \mathbf{Pl}(0, 2, 4, 9, 9, 1)_{332672} \\
\ell_{757} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{982984} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{982984} = \mathbf{Pl}(0, 29, 12, 7, 7, 1)_{267731} \\
\ell_{758} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1016825} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1016825} = \mathbf{Pl}(0, 30, 17, 24, 24, 1)_{824559} \\
\ell_{759} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{881515} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{881515} = \mathbf{Pl}(0, 26, 25, 10, 10, 1)_{366755} \\
\ell_{760} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{272674} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{272674} = \mathbf{Pl}(0, 8, 1, 1, 1, 1)_{70601} \\
\ell_{761} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{577109} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{577109} = \mathbf{Pl}(0, 17, 30, 20, 20, 1)_{694421} \\
\ell_{762} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{340329} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{340329} = \mathbf{Pl}(0, 10, 22, 8, 8, 1)_{301078} \\
\ell_{763} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{712391} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{712391} = \mathbf{Pl}(0, 21, 14, 6, 6, 1)_{235113} \\
\ell_{764} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1050639} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1050639} = \mathbf{Pl}(0, 31, 6, 14, 14, 1)_{496507} \\
\ell_{765} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{103584} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{103584} = \mathbf{Pl}(0, 3, 27, 31, 31, 1)_{1054314} \\
\ell_{766} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{644766} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{644766} = \mathbf{Pl}(0, 19, 19, 29, 29, 1)_{988354} \\
\ell_{767} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{678577} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{678577} = \mathbf{Pl}(0, 20, 11, 16, 16, 1)_{562283} \\
\ell_{768} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{915357} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{915357} = \mathbf{Pl}(0, 27, 3, 28, 28, 1)_{954618} \\
\ell_{769} &= \begin{bmatrix} 1 & 1 & \eta^5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{171233} = \begin{bmatrix} 1 & 1 & 5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{171233} = \mathbf{Pl}(0, 5, 0, 1, 1, 0)_{3141} \\
\ell_{770} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{272682} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{272682} = \mathbf{Pl}(0, 8, 4, 9, 9, 1)_{332678} \\
\ell_{771} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{35928} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{35928} = \mathbf{Pl}(0, 1, 5, 23, 23, 1)_{791038}
\end{aligned}$$

$$\begin{aligned}
\ell_{772} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{610938} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{610938} = \mathbf{Pl}(0, 18, 10, 25, 25, 1)_{856842} \\
\ell_{773} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{949166} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{949166} = \mathbf{Pl}(0, 28, 15, 13, 13, 1)_{464335} \\
\ell_{774} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{306527} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{306527} = \mathbf{Pl}(0, 9, 20, 30, 30, 1)_{1021143} \\
\ell_{775} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{780057} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{780057} = \mathbf{Pl}(0, 23, 17, 24, 24, 1)_{824552} \\
\ell_{776} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{475637} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{475637} = \mathbf{Pl}(0, 14, 30, 20, 20, 1)_{694418} \\
\ell_{777} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{408000} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{408000} = \mathbf{Pl}(0, 12, 27, 31, 31, 1)_{1054323} \\
\ell_{778} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{746224} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{746224} = \mathbf{Pl}(0, 22, 13, 15, 15, 1)_{529675} \\
\ell_{779} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{137399} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{137399} = \mathbf{Pl}(0, 4, 8, 22, 22, 1)_{758494} \\
\ell_{780} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{847693} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{847693} = \mathbf{Pl}(0, 25, 7, 12, 12, 1)_{431092} \\
\ell_{781} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{543283} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{543283} = \mathbf{Pl}(0, 16, 2, 18, 18, 1)_{627184} \\
\ell_{782} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{238859} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{238859} = \mathbf{Pl}(0, 7, 25, 10, 10, 1)_{366736} \\
\ell_{783} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{509444} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{509444} = \mathbf{Pl}(0, 15, 28, 3, 3, 1)_{137781} \\
\ell_{784} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{205054} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{205054} = \mathbf{Pl}(0, 6, 19, 29, 29, 1)_{988341} \\
\ell_{785} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{441801} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{441801} = \mathbf{Pl}(0, 13, 22, 8, 8, 1)_{301081} \\
\ell_{786} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{374166} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{374166} = \mathbf{Pl}(0, 11, 26, 21, 21, 1)_{726899} \\
\ell_{787} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{813884} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{813884} = \mathbf{Pl}(0, 24, 31, 27, 27, 1)_{923643} \\
\ell_{788} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{69740} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{69740} = \mathbf{Pl}(0, 2, 16, 11, 11, 1)_{398900} \\
\ell_{789} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{983003} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{983003} = \mathbf{Pl}(0, 29, 21, 26, 26, 1)_{890282} \\
\ell_{790} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1016807} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1016807} = \mathbf{Pl}(0, 30, 14, 6, 6, 1)_{235122} \\
\ell_{791} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{881521} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{881521} = \mathbf{Pl}(0, 26, 11, 16, 16, 1)_{562289} \\
\ell_{792} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{171202} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{171202} = \mathbf{Pl}(0, 5, 1, 1, 1, 1)_{70598}
\end{aligned}$$

