

Rank-73731 over GF(32)

January 15, 2021

The equation

The equation of the surface is :

$$X_0X_3^2 + X_0X_1X_2 = 0$$

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

The point rank of the equation over GF(32) is 1108378661

General information

Number of lines	1090
Number of points	2081
Number of singular points	34
Number of Eckardt points	0
Number of double points	0
Number of single points	1023
Number of points off lines	0
Number of Hesse planes	0
Number of axes	0
Type of points on lines	33^{1090}
Type of lines on points	$34^{33}, 33^{1025}, 1^{1023}$

Singular Points

The surface has 34 singular points:

- | | |
|---|---|
| 0 : $P_0 = \mathbf{P}(1, 0, 0, 0) = \mathbf{P}(1, 0, 0, 0)$ | 9 : $P_{8609} = \mathbf{P}(0, \eta^{20}, \eta^{11}, 1) = \mathbf{P}(0, 12, 7, 1)$ |
| 1 : $P_1 = \mathbf{P}(0, 1, 0, 0) = \mathbf{P}(0, 1, 0, 0)$ | 10 : $P_{9953} = \mathbf{P}(0, \eta^{28}, \eta^3, 1) = \mathbf{P}(0, 22, 8, 1)$ |
| 2 : $P_2 = \mathbf{P}(0, 0, 1, 0) = \mathbf{P}(0, 0, 1, 0)$ | 11 : $P_{10401} = \mathbf{P}(0, \eta^2, \eta^{29}, 1) = \mathbf{P}(0, 4, 9, 1)$ |
| 3 : $P_{2114} = \mathbf{P}(0, 1, 1, 1) = \mathbf{P}(0, 1, 1, 1)$ | 12 : $P_{12097} = \mathbf{P}(0, \eta^{25}, \eta^6, 1) = \mathbf{P}(0, 25, 10, 1)$ |
| 4 : $P_{3681} = \mathbf{P}(0, \eta^{30}, \eta, 1) = \mathbf{P}(0, 18, 2, 1)$ | 13 : $P_{12833} = \mathbf{P}(0, \eta^4, \eta^{27}, 1) = \mathbf{P}(0, 16, 11, 1)$ |
| 5 : $P_{5025} = \mathbf{P}(0, \eta^{13}, \eta^{18}, 1) = \mathbf{P}(0, 28, 3, 1)$ | 14 : $P_{13569} = \mathbf{P}(0, \eta^{11}, \eta^{20}, 1) = \mathbf{P}(0, 7, 12, 1)$ |
| 6 : $P_{5441} = \mathbf{P}(0, \eta^{29}, \eta^2, 1) = \mathbf{P}(0, 9, 4, 1)$ | 15 : $P_{14849} = \mathbf{P}(0, \eta^{23}, \eta^8, 1) = \mathbf{P}(0, 15, 13, 1)$ |
| 7 : $P_{6913} = \mathbf{P}(0, \eta^{26}, \eta^5, 1) = \mathbf{P}(0, 23, 5, 1)$ | 16 : $P_{15585} = \mathbf{P}(0, \eta^{19}, \eta^{12}, 1) = \mathbf{P}(0, 6, 14, 1)$ |
| 8 : $P_{7649} = \mathbf{P}(0, \eta^{12}, \eta^{19}, 1) = \mathbf{P}(0, 14, 6, 1)$ | 17 : $P_{16833} = \mathbf{P}(0, \eta^8, \eta^{23}, 1) = \mathbf{P}(0, 13, 15, 1)$ |

$$\begin{aligned}
18 : P_{17793} &= \mathbf{P}(0, \eta^{27}, \eta^4, 1) = \mathbf{P}(0, 11, 16, 1) \\
19 : P_{19233} &= \mathbf{P}(0, \eta^{21}, \eta^{10}, 1) = \mathbf{P}(0, 24, 17, 1) \\
20 : P_{19553} &= \mathbf{P}(0, \eta, \eta^{30}, 1) = \mathbf{P}(0, 2, 18, 1) \\
21 : P_{21441} &= \mathbf{P}(0, \eta^{14}, \eta^{17}, 1) = \mathbf{P}(0, 29, 19, 1) \\
22 : P_{22497} &= \mathbf{P}(0, \eta^{24}, \eta^7, 1) = \mathbf{P}(0, 30, 20, 1) \\
23 : P_{23393} &= \mathbf{P}(0, \eta^9, \eta^{22}, 1) = \mathbf{P}(0, 26, 21, 1) \\
24 : P_{23841} &= \mathbf{P}(0, \eta^3, \eta^{28}, 1) = \mathbf{P}(0, 8, 22, 1) \\
25 : P_{24769} &= \mathbf{P}(0, \eta^5, \eta^{26}, 1) = \mathbf{P}(0, 5, 23, 1) \\
26 : P_{26177} &= \mathbf{P}(0, \eta^{10}, \eta^{21}, 1) = \mathbf{P}(0, 17, 24, 1)
\end{aligned}$$

$$\begin{aligned}
27 : P_{26977} &= \mathbf{P}(0, \eta^6, \eta^{25}, 1) = \mathbf{P}(0, 10, 25, 1) \\
28 : P_{28353} &= \mathbf{P}(0, \eta^{22}, \eta^9, 1) = \mathbf{P}(0, 21, 26, 1) \\
29 : P_{29697} &= \mathbf{P}(0, \eta^{15}, \eta^{16}, 1) = \mathbf{P}(0, 31, 27, 1) \\
30 : P_{29825} &= \mathbf{P}(0, \eta^{18}, \eta^{13}, 1) = \mathbf{P}(0, 3, 28, 1) \\
31 : P_{31361} &= \mathbf{P}(0, \eta^{17}, \eta^{14}, 1) = \mathbf{P}(0, 19, 29, 1) \\
32 : P_{32417} &= \mathbf{P}(0, \eta^7, \eta^{24}, 1) = \mathbf{P}(0, 20, 30, 1) \\
33 : P_{33665} &= \mathbf{P}(0, \eta^{16}, \eta^{15}, 1) = \mathbf{P}(0, 27, 31, 1)
\end{aligned}$$

The 1090 Lines

The lines and their Pluecker coordinates are:

$$\begin{aligned}
\ell_0 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{bmatrix}_0 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{bmatrix}_0 = \mathbf{Pl}(1, 0, 0, 0, 0, 0)_0 \\
\ell_1 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1024} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1024} = \mathbf{Pl}(0, 0, 1, 0, 0, 0)_2 \\
\ell_2 &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082368} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082368} = \mathbf{Pl}(0, 0, 0, 0, 0, 1)_{34849} \\
\ell_3 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{33} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{33} = \mathbf{Pl}(1, 0, 1, 0, 1, 0)_{1153} \\
\ell_4 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^2 & \eta \end{bmatrix}_{68} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 4 & 2 \end{bmatrix}_{68} = \mathbf{Pl}(18, 0, 2, 0, 1, 0)_{1233} \\
\ell_5 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^5 & \eta^{18} \end{bmatrix}_{101} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 5 & 3 \end{bmatrix}_{101} = \mathbf{Pl}(28, 0, 3, 0, 1, 0)_{1306} \\
\ell_6 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^4 & \eta^2 \end{bmatrix}_{144} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 16 & 4 \end{bmatrix}_{144} = \mathbf{Pl}(9, 0, 4, 0, 1, 0)_{1350} \\
\ell_7 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{10} & \eta^5 \end{bmatrix}_{177} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 17 & 5 \end{bmatrix}_{177} = \mathbf{Pl}(23, 0, 5, 0, 1, 0)_{1427} \\
\ell_8 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^7 & \eta^{19} \end{bmatrix}_{212} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 20 & 6 \end{bmatrix}_{212} = \mathbf{Pl}(14, 0, 6, 0, 1, 0)_{1481} \\
\ell_9 &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{22} & \eta^{11} \end{bmatrix}_{245} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 21 & 7 \end{bmatrix}_{245} = \mathbf{Pl}(12, 0, 7, 0, 1, 0)_{1542} \\
\ell_{10} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^6 & \eta^3 \end{bmatrix}_{266} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 10 & 8 \end{bmatrix}_{266} = \mathbf{Pl}(22, 0, 8, 0, 1, 0)_{1615} \\
\ell_{11} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{27} & \eta^{29} \end{bmatrix}_{299} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 11 & 9 \end{bmatrix}_{299} = \mathbf{Pl}(4, 0, 9, 0, 1, 0)_{1660} \\
\ell_{12} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{12} & \eta^6 \end{bmatrix}_{334} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 14 & 10 \end{bmatrix}_{334} = \mathbf{Pl}(25, 0, 10, 0, 1, 0)_{1744} \\
\ell_{13} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{23} & \eta^{27} \end{bmatrix}_{367} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 15 & 11 \end{bmatrix}_{367} = \mathbf{Pl}(16, 0, 11, 0, 1, 0)_{1798} \\
\ell_{14} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^9 & \eta^{20} \end{bmatrix}_{410} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 26 & 12 \end{bmatrix}_{410} = \mathbf{Pl}(7, 0, 12, 0, 1, 0)_{1852} \\
\ell_{15} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{16} & \eta^8 \end{bmatrix}_{443} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 27 & 13 \end{bmatrix}_{443} = \mathbf{Pl}(15, 0, 13, 0, 1, 0)_{1923}
\end{aligned}$$

$$\begin{aligned}
\ell_{16} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{24} & \eta^{12} \end{bmatrix}_{478} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 30 & 14 \end{bmatrix}_{478} = \mathbf{Pl}(6, 0, 14, 0, 1, 0)_{1977} \\
\ell_{17} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{15} & \eta^{23} \end{bmatrix}_{511} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 31 & 15 \end{bmatrix}_{511} = \mathbf{Pl}(13, 0, 15, 0, 1, 0)_{2047} \\
\ell_{18} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^8 & \eta^4 \end{bmatrix}_{525} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 13 & 16 \end{bmatrix}_{525} = \mathbf{Pl}(11, 0, 16, 0, 1, 0)_{2108} \\
\ell_{19} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{20} & \eta^{10} \end{bmatrix}_{556} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 12 & 17 \end{bmatrix}_{556} = \mathbf{Pl}(24, 0, 17, 0, 1, 0)_{2184} \\
\ell_{20} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{29} & \eta^{30} \end{bmatrix}_{585} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 9 & 18 \end{bmatrix}_{585} = \mathbf{Pl}(2, 0, 18, 0, 1, 0)_{2225} \\
\ell_{21} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^3 & \eta^{17} \end{bmatrix}_{616} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 8 & 19 \end{bmatrix}_{616} = \mathbf{Pl}(29, 0, 19, 0, 1, 0)_{2315} \\
\ell_{22} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{14} & \eta^7 \end{bmatrix}_{669} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 29 & 20 \end{bmatrix}_{669} = \mathbf{Pl}(30, 0, 20, 0, 1, 0)_{2379} \\
\ell_{23} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{13} & \eta^{22} \end{bmatrix}_{700} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 28 & 21 \end{bmatrix}_{700} = \mathbf{Pl}(26, 0, 21, 0, 1, 0)_{2438} \\
\ell_{24} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{25} & \eta^{28} \end{bmatrix}_{729} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 25 & 22 \end{bmatrix}_{729} = \mathbf{Pl}(8, 0, 22, 0, 1, 0)_{2483} \\
\ell_{25} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{21} & \eta^{26} \end{bmatrix}_{760} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 24 & 23 \end{bmatrix}_{760} = \mathbf{Pl}(5, 0, 23, 0, 1, 0)_{2543} \\
\ell_{26} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{11} & \eta^{21} \end{bmatrix}_{775} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 7 & 24 \end{bmatrix}_{775} = \mathbf{Pl}(17, 0, 24, 0, 1, 0)_{2618} \\
\ell_{27} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{19} & \eta^{25} \end{bmatrix}_{806} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 6 & 25 \end{bmatrix}_{806} = \mathbf{Pl}(10, 0, 25, 0, 1, 0)_{2674} \\
\ell_{28} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{18} & \eta^9 \end{bmatrix}_{835} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 3 & 26 \end{bmatrix}_{835} = \mathbf{Pl}(21, 0, 26, 0, 1, 0)_{2748} \\
\ell_{29} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta & \eta^{16} \end{bmatrix}_{866} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 2 & 27 \end{bmatrix}_{866} = \mathbf{Pl}(31, 0, 27, 0, 1, 0)_{2821} \\
\ell_{30} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{26} & \eta^{13} \end{bmatrix}_{919} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 23 & 28 \end{bmatrix}_{919} = \mathbf{Pl}(3, 0, 28, 0, 1, 0)_{2856} \\
\ell_{31} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{28} & \eta^{14} \end{bmatrix}_{950} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 22 & 29 \end{bmatrix}_{950} = \mathbf{Pl}(19, 0, 29, 0, 1, 0)_{2935} \\
\ell_{32} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{17} & \eta^{24} \end{bmatrix}_{979} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 19 & 30 \end{bmatrix}_{979} = \mathbf{Pl}(20, 0, 30, 0, 1, 0)_{2999} \\
\ell_{33} &= \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & \eta^{30} & \eta^{15} \end{bmatrix}_{1010} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 18 & 31 \end{bmatrix}_{1010} = \mathbf{Pl}(27, 0, 31, 0, 1, 0)_{3069} \\
\ell_{34} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082400} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082400} = \mathbf{Pl}(0, 0, 0, 1, 0, 0)_{65} \\
\ell_{35} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082369} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082369} = \mathbf{Pl}(0, 0, 0, 1, 0, 1)_{36865} \\
\ell_{36} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082386} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082386} = \mathbf{Pl}(0, 0, 0, 18, 0, 1)_{37936}
\end{aligned}$$

$$\begin{aligned}
\ell_{37} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082396} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082396} = \mathbf{Pl}(0, 0, 0, 28, 0, 1)_{38566} \\
\ell_{38} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082377} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082377} = \mathbf{Pl}(0, 0, 0, 9, 0, 1)_{37369} \\
\ell_{39} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082391} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082391} = \mathbf{Pl}(0, 0, 0, 23, 0, 1)_{38251} \\
\ell_{40} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082382} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082382} = \mathbf{Pl}(0, 0, 0, 14, 0, 1)_{37684} \\
\ell_{41} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082380} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082380} = \mathbf{Pl}(0, 0, 0, 12, 0, 1)_{37558} \\
\ell_{42} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082390} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082390} = \mathbf{Pl}(0, 0, 0, 22, 0, 1)_{38188} \\
\ell_{43} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082372} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082372} = \mathbf{Pl}(0, 0, 0, 4, 0, 1)_{37054} \\
\ell_{44} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082393} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082393} = \mathbf{Pl}(0, 0, 0, 25, 0, 1)_{38377} \\
\ell_{45} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082384} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082384} = \mathbf{Pl}(0, 0, 0, 16, 0, 1)_{37810} \\
\ell_{46} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082375} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082375} = \mathbf{Pl}(0, 0, 0, 7, 0, 1)_{37243} \\
\ell_{47} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082383} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082383} = \mathbf{Pl}(0, 0, 0, 15, 0, 1)_{37747} \\
\ell_{48} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082374} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082374} = \mathbf{Pl}(0, 0, 0, 6, 0, 1)_{37180} \\
\ell_{49} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082381} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082381} = \mathbf{Pl}(0, 0, 0, 13, 0, 1)_{37621} \\
\ell_{50} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082379} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082379} = \mathbf{Pl}(0, 0, 0, 11, 0, 1)_{37495} \\
\ell_{51} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082392} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082392} = \mathbf{Pl}(0, 0, 0, 24, 0, 1)_{38314} \\
\ell_{52} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082370} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082370} = \mathbf{Pl}(0, 0, 0, 2, 0, 1)_{36928} \\
\ell_{53} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082397} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082397} = \mathbf{Pl}(0, 0, 0, 29, 0, 1)_{38629} \\
\ell_{54} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082398} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082398} = \mathbf{Pl}(0, 0, 0, 30, 0, 1)_{38692} \\
\ell_{55} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082394} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082394} = \mathbf{Pl}(0, 0, 0, 26, 0, 1)_{38440} \\
\ell_{56} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082376} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082376} = \mathbf{Pl}(0, 0, 0, 8, 0, 1)_{37306} \\
\ell_{57} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082373} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082373} = \mathbf{Pl}(0, 0, 0, 5, 0, 1)_{37117}
\end{aligned}$$