$$\begin{aligned}
\ell_{793} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{577094} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{577094} = \mathbf{Pl}(0, 17, 23, 5, 5, 1)_{202940} \\
\ell_{794} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{340323} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{340323} = \mathbf{Pl}(0, 10, 18, 2, 2, 1)_{104410} \\
\ell_{795} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{712404} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{712404} = \mathbf{Pl}(0, 21, 29, 19, 19, 1)_{661626} \\
\ell_{796} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1050642} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1050642} = \mathbf{Pl}(0, 31, 24, 17, 17, 1)_{595849} \\
\ell_{797} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{103581} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{103581} = \mathbf{Pl}(0, 3, 3, 28, 28, 1)_{954594} \\
\ell_{798} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{644751} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{644751} = \mathbf{Pl}(0, 19, 6, 14, 14, 1)_{496495} \\
\ell_{799} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{678565} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{678565} = \mathbf{Pl}(0, 20, 9, 4, 4, 1)_{169325} \\
\ell_{800} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{915336} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{915336} = \mathbf{Pl}(0, 27, 12, 7, 7, 1)_{267729} \\
\ell_{801} &= \begin{bmatrix} 1 & 1 & \eta^{10} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{577121} = \begin{bmatrix} 1 & 1 & 17 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{577121} = \mathbf{Pl}(0, 17, 0, 1, 1, 0)_{3153} \\
\ell_{802} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{340332} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{340332} = \mathbf{Pl}(0, 10, 16, 11, 11, 1)_{398908} \\
\ell_{803} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{35929} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{35929} = \mathbf{Pl}(0, 1, 17, 24, 24, 1)_{824530} \\
\ell_{804} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{610925} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{610925} = \mathbf{Pl}(0, 18, 7, 12, 12, 1)_{431085} \\
\ell_{805} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{949161} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{949161} = \mathbf{Pl}(0, 28, 22, 8, 8, 1)_{301096} \\
\ell_{806} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{306503} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{306503} = \mathbf{Pl}(0, 9, 14, 6, 6, 1)_{235101} \\
\ell_{807} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{780060} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{780060} = \mathbf{Pl}(0, 23, 31, 27, 27, 1)_{923642} \\
\ell_{808} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{475621} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{475621} = \mathbf{Pl}(0, 14, 9, 4, 4, 1)_{169319} \\
\ell_{809} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{407986} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{407986} = \mathbf{Pl}(0, 12, 24, 17, 17, 1)_{595830} \\
\ell_{810} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{746212} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{746212} = \mathbf{Pl}(0, 22, 28, 3, 3, 1)_{137788} \\
\ell_{811} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{137392} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{137392} = \mathbf{Pl}(0, 4, 13, 15, 15, 1)_{529657} \\
\ell_{812} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{847712} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{847712} = \mathbf{Pl}(0, 25, 27, 31, 31, 1)_{1054336} \\
\ell_{813} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{543290} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{543290} = \mathbf{Pl}(0, 16, 10, 25, 25, 1)_{856840}
\end{aligned}$$



$$\begin{aligned}
\ell_{814} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{238851} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{238851} = \mathbf{Pl}(0, 7, 18, 2, 2, 1)_{104407} \\
\ell_{815} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{509469} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{509469} = \mathbf{Pl}(0, 15, 3, 28, 28, 1)_{954606} \\
\ell_{816} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{205051} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{205051} = \mathbf{Pl}(0, 6, 21, 26, 26, 1)_{890259} \\
\ell_{817} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{441802} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{441802} = \mathbf{Pl}(0, 13, 4, 9, 9, 1)_{332683} \\
\ell_{818} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{374164} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{374164} = \mathbf{Pl}(0, 11, 29, 19, 19, 1)_{661616} \\
\ell_{819} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{813864} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{813864} = \mathbf{Pl}(0, 24, 12, 7, 7, 1)_{267726} \\
\ell_{820} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{69750} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{69750} = \mathbf{Pl}(0, 2, 26, 21, 21, 1)_{726890} \\
\ell_{821} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{982993} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{982993} = \mathbf{Pl}(0, 29, 11, 16, 16, 1)_{562292} \\
\ell_{822} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1016830} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1016830} = \mathbf{Pl}(0, 30, 19, 29, 29, 1)_{988365} \\
\ell_{823} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{881523} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{881523} = \mathbf{Pl}(0, 26, 2, 18, 18, 1)_{627194} \\
\ell_{824} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{272703} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{272703} = \mathbf{Pl}(0, 8, 20, 30, 30, 1)_{1021142} \\
\ell_{825} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{171224} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{171224} = \mathbf{Pl}(0, 5, 5, 23, 23, 1)_{791042} \\
\ell_{826} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{577090} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{577090} = \mathbf{Pl}(0, 17, 1, 1, 1, 1)_{70610} \\
\ell_{827} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{712399} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{712399} = \mathbf{Pl}(0, 21, 6, 14, 14, 1)_{496497} \\
\ell_{828} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1050630} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1050630} = \mathbf{Pl}(0, 31, 23, 5, 5, 1)_{202954} \\
\ell_{829} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{103566} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{103566} = \mathbf{Pl}(0, 3, 15, 13, 13, 1)_{464310} \\
\ell_{830} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{644757} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{644757} = \mathbf{Pl}(0, 19, 30, 20, 20, 1)_{694423} \\
\ell_{831} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{678583} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{678583} = \mathbf{Pl}(0, 20, 8, 22, 22, 1)_{758510} \\
\ell_{832} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{915339} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{915339} = \mathbf{Pl}(0, 27, 25, 10, 10, 1)_{366756} \\
\ell_{833} &= \begin{bmatrix} 1 & 1 & \eta^6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{340353} = \begin{bmatrix} 1 & 1 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{340353} = \mathbf{Pl}(0, 10, 0, 1, 1, 0)_{3146} \\
\ell_{834} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{577105} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{577105} = \mathbf{Pl}(0, 17, 11, 16, 16, 1)_{562280}
\end{aligned}$$

$$\begin{aligned}
\ell_{835} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{35930} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{35930} = \mathbf{Pl}(0, 1, 10, 25, 25, 1)_{856825} \\
\ell_{836} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{610943} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{610943} = \mathbf{Pl}(0, 18, 20, 30, 30, 1)_{1021152} \\
\ell_{837} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{949173} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{949173} = \mathbf{Pl}(0, 28, 30, 20, 20, 1)_{694432} \\
\ell_{838} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{306512} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{306512} = \mathbf{Pl}(0, 9, 13, 15, 15, 1)_{529662} \\
\ell_{839} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{780045} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{780045} = \mathbf{Pl}(0, 23, 7, 12, 12, 1)_{431090} \\
\ell_{840} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{475627} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{475627} = \mathbf{Pl}(0, 14, 25, 10, 10, 1)_{366743} \\
\ell_{841} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{407998} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{407998} = \mathbf{Pl}(0, 12, 19, 29, 29, 1)_{988347} \\
\ell_{842} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{746230} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{746230} = \mathbf{Pl}(0, 22, 26, 21, 21, 1)_{726910} \\
\ell_{843} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{137388} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{137388} = \mathbf{Pl}(0, 4, 16, 11, 11, 1)_{398902} \\
\ell_{844} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{847687} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{847687} = \mathbf{Pl}(0, 25, 14, 6, 6, 1)_{235117} \\
\ell_{845} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{543274} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{543274} = \mathbf{Pl}(0, 16, 4, 9, 9, 1)_{332686} \\
\ell_{846} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{238854} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{238854} = \mathbf{Pl}(0, 7, 23, 5, 5, 1)_{202930} \\
\ell_{847} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{509460} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{509460} = \mathbf{Pl}(0, 15, 29, 19, 19, 1)_{661620} \\
\ell_{848} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{205053} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{205053} = \mathbf{Pl}(0, 6, 3, 28, 28, 1)_{954597} \\
\ell_{849} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{441797} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{441797} = \mathbf{Pl}(0, 13, 9, 4, 4, 1)_{169318} \\
\ell_{850} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{374169} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{374169} = \mathbf{Pl}(0, 11, 17, 24, 24, 1)_{824540} \\
\ell_{851} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{813888} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{813888} = \mathbf{Pl}(0, 24, 27, 31, 31, 1)_{1054335} \\
\ell_{852} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{69752} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{69752} = \mathbf{Pl}(0, 2, 5, 23, 23, 1)_{791039} \\
\ell_{853} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{982990} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{982990} = \mathbf{Pl}(0, 29, 15, 13, 13, 1)_{464336} \\
\ell_{854} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1016804} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1016804} = \mathbf{Pl}(0, 30, 28, 3, 3, 1)_{137796} \\
\ell_{855} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{881513} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{881513} = \mathbf{Pl}(0, 26, 22, 8, 8, 1)_{301094}
\end{aligned}$$

$$\begin{aligned}
\ell_{856} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{272695} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{272695} = \mathbf{Pl}(0, 8, 8, 22, 22, 1)_{758498} \\
\ell_{857} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{171219} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{171219} = \mathbf{Pl}(0, 5, 2, 18, 18, 1)_{627173} \\
\ell_{858} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{340322} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{340322} = \mathbf{Pl}(0, 10, 1, 1, 1, 1)_{70603} \\
\ell_{859} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{712412} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{712412} = \mathbf{Pl}(0, 21, 31, 27, 27, 1)_{923640} \\
\ell_{860} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1050651} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1050651} = \mathbf{Pl}(0, 31, 21, 26, 26, 1)_{890284} \\
\ell_{861} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{103567} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{103567} = \mathbf{Pl}(0, 3, 6, 14, 14, 1)_{496479} \\
\ell_{862} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{644744} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{644744} = \mathbf{Pl}(0, 19, 12, 7, 7, 1)_{267721} \\
\ell_{863} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{678563} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{678563} = \mathbf{Pl}(0, 20, 18, 2, 2, 1)_{104420} \\
\ell_{864} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{915346} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{915346} = \mathbf{Pl}(0, 27, 24, 17, 17, 1)_{595845} \\
\ell_{865} &= \begin{bmatrix} 1 & 1 & \eta^{22} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{712417} = \begin{bmatrix} 1 & 1 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{712417} = \mathbf{Pl}(0, 21, 0, 1, 1, 0)_{3157} \\
\ell_{866} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1050655} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1050655} = \mathbf{Pl}(0, 31, 20, 30, 30, 1)_{1021165} \\
\ell_{867} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{35931} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{35931} = \mathbf{Pl}(0, 1, 21, 26, 26, 1)_{890254} \\
\ell_{868} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{610926} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{610926} = \mathbf{Pl}(0, 18, 15, 13, 13, 1)_{464325} \\
\ell_{869} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{949174} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{949174} = \mathbf{Pl}(0, 28, 26, 21, 21, 1)_{726916} \\
\ell_{870} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{306517} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{306517} = \mathbf{Pl}(0, 9, 30, 20, 20, 1)_{694413} \\
\ell_{871} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{780049} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{780049} = \mathbf{Pl}(0, 23, 11, 16, 16, 1)_{562286} \\
\ell_{872} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{475641} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{475641} = \mathbf{Pl}(0, 14, 17, 24, 24, 1)_{824543} \\
\ell_{873} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{407978} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{407978} = \mathbf{Pl}(0, 12, 4, 9, 9, 1)_{332682} \\
\ell_{874} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{746219} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{746219} = \mathbf{Pl}(0, 22, 25, 10, 10, 1)_{366751} \\
\ell_{875} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{137384} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{137384} = \mathbf{Pl}(0, 4, 12, 7, 7, 1)_{267706} \\
\ell_{876} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{847689} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{847689} = \mathbf{Pl}(0, 25, 22, 8, 8, 1)_{301093}
\end{aligned}$$