$$\begin{aligned}
\ell_{58} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082385} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082385} = \mathbf{Pl}(0, 0, 0, 17, 0, 1)_{37873} \\
\ell_{59} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082378} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082378} = \mathbf{Pl}(0, 0, 0, 10, 0, 1)_{37432} \\
\ell_{60} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082389} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082389} = \mathbf{Pl}(0, 0, 0, 21, 0, 1)_{38125} \\
\ell_{61} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082399} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082399} = \mathbf{Pl}(0, 0, 0, 31, 0, 1)_{38755} \\
\ell_{62} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082371} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082371} = \mathbf{Pl}(0, 0, 0, 3, 0, 1)_{36991} \\
\ell_{63} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082387} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082387} = \mathbf{Pl}(0, 0, 0, 19, 0, 1)_{37999} \\
\ell_{64} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082388} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082388} = \mathbf{Pl}(0, 0, 0, 20, 0, 1)_{38062} \\
\ell_{65} &= \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082395} = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082395} = \mathbf{Pl}(0, 0, 0, 27, 0, 1)_{38503} \\
\ell_{66} &= \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_{67} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082401} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082401} = \mathbf{Pl}(0, 1, 0, 0, 0, 1)_{34881} \\
\ell_{68} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082962} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082962} = \mathbf{Pl}(0, 18, 0, 0, 0, 1)_{34898} \\
\ell_{69} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083292} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083292} = \mathbf{Pl}(0, 28, 0, 0, 0, 1)_{34908} \\
\ell_{70} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082665} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082665} = \mathbf{Pl}(0, 9, 0, 0, 0, 1)_{34889} \\
\ell_{71} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083127} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083127} = \mathbf{Pl}(0, 23, 0, 0, 0, 1)_{34903} \\
\ell_{72} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082830} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082830} = \mathbf{Pl}(0, 14, 0, 0, 0, 1)_{34894} \\
\ell_{73} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082764} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082764} = \mathbf{Pl}(0, 12, 0, 0, 0, 1)_{34892} \\
\ell_{74} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083094} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083094} = \mathbf{Pl}(0, 22, 0, 0, 0, 1)_{34902} \\
\ell_{75} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082500} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082500} = \mathbf{Pl}(0, 4, 0, 0, 0, 1)_{34884} \\
\ell_{76} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083193} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083193} = \mathbf{Pl}(0, 25, 0, 0, 0, 1)_{34905} \\
\ell_{77} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082896} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082896} = \mathbf{Pl}(0, 16, 0, 0, 0, 1)_{34896} \\
\ell_{78} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082599} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082599} = \mathbf{Pl}(0, 7, 0, 0, 0, 1)_{34887}
\end{aligned}$$

$$\begin{aligned}
\ell_{79} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082863} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082863} = \mathbf{Pl}(0, 15, 0, 0, 0, 1)_{34895} \\
\ell_{80} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082566} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082566} = \mathbf{Pl}(0, 6, 0, 0, 0, 1)_{34886} \\
\ell_{81} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082797} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082797} = \mathbf{Pl}(0, 13, 0, 0, 0, 1)_{34893} \\
\ell_{82} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082731} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082731} = \mathbf{Pl}(0, 11, 0, 0, 0, 1)_{34891} \\
\ell_{83} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083160} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083160} = \mathbf{Pl}(0, 24, 0, 0, 0, 1)_{34904} \\
\ell_{84} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082434} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082434} = \mathbf{Pl}(0, 2, 0, 0, 0, 1)_{34882} \\
\ell_{85} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083325} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083325} = \mathbf{Pl}(0, 29, 0, 0, 0, 1)_{34909} \\
\ell_{86} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083358} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083358} = \mathbf{Pl}(0, 30, 0, 0, 0, 1)_{34910} \\
\ell_{87} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083226} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083226} = \mathbf{Pl}(0, 26, 0, 0, 0, 1)_{34906} \\
\ell_{88} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082632} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082632} = \mathbf{Pl}(0, 8, 0, 0, 0, 1)_{34888} \\
\ell_{89} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082533} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082533} = \mathbf{Pl}(0, 5, 0, 0, 0, 1)_{34885} \\
\ell_{90} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082929} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082929} = \mathbf{Pl}(0, 17, 0, 0, 0, 1)_{34897} \\
\ell_{91} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082698} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082698} = \mathbf{Pl}(0, 10, 0, 0, 0, 1)_{34890} \\
\ell_{92} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083061} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083061} = \mathbf{Pl}(0, 21, 0, 0, 0, 1)_{34901} \\
\ell_{93} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083391} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083391} = \mathbf{Pl}(0, 31, 0, 0, 0, 1)_{34911} \\
\ell_{94} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082467} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082467} = \mathbf{Pl}(0, 3, 0, 0, 0, 1)_{34883} \\
\ell_{95} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082995} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1082995} = \mathbf{Pl}(0, 19, 0, 0, 0, 1)_{34899} \\
\ell_{96} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083028} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083028} = \mathbf{Pl}(0, 20, 0, 0, 0, 1)_{34900} \\
\ell_{97} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083259} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{1083259} = \mathbf{Pl}(0, 27, 0, 0, 0, 1)_{34907} \\
\ell_{98} &= \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082433} = \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082433} = \mathbf{Pl}(0, 1, 0, 1, 0, 0)_{97} \\
\ell_{99} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082402} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082402} = \mathbf{Pl}(0, 1, 0, 1, 0, 1)_{36897}
\end{aligned}$$

$$\begin{aligned}
\ell_{100} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082980} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082980} = \mathbf{PI}(0, 18, 0, 18, 0, 1)_{37985} \\
\ell_{101} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083320} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083320} = \mathbf{PI}(0, 28, 0, 28, 0, 1)_{38625} \\
\ell_{102} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082674} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082674} = \mathbf{PI}(0, 9, 0, 9, 0, 1)_{37409} \\
\ell_{103} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083150} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083150} = \mathbf{PI}(0, 23, 0, 23, 0, 1)_{38305} \\
\ell_{104} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082844} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082844} = \mathbf{PI}(0, 14, 0, 14, 0, 1)_{37729} \\
\ell_{105} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082776} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082776} = \mathbf{PI}(0, 12, 0, 12, 0, 1)_{37601} \\
\ell_{106} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083116} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083116} = \mathbf{PI}(0, 22, 0, 22, 0, 1)_{38241} \\
\ell_{107} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082504} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082504} = \mathbf{PI}(0, 4, 0, 4, 0, 1)_{37089} \\
\ell_{108} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083218} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083218} = \mathbf{PI}(0, 25, 0, 25, 0, 1)_{38433} \\
\ell_{109} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082912} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082912} = \mathbf{PI}(0, 16, 0, 16, 0, 1)_{37857} \\
\ell_{110} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082606} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082606} = \mathbf{PI}(0, 7, 0, 7, 0, 1)_{37281} \\
\ell_{111} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082878} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082878} = \mathbf{PI}(0, 15, 0, 15, 0, 1)_{37793} \\
\ell_{112} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082572} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082572} = \mathbf{PI}(0, 6, 0, 6, 0, 1)_{37217} \\
\ell_{113} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082810} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082810} = \mathbf{PI}(0, 13, 0, 13, 0, 1)_{37665} \\
\ell_{114} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082742} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082742} = \mathbf{PI}(0, 11, 0, 11, 0, 1)_{37537} \\
\ell_{115} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083184} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083184} = \mathbf{PI}(0, 24, 0, 24, 0, 1)_{38369} \\
\ell_{116} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082436} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082436} = \mathbf{PI}(0, 2, 0, 2, 0, 1)_{36961} \\
\ell_{117} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083354} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083354} = \mathbf{PI}(0, 29, 0, 29, 0, 1)_{38689} \\
\ell_{118} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083388} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083388} = \mathbf{PI}(0, 30, 0, 30, 0, 1)_{38753} \\
\ell_{119} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083252} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083252} = \mathbf{PI}(0, 26, 0, 26, 0, 1)_{38497} \\
\ell_{120} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082640} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082640} = \mathbf{PI}(0, 8, 0, 8, 0, 1)_{37345}
\end{aligned}$$

$$\begin{aligned}
\ell_{121} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082538} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082538} = \mathbf{Pl}(0, 5, 0, 5, 0, 1)_{37153} \\
\ell_{122} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082946} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082946} = \mathbf{Pl}(0, 17, 0, 17, 0, 1)_{37921} \\
\ell_{123} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082708} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082708} = \mathbf{Pl}(0, 10, 0, 10, 0, 1)_{37473} \\
\ell_{124} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083082} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083082} = \mathbf{Pl}(0, 21, 0, 21, 0, 1)_{38177} \\
\ell_{125} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083422} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083422} = \mathbf{Pl}(0, 31, 0, 31, 0, 1)_{38817} \\
\ell_{126} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082470} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082470} = \mathbf{Pl}(0, 3, 0, 3, 0, 1)_{37025} \\
\ell_{127} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083014} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083014} = \mathbf{Pl}(0, 19, 0, 19, 0, 1)_{38049} \\
\ell_{128} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083048} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083048} = \mathbf{Pl}(0, 20, 0, 20, 0, 1)_{38113} \\
\ell_{129} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083286} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083286} = \mathbf{Pl}(0, 27, 0, 27, 0, 1)_{38561} \\
\ell_{130} &= \begin{bmatrix} 0 & 1 & \eta^{30} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082994} = \begin{bmatrix} 0 & 1 & 18 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082994} = \mathbf{Pl}(0, 18, 0, 1, 0, 0)_{114} \\
\ell_{131} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082403} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082403} = \mathbf{Pl}(0, 1, 0, 2, 0, 1)_{36960} \\
\ell_{132} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082963} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082963} = \mathbf{Pl}(0, 18, 0, 1, 0, 1)_{36914} \\
\ell_{133} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083321} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083321} = \mathbf{Pl}(0, 28, 0, 29, 0, 1)_{38688} \\
\ell_{134} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082683} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082683} = \mathbf{Pl}(0, 9, 0, 18, 0, 1)_{37976} \\
\ell_{135} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083138} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083138} = \mathbf{Pl}(0, 23, 0, 11, 0, 1)_{37549} \\
\ell_{136} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082858} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082858} = \mathbf{Pl}(0, 14, 0, 28, 0, 1)_{38611} \\
\ell_{137} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082788} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082788} = \mathbf{Pl}(0, 12, 0, 24, 0, 1)_{38357} \\
\ell_{138} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083103} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083103} = \mathbf{Pl}(0, 22, 0, 9, 0, 1)_{37422} \\
\ell_{139} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082508} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082508} = \mathbf{Pl}(0, 4, 0, 8, 0, 1)_{37341} \\
\ell_{140} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083216} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083216} = \mathbf{Pl}(0, 25, 0, 23, 0, 1)_{38307} \\
\ell_{141} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082901} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082901} = \mathbf{Pl}(0, 16, 0, 5, 0, 1)_{37164}
\end{aligned}$$

$$\begin{aligned}
\ell_{142} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082613} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082613} = \mathbf{PI}(0, 7, 0, 14, 0, 1)_{37722} \\
\ell_{143} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082893} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082893} = \mathbf{PI}(0, 15, 0, 30, 0, 1)_{38738} \\
\ell_{144} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082578} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082578} = \mathbf{PI}(0, 6, 0, 12, 0, 1)_{37595} \\
\ell_{145} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082823} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082823} = \mathbf{PI}(0, 13, 0, 26, 0, 1)_{38484} \\
\ell_{146} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082753} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082753} = \mathbf{PI}(0, 11, 0, 22, 0, 1)_{38230} \\
\ell_{147} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083181} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083181} = \mathbf{PI}(0, 24, 0, 21, 0, 1)_{38180} \\
\ell_{148} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082438} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082438} = \mathbf{PI}(0, 2, 0, 4, 0, 1)_{37087} \\
\ell_{149} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083356} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083356} = \mathbf{PI}(0, 29, 0, 31, 0, 1)_{38815} \\
\ell_{150} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083383} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083383} = \mathbf{PI}(0, 30, 0, 25, 0, 1)_{38438} \\
\ell_{151} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083243} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083243} = \mathbf{PI}(0, 26, 0, 17, 0, 1)_{37930} \\
\ell_{152} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082648} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082648} = \mathbf{PI}(0, 8, 0, 16, 0, 1)_{37849} \\
\ell_{153} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082543} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082543} = \mathbf{PI}(0, 5, 0, 10, 0, 1)_{37468} \\
\ell_{154} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082936} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082936} = \mathbf{PI}(0, 17, 0, 7, 0, 1)_{37291} \\
\ell_{155} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082718} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082718} = \mathbf{PI}(0, 10, 0, 20, 0, 1)_{38103} \\
\ell_{156} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083076} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083076} = \mathbf{PI}(0, 21, 0, 15, 0, 1)_{37799} \\
\ell_{157} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083418} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083418} = \mathbf{PI}(0, 31, 0, 27, 0, 1)_{38565} \\
\ell_{158} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082473} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082473} = \mathbf{PI}(0, 3, 0, 6, 0, 1)_{37214} \\
\ell_{159} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082998} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082998} = \mathbf{PI}(0, 19, 0, 3, 0, 1)_{37041} \\
\ell_{160} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083041} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083041} = \mathbf{PI}(0, 20, 0, 13, 0, 1)_{37672} \\
\ell_{161} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083278} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083278} = \mathbf{PI}(0, 27, 0, 19, 0, 1)_{38057} \\
\ell_{162} &= \begin{bmatrix} 0 & 1 & \eta^{13} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083324} = \begin{bmatrix} 0 & 1 & 28 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083324} = \mathbf{PI}(0, 28, 0, 1, 0, 0)_{124}
\end{aligned}$$