$$\begin{aligned}
\ell_{877} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{543293} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{543293} = \mathbf{Pl}(0, 16, 3, 28, 28, 1)_{954607} \\
\ell_{878} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{238861} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{238861} = \mathbf{Pl}(0, 7, 7, 12, 12, 1)_{431074} \\
\ell_{879} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{509443} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{509443} = \mathbf{Pl}(0, 15, 18, 2, 2, 1)_{104415} \\
\ell_{880} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{205047} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{205047} = \mathbf{Pl}(0, 6, 8, 22, 22, 1)_{758496} \\
\ell_{881} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{441812} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{441812} = \mathbf{Pl}(0, 13, 29, 19, 19, 1)_{661618} \\
\ell_{882} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{374150} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{374150} = \mathbf{Pl}(0, 11, 23, 5, 5, 1)_{202934} \\
\ell_{883} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{813875} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{813875} = \mathbf{Pl}(0, 24, 2, 18, 18, 1)_{627192} \\
\ell_{884} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{69746} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{69746} = \mathbf{Pl}(0, 2, 24, 17, 17, 1)_{595820} \\
\ell_{885} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{982992} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{982992} = \mathbf{Pl}(0, 29, 13, 15, 15, 1)_{529682} \\
\ell_{886} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1016805} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1016805} = \mathbf{Pl}(0, 30, 9, 4, 4, 1)_{169335} \\
\ell_{887} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{881508} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{881508} = \mathbf{Pl}(0, 26, 28, 3, 3, 1)_{137792} \\
\ell_{888} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{272687} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{272687} = \mathbf{Pl}(0, 8, 6, 14, 14, 1)_{496484} \\
\ell_{889} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{171230} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{171230} = \mathbf{Pl}(0, 5, 19, 29, 29, 1)_{988340} \\
\ell_{890} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{577095} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{577095} = \mathbf{Pl}(0, 17, 14, 6, 6, 1)_{235109} \\
\ell_{891} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{340352} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{340352} = \mathbf{Pl}(0, 10, 27, 31, 31, 1)_{1054321} \\
\ell_{892} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{712386} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{712386} = \mathbf{Pl}(0, 21, 1, 1, 1, 1)_{70614} \\
\ell_{893} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{103564} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{103564} = \mathbf{Pl}(0, 3, 16, 11, 11, 1)_{398901} \\
\ell_{894} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{644760} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{644760} = \mathbf{Pl}(0, 19, 5, 23, 23, 1)_{791056} \\
\ell_{895} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{678588} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{678588} = \mathbf{Pl}(0, 20, 31, 27, 27, 1)_{923639} \\
\ell_{896} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{915354} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{915354} = \mathbf{Pl}(0, 27, 10, 25, 25, 1)_{856851} \\
\ell_{897} &= \begin{bmatrix} 1 & 1 & \eta^{15} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1050657} = \begin{bmatrix} 1 & 1 & 31 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1050657} = \mathbf{Pl}(0, 31, 0, 1, 1, 0)_{3167}
\end{aligned}$$

$$\begin{aligned}
\ell_{898} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{712405} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{712405} = \mathbf{Pl}(0, 21, 30, 20, 20, 1)_{694425} \\
\ell_{899} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{35932} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{35932} = \mathbf{Pl}(0, 1, 31, 27, 27, 1)_{923620} \\
\ell_{900} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{610944} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{610944} = \mathbf{Pl}(0, 18, 27, 31, 31, 1)_{1054329} \\
\ell_{901} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{949162} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{949162} = \mathbf{Pl}(0, 28, 4, 9, 9, 1)_{332698} \\
\ell_{902} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{306526} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{306526} = \mathbf{Pl}(0, 9, 19, 29, 29, 1)_{988344} \\
\ell_{903} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{780040} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{780040} = \mathbf{Pl}(0, 23, 12, 7, 7, 1)_{267725} \\
\ell_{904} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{475639} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{475639} = \mathbf{Pl}(0, 14, 8, 22, 22, 1)_{758504} \\
\ell_{905} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{407974} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{407974} = \mathbf{Pl}(0, 12, 23, 5, 5, 1)_{202935} \\
\ell_{906} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{746237} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{746237} = \mathbf{Pl}(0, 22, 3, 28, 28, 1)_{954613} \\
\ell_{907} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{137380} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{137380} = \mathbf{Pl}(0, 4, 28, 3, 3, 1)_{137770} \\
\ell_{908} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{847698} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{847698} = \mathbf{Pl}(0, 25, 24, 17, 17, 1)_{595843} \\
\ell_{909} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{543277} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{543277} = \mathbf{Pl}(0, 16, 7, 12, 12, 1)_{431083} \\
\ell_{910} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{238860} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{238860} = \mathbf{Pl}(0, 7, 16, 11, 11, 1)_{398905} \\
\ell_{911} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{509454} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{509454} = \mathbf{Pl}(0, 15, 15, 13, 13, 1)_{464322} \\
\ell_{912} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{205041} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{205041} = \mathbf{Pl}(0, 6, 11, 16, 16, 1)_{562269} \\
\ell_{913} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{441823} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{441823} = \mathbf{Pl}(0, 13, 20, 30, 30, 1)_{1021147} \\
\ell_{914} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{374159} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{374159} = \mathbf{Pl}(0, 11, 6, 14, 14, 1)_{496487} \\
\ell_{915} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{813867} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{813867} = \mathbf{Pl}(0, 24, 25, 10, 10, 1)_{366753} \\
\ell_{916} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{69748} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{69748} = \mathbf{Pl}(0, 2, 29, 19, 19, 1)_{661607} \\
\ell_{917} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{982995} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{982995} = \mathbf{Pl}(0, 29, 2, 18, 18, 1)_{627197} \\
\ell_{918} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1016827} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1016827} = \mathbf{Pl}(0, 30, 21, 26, 26, 1)_{890283}
\end{aligned}$$

$$\begin{aligned}
\ell_{919} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{881530} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{881530} = \mathbf{Pl}(0, 26, 10, 25, 25, 1)_{856850} \\
\ell_{920} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{272679} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{272679} = \mathbf{Pl}(0, 8, 14, 6, 6, 1)_{235100} \\
\ell_{921} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{171225} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{171225} = \mathbf{Pl}(0, 5, 17, 24, 24, 1)_{824534} \\
\ell_{922} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{577112} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{577112} = \mathbf{Pl}(0, 17, 5, 23, 23, 1)_{791054} \\
\ell_{923} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{340342} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{340342} = \mathbf{Pl}(0, 10, 26, 21, 21, 1)_{726898} \\
\ell_{924} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1050626} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1050626} = \mathbf{Pl}(0, 31, 1, 1, 1, 1)_{70624} \\
\ell_{925} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{103561} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{103561} = \mathbf{Pl}(0, 3, 22, 8, 8, 1)_{301071} \\
\ell_{926} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{644741} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{644741} = \mathbf{Pl}(0, 19, 9, 4, 4, 1)_{169324} \\
\ell_{927} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{678576} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{678576} = \mathbf{Pl}(0, 20, 13, 15, 15, 1)_{529673} \\
\ell_{928} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{915331} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{915331} = \mathbf{Pl}(0, 27, 18, 2, 2, 1)_{104427} \\
\ell_{929} &= \begin{bmatrix} 1 & 1 & \eta^{18} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{103585} = \begin{bmatrix} 1 & 1 & 3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{103585} = \mathbf{Pl}(0, 3, 0, 1, 1, 0)_{3139} \\
\ell_{930} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{644755} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{644755} = \mathbf{Pl}(0, 19, 2, 18, 18, 1)_{627187} \\
\ell_{931} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{35933} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{35933} = \mathbf{Pl}(0, 1, 3, 28, 28, 1)_{954592} \\
\ell_{932} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{610927} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{610927} = \mathbf{Pl}(0, 18, 6, 14, 14, 1)_{496494} \\
\ell_{933} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{949176} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{949176} = \mathbf{Pl}(0, 28, 5, 23, 23, 1)_{791065} \\
\ell_{934} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{306504} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{306504} = \mathbf{Pl}(0, 9, 12, 7, 7, 1)_{267711} \\
\ell_{935} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{780046} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{780046} = \mathbf{Pl}(0, 23, 15, 13, 13, 1)_{464330} \\
\ell_{936} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{475642} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{475642} = \mathbf{Pl}(0, 14, 10, 25, 25, 1)_{856838} \\
\ell_{937} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{407973} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{407973} = \mathbf{Pl}(0, 12, 9, 4, 4, 1)_{169317} \\
\ell_{938} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{746226} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{746226} = \mathbf{Pl}(0, 22, 24, 17, 17, 1)_{595840} \\
\ell_{939} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{137408} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{137408} = \mathbf{Pl}(0, 4, 27, 31, 31, 1)_{1054315}
\end{aligned}$$

$$\begin{aligned}
\ell_{940} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{847701} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{847701} = \mathbf{Pl}(0, 25, 30, 20, 20, 1)_{694429} \\
\ell_{941} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{543284} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{543284} = \mathbf{Pl}(0, 16, 29, 19, 19, 1)_{661621} \\
\ell_{942} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{238879} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{238879} = \mathbf{Pl}(0, 7, 20, 30, 30, 1)_{1021141} \\
\ell_{943} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{509446} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{509446} = \mathbf{Pl}(0, 15, 23, 5, 5, 1)_{202938} \\
\ell_{944} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{205027} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{205027} = \mathbf{Pl}(0, 6, 18, 2, 2, 1)_{104406} \\
\ell_{945} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{441817} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{441817} = \mathbf{Pl}(0, 13, 17, 24, 24, 1)_{824542} \\
\ell_{946} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{374171} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{374171} = \mathbf{Pl}(0, 11, 21, 26, 26, 1)_{890264} \\
\ell_{947} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{813865} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{813865} = \mathbf{Pl}(0, 24, 22, 8, 8, 1)_{301092} \\
\ell_{948} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{69758} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{69758} = \mathbf{Pl}(0, 2, 19, 29, 29, 1)_{988337} \\
\ell_{949} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{982988} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{982988} = \mathbf{Pl}(0, 29, 16, 11, 11, 1)_{398927} \\
\ell_{950} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1016811} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1016811} = \mathbf{Pl}(0, 30, 25, 10, 10, 1)_{366759} \\
\ell_{951} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{881526} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{881526} = \mathbf{Pl}(0, 26, 26, 21, 21, 1)_{726914} \\
\ell_{952} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{272700} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{272700} = \mathbf{Pl}(0, 8, 31, 27, 27, 1)_{923627} \\
\ell_{953} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{171204} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{171204} = \mathbf{Pl}(0, 5, 28, 3, 3, 1)_{137771} \\
\ell_{954} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{577104} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{577104} = \mathbf{Pl}(0, 17, 13, 15, 15, 1)_{529670} \\
\ell_{955} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{340327} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{340327} = \mathbf{Pl}(0, 10, 14, 6, 6, 1)_{235102} \\
\ell_{956} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{712401} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{712401} = \mathbf{Pl}(0, 21, 11, 16, 16, 1)_{562284} \\
\ell_{957} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1050647} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1050647} = \mathbf{Pl}(0, 31, 8, 22, 22, 1)_{758521} \\
\ell_{958} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{103554} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{103554} = \mathbf{Pl}(0, 3, 1, 1, 1, 1)_{70596} \\
\ell_{959} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{678573} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{678573} = \mathbf{Pl}(0, 20, 7, 12, 12, 1)_{431087} \\
\ell_{960} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{915338} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{915338} = \mathbf{Pl}(0, 27, 4, 9, 9, 1)_{332697}
\end{aligned}$$