$$\begin{aligned}
\ell_{163} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082404} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082404} = \mathbf{PI}(0, 1, 0, 3, 0, 1)_{37023} \\
\ell_{164} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082981} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082981} = \mathbf{PI}(0, 18, 0, 19, 0, 1)_{38048} \\
\ell_{165} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083293} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083293} = \mathbf{PI}(0, 28, 0, 1, 0, 1)_{36924} \\
\ell_{166} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082692} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082692} = \mathbf{PI}(0, 9, 0, 27, 0, 1)_{38543} \\
\ell_{167} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083155} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083155} = \mathbf{PI}(0, 23, 0, 28, 0, 1)_{38620} \\
\ell_{168} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082848} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082848} = \mathbf{PI}(0, 14, 0, 18, 0, 1)_{37981} \\
\ell_{169} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082784} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082784} = \mathbf{PI}(0, 12, 0, 20, 0, 1)_{38105} \\
\ell_{170} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083125} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083125} = \mathbf{PI}(0, 22, 0, 31, 0, 1)_{38808} \\
\ell_{171} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082512} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082512} = \mathbf{PI}(0, 4, 0, 12, 0, 1)_{37593} \\
\ell_{172} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083207} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083207} = \mathbf{PI}(0, 25, 0, 14, 0, 1)_{37740} \\
\ell_{173} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082917} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082917} = \mathbf{PI}(0, 16, 0, 21, 0, 1)_{38172} \\
\ell_{174} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082608} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082608} = \mathbf{PI}(0, 7, 0, 9, 0, 1)_{37407} \\
\ell_{175} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082880} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082880} = \mathbf{PI}(0, 15, 0, 17, 0, 1)_{37919} \\
\ell_{176} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082576} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082576} = \mathbf{PI}(0, 6, 0, 10, 0, 1)_{37469} \\
\ell_{177} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082820} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082820} = \mathbf{PI}(0, 13, 0, 23, 0, 1)_{38295} \\
\ell_{178} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082760} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082760} = \mathbf{PI}(0, 11, 0, 29, 0, 1)_{38671} \\
\ell_{179} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083173} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083173} = \mathbf{PI}(0, 24, 0, 13, 0, 1)_{37676} \\
\ell_{180} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082440} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082440} = \mathbf{PI}(0, 2, 0, 6, 0, 1)_{37213} \\
\ell_{181} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083327} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083327} = \mathbf{PI}(0, 29, 0, 2, 0, 1)_{36988} \\
\ell_{182} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083365} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083365} = \mathbf{PI}(0, 30, 0, 7, 0, 1)_{37304} \\
\ell_{183} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083237} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083237} = \mathbf{PI}(0, 26, 0, 11, 0, 1)_{37552}
\end{aligned}$$

$$\begin{aligned}
\ell_{184} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082656} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082656} = \mathbf{Pl}(0, 8, 0, 24, 0, 1)_{38353} \\
\ell_{185} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082548} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082548} = \mathbf{Pl}(0, 5, 0, 15, 0, 1)_{37783} \\
\ell_{186} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082951} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082951} = \mathbf{Pl}(0, 17, 0, 22, 0, 1)_{38236} \\
\ell_{187} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082728} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082728} = \mathbf{Pl}(0, 10, 0, 30, 0, 1)_{38733} \\
\ell_{188} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083087} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083087} = \mathbf{Pl}(0, 21, 0, 26, 0, 1)_{38492} \\
\ell_{189} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083395} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083395} = \mathbf{Pl}(0, 31, 0, 4, 0, 1)_{37116} \\
\ell_{190} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082472} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082472} = \mathbf{Pl}(0, 3, 0, 5, 0, 1)_{37151} \\
\ell_{191} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083011} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083011} = \mathbf{Pl}(0, 19, 0, 16, 0, 1)_{37860} \\
\ell_{192} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083053} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083053} = \mathbf{Pl}(0, 20, 0, 25, 0, 1)_{38428} \\
\ell_{193} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083267} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083267} = \mathbf{Pl}(0, 27, 0, 8, 0, 1)_{37364} \\
\ell_{194} &= \begin{bmatrix} 0 & 1 & \eta^{29} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082697} = \begin{bmatrix} 0 & 1 & 9 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082697} = \mathbf{Pl}(0, 9, 0, 1, 0, 0)_{105} \\
\ell_{195} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082405} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082405} = \mathbf{Pl}(0, 1, 0, 4, 0, 1)_{37086} \\
\ell_{196} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082964} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082964} = \mathbf{Pl}(0, 18, 0, 2, 0, 1)_{36977} \\
\ell_{197} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083323} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083323} = \mathbf{Pl}(0, 28, 0, 31, 0, 1)_{38814} \\
\ell_{198} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082666} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082666} = \mathbf{Pl}(0, 9, 0, 1, 0, 1)_{36905} \\
\ell_{199} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083149} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083149} = \mathbf{Pl}(0, 23, 0, 22, 0, 1)_{38242} \\
\ell_{200} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082859} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082859} = \mathbf{Pl}(0, 14, 0, 29, 0, 1)_{38674} \\
\ell_{201} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082785} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082785} = \mathbf{Pl}(0, 12, 0, 21, 0, 1)_{38168} \\
\ell_{202} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083112} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083112} = \mathbf{Pl}(0, 22, 0, 18, 0, 1)_{37989} \\
\ell_{203} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082516} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082516} = \mathbf{Pl}(0, 4, 0, 16, 0, 1)_{37845} \\
\ell_{204} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083204} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083204} = \mathbf{Pl}(0, 25, 0, 11, 0, 1)_{37551}
\end{aligned}$$

$$\begin{aligned}
\ell_{205} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082906} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082906} = \mathbf{Pl}(0, 16, 0, 10, 0, 1)_{37479} \\
\ell_{206} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082627} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082627} = \mathbf{Pl}(0, 7, 0, 28, 0, 1)_{38604} \\
\ell_{207} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082888} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082888} = \mathbf{Pl}(0, 15, 0, 25, 0, 1)_{38423} \\
\ell_{208} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082590} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082590} = \mathbf{Pl}(0, 6, 0, 24, 0, 1)_{38351} \\
\ell_{209} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082814} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082814} = \mathbf{Pl}(0, 13, 0, 17, 0, 1)_{37917} \\
\ell_{210} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082740} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082740} = \mathbf{Pl}(0, 11, 0, 9, 0, 1)_{37411} \\
\ell_{211} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083175} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083175} = \mathbf{Pl}(0, 24, 0, 15, 0, 1)_{37802} \\
\ell_{212} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082442} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082442} = \mathbf{Pl}(0, 2, 0, 8, 0, 1)_{37339} \\
\ell_{213} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083352} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083352} = \mathbf{Pl}(0, 29, 0, 27, 0, 1)_{38563} \\
\ell_{214} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083381} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083381} = \mathbf{Pl}(0, 30, 0, 23, 0, 1)_{38312} \\
\ell_{215} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083233} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083233} = \mathbf{Pl}(0, 26, 0, 7, 0, 1)_{37300} \\
\ell_{216} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082637} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082637} = \mathbf{Pl}(0, 8, 0, 5, 0, 1)_{37156} \\
\ell_{217} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082553} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082553} = \mathbf{Pl}(0, 5, 0, 20, 0, 1)_{38098} \\
\ell_{218} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082943} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082943} = \mathbf{Pl}(0, 17, 0, 14, 0, 1)_{37732} \\
\ell_{219} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082711} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082711} = \mathbf{Pl}(0, 10, 0, 13, 0, 1)_{37662} \\
\ell_{220} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083091} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083091} = \mathbf{Pl}(0, 21, 0, 30, 0, 1)_{38744} \\
\ell_{221} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083410} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083410} = \mathbf{Pl}(0, 31, 0, 19, 0, 1)_{38061} \\
\ell_{222} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082479} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082479} = \mathbf{Pl}(0, 3, 0, 12, 0, 1)_{37592} \\
\ell_{223} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083001} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083001} = \mathbf{Pl}(0, 19, 0, 6, 0, 1)_{37230} \\
\ell_{224} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083054} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083054} = \mathbf{Pl}(0, 20, 0, 26, 0, 1)_{38491} \\
\ell_{225} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083262} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083262} = \mathbf{Pl}(0, 27, 0, 3, 0, 1)_{37049}
\end{aligned}$$