$$\begin{aligned}
\ell_{961} &= \begin{bmatrix} 1 & 1 & \eta^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{644769} = \begin{bmatrix} 1 & 1 & 19 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{644769} = \mathbf{Pl}(0, 19, 0, 1, 1, 0)_{3155} \\
\ell_{962} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{103555} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{103555} = \mathbf{Pl}(0, 3, 18, 2, 2, 1)_{104403} \\
\ell_{963} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{35934} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{35934} = \mathbf{Pl}(0, 1, 19, 29, 29, 1)_{988336} \\
\ell_{964} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{610941} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{610941} = \mathbf{Pl}(0, 18, 3, 28, 28, 1)_{954609} \\
\ell_{965} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{949164} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{949164} = \mathbf{Pl}(0, 28, 16, 11, 11, 1)_{398926} \\
\ell_{966} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{306511} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{306511} = \mathbf{Pl}(0, 9, 6, 14, 14, 1)_{496485} \\
\ell_{967} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{780059} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{780059} = \mathbf{Pl}(0, 23, 21, 26, 26, 1)_{890276} \\
\ell_{968} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{475640} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{475640} = \mathbf{Pl}(0, 14, 5, 23, 23, 1)_{791051} \\
\ell_{969} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{407977} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{407977} = \mathbf{Pl}(0, 12, 22, 8, 8, 1)_{301080} \\
\ell_{970} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{746216} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{746216} = \mathbf{Pl}(0, 22, 12, 7, 7, 1)_{267724} \\
\ell_{971} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{137404} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{137404} = \mathbf{Pl}(0, 4, 31, 27, 27, 1)_{923623} \\
\ell_{972} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{847694} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{847694} = \mathbf{Pl}(0, 25, 15, 13, 13, 1)_{464332} \\
\ell_{973} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{543268} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{543268} = \mathbf{Pl}(0, 16, 28, 3, 3, 1)_{137782} \\
\ell_{974} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{238874} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{238874} = \mathbf{Pl}(0, 7, 10, 25, 25, 1)_{856831} \\
\ell_{975} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{509451} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{509451} = \mathbf{Pl}(0, 15, 25, 10, 10, 1)_{366744} \\
\ell_{976} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{205029} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{205029} = \mathbf{Pl}(0, 6, 9, 4, 4, 1)_{169311} \\
\ell_{977} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{441814} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{441814} = \mathbf{Pl}(0, 13, 26, 21, 21, 1)_{726901} \\
\ell_{978} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{374162} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{374162} = \mathbf{Pl}(0, 11, 24, 17, 17, 1)_{595829} \\
\ell_{979} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{813873} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{813873} = \mathbf{Pl}(0, 24, 11, 16, 16, 1)_{562287} \\
\ell_{980} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{69760} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{69760} = \mathbf{Pl}(0, 2, 27, 31, 31, 1)_{1054313} \\
\ell_{981} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{982999} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{982999} = \mathbf{Pl}(0, 29, 8, 22, 22, 1)_{758519}
\end{aligned}$$



$$\begin{aligned}
\ell_{982} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1016821} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1016821} = \mathbf{Pl}(0, 30, 30, 20, 20, 1)_{694434} \\
\ell_{983} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{881520} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{881520} = \mathbf{Pl}(0, 26, 13, 15, 15, 1)_{529679} \\
\ell_{984} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{272692} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{272692} = \mathbf{Pl}(0, 8, 29, 19, 19, 1)_{661613} \\
\ell_{985} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{171207} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{171207} = \mathbf{Pl}(0, 5, 14, 6, 6, 1)_{235097} \\
\ell_{986} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{577119} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{577119} = \mathbf{Pl}(0, 17, 20, 30, 30, 1)_{1021151} \\
\ell_{987} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{340333} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{340333} = \mathbf{Pl}(0, 10, 7, 12, 12, 1)_{431077} \\
\ell_{988} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{712390} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{712390} = \mathbf{Pl}(0, 21, 23, 5, 5, 1)_{202944} \\
\ell_{989} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1050634} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1050634} = \mathbf{Pl}(0, 31, 4, 9, 9, 1)_{332701} \\
\ell_{990} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{644738} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{644738} = \mathbf{Pl}(0, 19, 1, 1, 1, 1)_{70612} \\
\ell_{991} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{678585} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{678585} = \mathbf{Pl}(0, 20, 17, 24, 24, 1)_{824549} \\
\ell_{992} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{915347} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{915347} = \mathbf{Pl}(0, 27, 2, 18, 18, 1)_{627195} \\
\ell_{993} &= \begin{bmatrix} 1 & 1 & \eta^7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{678593} = \begin{bmatrix} 1 & 1 & 20 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{678593} = \mathbf{Pl}(0, 20, 0, 1, 1, 0)_{3156} \\
\ell_{994} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{915355} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{915355} = \mathbf{Pl}(0, 27, 21, 26, 26, 1)_{890280} \\
\ell_{995} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{35935} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{35935} = \mathbf{Pl}(0, 1, 20, 30, 30, 1)_{1021135} \\
\ell_{996} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{610928} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{610928} = \mathbf{Pl}(0, 18, 13, 15, 15, 1)_{529671} \\
\ell_{997} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{949163} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{949163} = \mathbf{Pl}(0, 28, 25, 10, 10, 1)_{366757} \\
\ell_{998} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{306518} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{306518} = \mathbf{Pl}(0, 9, 26, 21, 21, 1)_{726897} \\
\ell_{999} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{780039} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{780039} = \mathbf{Pl}(0, 23, 14, 6, 6, 1)_{235115} \\
\ell_{1000} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{475622} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{475622} = \mathbf{Pl}(0, 14, 23, 5, 5, 1)_{202937} \\
\ell_{1001} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{407997} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{407997} = \mathbf{Pl}(0, 12, 3, 28, 28, 1)_{954603} \\
\ell_{1002} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{746233} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{746233} = \mathbf{Pl}(0, 22, 17, 24, 24, 1)_{824551}
\end{aligned}$$