$$\begin{aligned}
\ell_{226} &= \begin{bmatrix} 0 & 1 & \eta^{26} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083159} = \begin{bmatrix} 0 & 1 & 23 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083159} = \mathbf{Pl}(0, 23, 0, 1, 0, 0)_{119} \\
\ell_{227} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082406} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082406} = \mathbf{Pl}(0, 1, 0, 5, 0, 1)_{37149} \\
\ell_{228} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082978} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082978} = \mathbf{Pl}(0, 18, 0, 16, 0, 1)_{37859} \\
\ell_{229} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083295} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083295} = \mathbf{Pl}(0, 28, 0, 3, 0, 1)_{37050} \\
\ell_{230} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082673} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082673} = \mathbf{Pl}(0, 9, 0, 8, 0, 1)_{37346} \\
\ell_{231} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083128} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083128} = \mathbf{Pl}(0, 23, 0, 1, 0, 1)_{36919} \\
\ell_{232} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082849} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082849} = \mathbf{Pl}(0, 14, 0, 19, 0, 1)_{38044} \\
\ell_{233} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082789} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082789} = \mathbf{Pl}(0, 12, 0, 25, 0, 1)_{38420} \\
\ell_{234} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083098} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083098} = \mathbf{Pl}(0, 22, 0, 4, 0, 1)_{37107} \\
\ell_{235} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082520} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082520} = \mathbf{Pl}(0, 4, 0, 20, 0, 1)_{38097} \\
\ell_{236} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083211} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083211} = \mathbf{Pl}(0, 25, 0, 18, 0, 1)_{37992} \\
\ell_{237} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082922} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082922} = \mathbf{Pl}(0, 16, 0, 26, 0, 1)_{38487} \\
\ell_{238} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082626} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082626} = \mathbf{Pl}(0, 7, 0, 27, 0, 1)_{38541} \\
\ell_{239} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082885} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082885} = \mathbf{Pl}(0, 15, 0, 22, 0, 1)_{38234} \\
\ell_{240} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082596} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082596} = \mathbf{Pl}(0, 6, 0, 30, 0, 1)_{38729} \\
\ell_{241} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082825} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082825} = \mathbf{Pl}(0, 13, 0, 28, 0, 1)_{38610} \\
\ell_{242} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082733} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082733} = \mathbf{Pl}(0, 11, 0, 2, 0, 1)_{36970} \\
\ell_{243} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083183} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083183} = \mathbf{Pl}(0, 24, 0, 23, 0, 1)_{38306} \\
\ell_{244} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082444} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082444} = \mathbf{Pl}(0, 2, 0, 10, 0, 1)_{37465} \\
\ell_{245} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083331} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083331} = \mathbf{Pl}(0, 29, 0, 6, 0, 1)_{37240} \\
\ell_{246} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083367} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083367} = \mathbf{Pl}(0, 30, 0, 9, 0, 1)_{37430}
\end{aligned}$$

$$\begin{aligned}
\ell_{247} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083255} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083255} = \mathbf{Pl}(0, 26, 0, 29, 0, 1)_{38686} \\
\ell_{248} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082645} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082645} = \mathbf{Pl}(0, 8, 0, 13, 0, 1)_{37660} \\
\ell_{249} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082550} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082550} = \mathbf{Pl}(0, 5, 0, 17, 0, 1)_{37909} \\
\ell_{250} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082960} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082960} = \mathbf{Pl}(0, 17, 0, 31, 0, 1)_{38803} \\
\ell_{251} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082705} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082705} = \mathbf{Pl}(0, 10, 0, 7, 0, 1)_{37284} \\
\ell_{252} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083072} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083072} = \mathbf{Pl}(0, 21, 0, 11, 0, 1)_{37547} \\
\ell_{253} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083403} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083403} = \mathbf{Pl}(0, 31, 0, 12, 0, 1)_{37620} \\
\ell_{254} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082482} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082482} = \mathbf{Pl}(0, 3, 0, 15, 0, 1)_{37781} \\
\ell_{255} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083016} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083016} = \mathbf{Pl}(0, 19, 0, 21, 0, 1)_{38175} \\
\ell_{256} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083042} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083042} = \mathbf{Pl}(0, 20, 0, 14, 0, 1)_{37735} \\
\ell_{257} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083283} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083283} = \mathbf{Pl}(0, 27, 0, 24, 0, 1)_{38372} \\
\ell_{258} &= \begin{bmatrix} 0 & 1 & \eta^{12} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082862} = \begin{bmatrix} 0 & 1 & 14 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082862} = \mathbf{Pl}(0, 14, 0, 1, 0, 0)_{110} \\
\ell_{259} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082407} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082407} = \mathbf{Pl}(0, 1, 0, 6, 0, 1)_{37212} \\
\ell_{260} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082965} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082965} = \mathbf{Pl}(0, 18, 0, 3, 0, 1)_{37040} \\
\ell_{261} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083294} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083294} = \mathbf{Pl}(0, 28, 0, 2, 0, 1)_{36987} \\
\ell_{262} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082684} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082684} = \mathbf{Pl}(0, 9, 0, 19, 0, 1)_{38039} \\
\ell_{263} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083156} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083156} = \mathbf{Pl}(0, 23, 0, 29, 0, 1)_{38683} \\
\ell_{264} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082831} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082831} = \mathbf{Pl}(0, 14, 0, 1, 0, 1)_{36910} \\
\ell_{265} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082777} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082777} = \mathbf{Pl}(0, 12, 0, 13, 0, 1)_{37664} \\
\ell_{266} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083121} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083121} = \mathbf{Pl}(0, 22, 0, 27, 0, 1)_{38556} \\
\ell_{267} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082524} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082524} = \mathbf{Pl}(0, 4, 0, 24, 0, 1)_{38349}
\end{aligned}$$