$$\begin{aligned}
\ell_{1003} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{137400} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{137400} = \mathbf{Pl}(0, 4, 5, 23, 23, 1)_{791041} \\
\ell_{1004} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{847684} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{847684} = \mathbf{Pl}(0, 25, 28, 3, 3, 1)_{137791} \\
\ell_{1005} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{543287} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{543287} = \mathbf{Pl}(0, 16, 8, 22, 22, 1)_{758506} \\
\ell_{1006} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{238865} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{238865} = \mathbf{Pl}(0, 7, 11, 16, 16, 1)_{562270} \\
\ell_{1007} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{509468} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{509468} = \mathbf{Pl}(0, 15, 31, 27, 27, 1)_{923634} \\
\ell_{1008} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{205039} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{205039} = \mathbf{Pl}(0, 6, 6, 14, 14, 1)_{496482} \\
\ell_{1009} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{441795} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{441795} = \mathbf{Pl}(0, 13, 18, 2, 2, 1)_{104413} \\
\ell_{1010} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{374157} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{374157} = \mathbf{Pl}(0, 11, 7, 12, 12, 1)_{431078} \\
\ell_{1011} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{813886} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{813886} = \mathbf{Pl}(0, 24, 19, 29, 29, 1)_{988359} \\
\ell_{1012} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{69754} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{69754} = \mathbf{Pl}(0, 2, 10, 25, 25, 1)_{856826} \\
\ell_{1013} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{982997} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{982997} = \mathbf{Pl}(0, 29, 30, 20, 20, 1)_{694433} \\
\ell_{1014} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1016820} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1016820} = \mathbf{Pl}(0, 30, 29, 19, 19, 1)_{661635} \\
\ell_{1015} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{881509} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{881509} = \mathbf{Pl}(0, 26, 9, 4, 4, 1)_{169331} \\
\ell_{1016} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{272684} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{272684} = \mathbf{Pl}(0, 8, 16, 11, 11, 1)_{398906} \\
\ell_{1017} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{171210} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{171210} = \mathbf{Pl}(0, 5, 4, 9, 9, 1)_{332675} \\
\ell_{1018} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{577097} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{577097} = \mathbf{Pl}(0, 17, 22, 8, 8, 1)_{301085} \\
\ell_{1019} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{340339} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{340339} = \mathbf{Pl}(0, 10, 2, 18, 18, 1)_{627178} \\
\ell_{1020} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{712416} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{712416} = \mathbf{Pl}(0, 21, 27, 31, 31, 1)_{1054332} \\
\ell_{1021} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1050638} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1050638} = \mathbf{Pl}(0, 31, 15, 13, 13, 1)_{464338} \\
\ell_{1022} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{103560} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{103560} = \mathbf{Pl}(0, 3, 12, 7, 7, 1)_{267705} \\
\ell_{1023} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{644754} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{644754} = \mathbf{Pl}(0, 19, 24, 17, 17, 1)_{595837}
\end{aligned}$$

$$\begin{aligned}
\ell_{1024} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{678562} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{678562} = \mathbf{Pl}(0, 20, 1, 1, 1, 1)_{70613} \\
\ell_{1025} &= \begin{bmatrix} 1 & 1 & \eta^{16} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{915361} = \begin{bmatrix} 1 & 1 & 27 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{915361} = \mathbf{Pl}(0, 27, 0, 1, 1, 0)_{3163} \\
\ell_{1026} &= \begin{bmatrix} 1 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{678582} = \begin{bmatrix} 1 & 1 & 0 & 20 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{678582} = \mathbf{Pl}(0, 20, 26, 21, 21, 1)_{726908} \\
\ell_{1027} &= \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{35936} = \begin{bmatrix} 1 & 1 & 0 & 1 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{35936} = \mathbf{Pl}(0, 1, 27, 31, 31, 1)_{1054312} \\
\ell_{1028} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{610942} = \begin{bmatrix} 1 & 1 & 0 & 18 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{610942} = \mathbf{Pl}(0, 18, 19, 29, 29, 1)_{988353} \\
\ell_{1029} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{949175} = \begin{bmatrix} 1 & 1 & 0 & 28 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{949175} = \mathbf{Pl}(0, 28, 8, 22, 22, 1)_{758518} \\
\ell_{1030} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{306525} = \begin{bmatrix} 1 & 1 & 0 & 9 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{306525} = \mathbf{Pl}(0, 9, 3, 28, 28, 1)_{954600} \\
\ell_{1031} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{780050} = \begin{bmatrix} 1 & 1 & 0 & 23 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{780050} = \mathbf{Pl}(0, 23, 24, 17, 17, 1)_{595841} \\
\ell_{1032} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{475628} = \begin{bmatrix} 1 & 1 & 0 & 14 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{475628} = \mathbf{Pl}(0, 14, 16, 11, 11, 1)_{398912} \\
\ell_{1033} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{407985} = \begin{bmatrix} 1 & 1 & 0 & 12 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{407985} = \mathbf{Pl}(0, 12, 11, 16, 16, 1)_{562275} \\
\ell_{1034} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{746223} = \begin{bmatrix} 1 & 1 & 0 & 22 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{746223} = \mathbf{Pl}(0, 22, 6, 14, 14, 1)_{496498} \\
\ell_{1035} &= \begin{bmatrix} 1 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{137396} = \begin{bmatrix} 1 & 1 & 0 & 4 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{137396} = \mathbf{Pl}(0, 4, 29, 19, 19, 1)_{661609} \\
\ell_{1036} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{847707} = \begin{bmatrix} 1 & 1 & 0 & 25 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{847707} = \mathbf{Pl}(0, 25, 21, 26, 26, 1)_{890278} \\
\ell_{1037} &= \begin{bmatrix} 1 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{543271} = \begin{bmatrix} 1 & 1 & 0 & 16 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{543271} = \mathbf{Pl}(0, 16, 14, 6, 6, 1)_{235108} \\
\ell_{1038} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{238872} = \begin{bmatrix} 1 & 1 & 0 & 7 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{238872} = \mathbf{Pl}(0, 7, 5, 23, 23, 1)_{791044} \\
\ell_{1039} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{509461} = \begin{bmatrix} 1 & 1 & 0 & 15 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{509461} = \mathbf{Pl}(0, 15, 30, 20, 20, 1)_{694419} \\
\ell_{1040} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{205033} = \begin{bmatrix} 1 & 1 & 0 & 6 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{205033} = \mathbf{Pl}(0, 6, 22, 8, 8, 1)_{301074} \\
\ell_{1041} &= \begin{bmatrix} 1 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{441808} = \begin{bmatrix} 1 & 1 & 0 & 13 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{441808} = \mathbf{Pl}(0, 13, 13, 15, 15, 1)_{529666} \\
\ell_{1042} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{374152} = \begin{bmatrix} 1 & 1 & 0 & 11 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{374152} = \mathbf{Pl}(0, 11, 12, 7, 7, 1)_{267713} \\
\ell_{1043} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{813862} = \begin{bmatrix} 1 & 1 & 0 & 24 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{813862} = \mathbf{Pl}(0, 24, 23, 5, 5, 1)_{202947} \\
\ell_{1044} &= \begin{bmatrix} 1 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{69756} = \begin{bmatrix} 1 & 1 & 0 & 2 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{69756} = \mathbf{Pl}(0, 2, 31, 27, 27, 1)_{923621}
\end{aligned}$$