$$\begin{aligned}
\ell_{268} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083221} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083221} = \mathbf{PI}(0, 25, 0, 28, 0, 1)_{38622} \\
\ell_{269} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082911} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082911} = \mathbf{PI}(0, 16, 0, 15, 0, 1)_{37794} \\
\ell_{270} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082617} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082617} = \mathbf{PI}(0, 7, 0, 18, 0, 1)_{37974} \\
\ell_{271} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082870} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082870} = \mathbf{PI}(0, 15, 0, 7, 0, 1)_{37289} \\
\ell_{272} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082586} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082586} = \mathbf{PI}(0, 6, 0, 20, 0, 1)_{38099} \\
\ell_{273} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082808} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082808} = \mathbf{PI}(0, 13, 0, 11, 0, 1)_{37539} \\
\ell_{274} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082762} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082762} = \mathbf{PI}(0, 11, 0, 31, 0, 1)_{38797} \\
\ell_{275} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083186} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083186} = \mathbf{PI}(0, 24, 0, 26, 0, 1)_{38495} \\
\ell_{276} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082446} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082446} = \mathbf{PI}(0, 2, 0, 12, 0, 1)_{37591} \\
\ell_{277} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083329} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083329} = \mathbf{PI}(0, 29, 0, 4, 0, 1)_{37114} \\
\ell_{278} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083372} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083372} = \mathbf{PI}(0, 30, 0, 14, 0, 1)_{37745} \\
\ell_{279} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083248} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083248} = \mathbf{PI}(0, 26, 0, 22, 0, 1)_{38245} \\
\ell_{280} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082653} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082653} = \mathbf{PI}(0, 8, 0, 21, 0, 1)_{38164} \\
\ell_{281} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082563} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082563} = \mathbf{PI}(0, 5, 0, 30, 0, 1)_{38728} \\
\ell_{282} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082938} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082938} = \mathbf{PI}(0, 17, 0, 9, 0, 1)_{37417} \\
\ell_{283} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082723} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082723} = \mathbf{PI}(0, 10, 0, 25, 0, 1)_{38418} \\
\ell_{284} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083078} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083078} = \mathbf{PI}(0, 21, 0, 17, 0, 1)_{37925} \\
\ell_{285} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083399} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083399} = \mathbf{PI}(0, 31, 0, 8, 0, 1)_{37368} \\
\ell_{286} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082477} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082477} = \mathbf{PI}(0, 3, 0, 10, 0, 1)_{37466} \\
\ell_{287} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083000} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083000} = \mathbf{PI}(0, 19, 0, 5, 0, 1)_{37167} \\
\ell_{288} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083051} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083051} = \mathbf{PI}(0, 20, 0, 23, 0, 1)_{38302}
\end{aligned}$$

$$\begin{aligned}
\ell_{289} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083275} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083275} = \mathbf{Pl}(0, 27, 0, 16, 0, 1)_{37868} \\
\ell_{290} &= \begin{bmatrix} 0 & 1 & \eta^{20} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082796} = \begin{bmatrix} 0 & 1 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082796} = \mathbf{Pl}(0, 12, 0, 1, 0, 0)_{108} \\
\ell_{291} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082408} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082408} = \mathbf{Pl}(0, 1, 0, 7, 0, 1)_{37275} \\
\ell_{292} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082979} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082979} = \mathbf{Pl}(0, 18, 0, 17, 0, 1)_{37922} \\
\ell_{293} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083322} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083322} = \mathbf{Pl}(0, 28, 0, 30, 0, 1)_{38751} \\
\ell_{294} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082691} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082691} = \mathbf{Pl}(0, 9, 0, 26, 0, 1)_{38480} \\
\ell_{295} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083137} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083137} = \mathbf{Pl}(0, 23, 0, 10, 0, 1)_{37486} \\
\ell_{296} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082845} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082845} = \mathbf{Pl}(0, 14, 0, 15, 0, 1)_{37792} \\
\ell_{297} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082765} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082765} = \mathbf{Pl}(0, 12, 0, 1, 0, 1)_{36908} \\
\ell_{298} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083107} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083107} = \mathbf{Pl}(0, 22, 0, 13, 0, 1)_{37674} \\
\ell_{299} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082528} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082528} = \mathbf{Pl}(0, 4, 0, 28, 0, 1)_{38601} \\
\ell_{300} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083198} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083198} = \mathbf{Pl}(0, 25, 0, 5, 0, 1)_{37173} \\
\ell_{301} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082927} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082927} = \mathbf{Pl}(0, 16, 0, 31, 0, 1)_{38802} \\
\ell_{302} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082620} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082620} = \mathbf{Pl}(0, 7, 0, 21, 0, 1)_{38163} \\
\ell_{303} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082871} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082871} = \mathbf{Pl}(0, 15, 0, 8, 0, 1)_{37352} \\
\ell_{304} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082584} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082584} = \mathbf{Pl}(0, 6, 0, 18, 0, 1)_{37973} \\
\ell_{305} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082803} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082803} = \mathbf{Pl}(0, 13, 0, 6, 0, 1)_{37224} \\
\ell_{306} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082751} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082751} = \mathbf{Pl}(0, 11, 0, 20, 0, 1)_{38104} \\
\ell_{307} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083162} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083162} = \mathbf{Pl}(0, 24, 0, 2, 0, 1)_{36983} \\
\ell_{308} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082448} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082448} = \mathbf{Pl}(0, 2, 0, 14, 0, 1)_{37717} \\
\ell_{309} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083350} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083350} = \mathbf{Pl}(0, 29, 0, 25, 0, 1)_{38437}
\end{aligned}$$

$$\begin{aligned}
\ell_{310} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083374} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083374} = \mathbf{PI}(0, 30, 0, 16, 0, 1)_{37871} \\
\ell_{311} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083238} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083238} = \mathbf{PI}(0, 26, 0, 12, 0, 1)_{37615} \\
\ell_{312} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082661} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082661} = \mathbf{PI}(0, 8, 0, 29, 0, 1)_{38668} \\
\ell_{313} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082560} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082560} = \mathbf{PI}(0, 5, 0, 27, 0, 1)_{38539} \\
\ell_{314} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082953} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082953} = \mathbf{PI}(0, 17, 0, 24, 0, 1)_{38362} \\
\ell_{315} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082717} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082717} = \mathbf{PI}(0, 10, 0, 19, 0, 1)_{38040} \\
\ell_{316} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083065} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083065} = \mathbf{PI}(0, 21, 0, 4, 0, 1)_{37106} \\
\ell_{317} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083414} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083414} = \mathbf{PI}(0, 31, 0, 23, 0, 1)_{38313} \\
\ell_{318} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082476} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082476} = \mathbf{PI}(0, 3, 0, 9, 0, 1)_{37403} \\
\ell_{319} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083017} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083017} = \mathbf{PI}(0, 19, 0, 22, 0, 1)_{38238} \\
\ell_{320} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083031} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083031} = \mathbf{PI}(0, 20, 0, 3, 0, 1)_{37042} \\
\ell_{321} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083270} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083270} = \mathbf{PI}(0, 27, 0, 11, 0, 1)_{37553} \\
\ell_{322} &= \begin{bmatrix} 0 & 1 & \eta^{28} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083126} = \begin{bmatrix} 0 & 1 & 22 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083126} = \mathbf{PI}(0, 22, 0, 1, 0, 0)_{118} \\
\ell_{323} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082409} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082409} = \mathbf{PI}(0, 1, 0, 8, 0, 1)_{37338} \\
\ell_{324} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082966} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082966} = \mathbf{PI}(0, 18, 0, 4, 0, 1)_{37103} \\
\ell_{325} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083319} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083319} = \mathbf{PI}(0, 28, 0, 27, 0, 1)_{38562} \\
\ell_{326} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082667} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082667} = \mathbf{PI}(0, 9, 0, 2, 0, 1)_{36968} \\
\ell_{327} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083136} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083136} = \mathbf{PI}(0, 23, 0, 9, 0, 1)_{37423} \\
\ell_{328} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082861} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082861} = \mathbf{PI}(0, 14, 0, 31, 0, 1)_{38800} \\
\ell_{329} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082779} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082779} = \mathbf{PI}(0, 12, 0, 15, 0, 1)_{37790} \\
\ell_{330} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083095} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083095} = \mathbf{PI}(0, 22, 0, 1, 0, 1)_{36918}
\end{aligned}$$