$$\begin{aligned}
\ell_{1045} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{982986} = \begin{bmatrix} 1 & 1 & 0 & 29 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{982986} = \mathbf{Pl}(0, 29, 4, 9, 9, 1)_{332699} \\
\ell_{1046} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1016814} = \begin{bmatrix} 1 & 1 & 0 & 30 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1016814} = \mathbf{Pl}(0, 30, 15, 13, 13, 1)_{464337} \\
\ell_{1047} &= \begin{bmatrix} 1 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{881535} = \begin{bmatrix} 1 & 1 & 0 & 26 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{881535} = \mathbf{Pl}(0, 26, 20, 30, 30, 1)_{1021160} \\
\ell_{1048} &= \begin{bmatrix} 1 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{272676} = \begin{bmatrix} 1 & 1 & 0 & 8 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{272676} = \mathbf{Pl}(0, 8, 28, 3, 3, 1)_{137774} \\
\ell_{1049} &= \begin{bmatrix} 1 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{171213} = \begin{bmatrix} 1 & 1 & 0 & 5 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{171213} = \mathbf{Pl}(0, 5, 7, 12, 12, 1)_{431072} \\
\ell_{1050} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{577114} = \begin{bmatrix} 1 & 1 & 0 & 17 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{577114} = \mathbf{Pl}(0, 17, 10, 25, 25, 1)_{856841} \\
\ell_{1051} &= \begin{bmatrix} 1 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{340345} = \begin{bmatrix} 1 & 1 & 0 & 10 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{340345} = \mathbf{Pl}(0, 10, 17, 24, 24, 1)_{824539} \\
\ell_{1052} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{712395} = \begin{bmatrix} 1 & 1 & 0 & 21 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{712395} = \mathbf{Pl}(0, 21, 25, 10, 10, 1)_{366750} \\
\ell_{1053} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1050643} = \begin{bmatrix} 1 & 1 & 0 & 31 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1050643} = \mathbf{Pl}(0, 31, 2, 18, 18, 1)_{627199} \\
\ell_{1054} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{103557} = \begin{bmatrix} 1 & 1 & 0 & 3 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{103557} = \mathbf{Pl}(0, 3, 9, 4, 4, 1)_{169308} \\
\ell_{1055} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{644739} = \begin{bmatrix} 1 & 1 & 0 & 19 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{644739} = \mathbf{Pl}(0, 19, 18, 2, 2, 1)_{104419} \\
\ell_{1056} &= \begin{bmatrix} 1 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{915330} = \begin{bmatrix} 1 & 1 & 0 & 27 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{915330} = \mathbf{Pl}(0, 27, 1, 1, 1, 1)_{70620}
\end{aligned}$$

Rank of lines: ( 2081, 1083424, 35905, 610913, 949153, 306497, 780033, 475617, 407969, 746209, 137377, 847681, 543265, 238849, 509441, 205025, 441793, 374145, 813857, 69729, 982977, 1016801, 881505, 272673, 171201, 577089, 340321, 712385, 1050625, 103553, 644737, 678561, 915329, 2113, 2082, 2099, 2109, 2090, 2104, 2095, 2093, 2103, 2085, 2106, 2097, 2088, 2096, 2087, 2094, 2092, ...103557, 644739, 915330 )

Rank of points on Klein quadric: ( 34912, 1, 34944, 34961, 34971, 34952, 34966, 34957, 34955, 34965, 34947, 34968, 34959, 34950, 34958, 34949, 34956, 34954, 34967, 34945, 34972, 34973, 34969, 34951, 34948, 34960, 34953, 34964, 34974, 34946, 34962, 34963, 34970, 3105, 70562, 627137, 954560, 332639, 791006, 496445, 431036, 758459, 169274, 856793, 562232, 267671, 529622, 235061, 464276, 398867, ...169308, 104419, 70620 )

### Eckardt Points

The surface has 0 Eckardt points:

### Double Points

The surface has 0 Double points:

The double points on the surface are:

### **Single Points**

The surface has 0 single points:

The single points on the surface are:

The single points on the surface are:

### **Points on surface but on no line**

The surface has 0 points not on any line:

The points on the surface but not on lines are:

### **Line Intersection Graph**

Too many lines to print.

Neighbor sets in the line intersection graph:

Too many lines to print.

The surface has 1057 points:

Too many to print.