$$\begin{aligned}
\ell_{331} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082505} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082505} = \mathbf{Pl}(0, 4, 0, 5, 0, 1)_{37152} \\
\ell_{332} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083215} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083215} = \mathbf{Pl}(0, 25, 0, 22, 0, 1)_{38244} \\
\ell_{333} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082916} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082916} = \mathbf{Pl}(0, 16, 0, 20, 0, 1)_{38109} \\
\ell_{334} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082628} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082628} = \mathbf{Pl}(0, 7, 0, 29, 0, 1)_{38667} \\
\ell_{335} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082886} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082886} = \mathbf{Pl}(0, 15, 0, 23, 0, 1)_{38297} \\
\ell_{336} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082587} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082587} = \mathbf{Pl}(0, 6, 0, 21, 0, 1)_{38162} \\
\ell_{337} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082804} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082804} = \mathbf{Pl}(0, 13, 0, 7, 0, 1)_{37287} \\
\ell_{338} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082749} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082749} = \mathbf{Pl}(0, 11, 0, 18, 0, 1)_{37978} \\
\ell_{339} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083190} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083190} = \mathbf{Pl}(0, 24, 0, 30, 0, 1)_{38747} \\
\ell_{340} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082450} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082450} = \mathbf{Pl}(0, 2, 0, 16, 0, 1)_{37843} \\
\ell_{341} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083344} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083344} = \mathbf{Pl}(0, 29, 0, 19, 0, 1)_{38059} \\
\ell_{342} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083369} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083369} = \mathbf{Pl}(0, 30, 0, 11, 0, 1)_{37556} \\
\ell_{343} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083240} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083240} = \mathbf{Pl}(0, 26, 0, 14, 0, 1)_{37741} \\
\ell_{344} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082642} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082642} = \mathbf{Pl}(0, 8, 0, 10, 0, 1)_{37471} \\
\ell_{345} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082546} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082546} = \mathbf{Pl}(0, 5, 0, 13, 0, 1)_{37657} \\
\ell_{346} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082957} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082957} = \mathbf{Pl}(0, 17, 0, 28, 0, 1)_{38614} \\
\ell_{347} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082724} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082724} = \mathbf{Pl}(0, 10, 0, 26, 0, 1)_{38481} \\
\ell_{348} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083086} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083086} = \mathbf{Pl}(0, 21, 0, 25, 0, 1)_{38429} \\
\ell_{349} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083394} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083394} = \mathbf{Pl}(0, 31, 0, 3, 0, 1)_{37053} \\
\ell_{350} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082491} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082491} = \mathbf{Pl}(0, 3, 0, 24, 0, 1)_{38348} \\
\ell_{351} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083007} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083007} = \mathbf{Pl}(0, 19, 0, 12, 0, 1)_{37608}
\end{aligned}$$

$$\begin{aligned}
\ell_{352} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083045} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083045} = \mathbf{Pl}(0, 20, 0, 17, 0, 1)_{37924} \\
\ell_{353} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083265} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083265} = \mathbf{Pl}(0, 27, 0, 6, 0, 1)_{37238} \\
\ell_{354} &= \begin{bmatrix} 0 & 1 & \eta^2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082532} = \begin{bmatrix} 0 & 1 & 4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082532} = \mathbf{Pl}(0, 4, 0, 1, 0, 0)_{100} \\
\ell_{355} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082410} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082410} = \mathbf{Pl}(0, 1, 0, 9, 0, 1)_{37401} \\
\ell_{356} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082984} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082984} = \mathbf{Pl}(0, 18, 0, 22, 0, 1)_{38237} \\
\ell_{357} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083299} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083299} = \mathbf{Pl}(0, 28, 0, 7, 0, 1)_{37302} \\
\ell_{358} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082676} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082676} = \mathbf{Pl}(0, 9, 0, 11, 0, 1)_{37535} \\
\ell_{359} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083157} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083157} = \mathbf{Pl}(0, 23, 0, 30, 0, 1)_{38746} \\
\ell_{360} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082847} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082847} = \mathbf{Pl}(0, 14, 0, 17, 0, 1)_{37918} \\
\ell_{361} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082767} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082767} = \mathbf{Pl}(0, 12, 0, 3, 0, 1)_{37034} \\
\ell_{362} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083117} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083117} = \mathbf{Pl}(0, 22, 0, 23, 0, 1)_{38304} \\
\ell_{363} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082501} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082501} = \mathbf{Pl}(0, 4, 0, 1, 0, 1)_{36900} \\
\ell_{364} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083208} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083208} = \mathbf{Pl}(0, 25, 0, 15, 0, 1)_{37803} \\
\ell_{365} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082900} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082900} = \mathbf{Pl}(0, 16, 0, 4, 0, 1)_{37101} \\
\ell_{366} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082625} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082625} = \mathbf{Pl}(0, 7, 0, 26, 0, 1)_{38478} \\
\ell_{367} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082887} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082887} = \mathbf{Pl}(0, 15, 0, 24, 0, 1)_{38360} \\
\ell_{368} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082585} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082585} = \mathbf{Pl}(0, 6, 0, 19, 0, 1)_{38036} \\
\ell_{369} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082807} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082807} = \mathbf{Pl}(0, 13, 0, 10, 0, 1)_{37476} \\
\ell_{370} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082756} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082756} = \mathbf{Pl}(0, 11, 0, 25, 0, 1)_{38419} \\
\ell_{371} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083166} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083166} = \mathbf{Pl}(0, 24, 0, 6, 0, 1)_{37235} \\
\ell_{372} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082452} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082452} = \mathbf{Pl}(0, 2, 0, 18, 0, 1)_{37969}
\end{aligned}$$

$$\begin{aligned}
\ell_{373} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083339} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083339} = \mathbf{Pl}(0, 29, 0, 14, 0, 1)_{37744} \\
\ell_{374} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083379} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083379} = \mathbf{Pl}(0, 30, 0, 21, 0, 1)_{38186} \\
\ell_{375} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083246} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083246} = \mathbf{Pl}(0, 26, 0, 20, 0, 1)_{38119} \\
\ell_{376} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082634} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082634} = \mathbf{Pl}(0, 8, 0, 2, 0, 1)_{36967} \\
\ell_{377} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082541} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082541} = \mathbf{Pl}(0, 5, 0, 8, 0, 1)_{37342} \\
\ell_{378} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082942} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082942} = \mathbf{Pl}(0, 17, 0, 13, 0, 1)_{37669} \\
\ell_{379} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082714} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082714} = \mathbf{Pl}(0, 10, 0, 16, 0, 1)_{37851} \\
\ell_{380} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083073} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083073} = \mathbf{Pl}(0, 21, 0, 12, 0, 1)_{37610} \\
\ell_{381} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083419} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083419} = \mathbf{Pl}(0, 31, 0, 28, 0, 1)_{38628} \\
\ell_{382} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082494} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082494} = \mathbf{Pl}(0, 3, 0, 27, 0, 1)_{38537} \\
\ell_{383} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083026} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083026} = \mathbf{Pl}(0, 19, 0, 31, 0, 1)_{38805} \\
\ell_{384} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083033} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083033} = \mathbf{Pl}(0, 20, 0, 5, 0, 1)_{37168} \\
\ell_{385} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083288} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083288} = \mathbf{Pl}(0, 27, 0, 29, 0, 1)_{38687} \\
\ell_{386} &= \begin{bmatrix} 0 & 1 & \eta^{25} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083225} = \begin{bmatrix} 0 & 1 & 25 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083225} = \mathbf{Pl}(0, 25, 0, 1, 0, 0)_{121} \\
\ell_{387} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082411} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082411} = \mathbf{Pl}(0, 1, 0, 10, 0, 1)_{37464} \\
\ell_{388} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082967} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082967} = \mathbf{Pl}(0, 18, 0, 5, 0, 1)_{37166} \\
\ell_{389} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083298} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083298} = \mathbf{Pl}(0, 28, 0, 6, 0, 1)_{37239} \\
\ell_{390} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082681} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082681} = \mathbf{Pl}(0, 9, 0, 16, 0, 1)_{37850} \\
\ell_{391} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083129} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083129} = \mathbf{Pl}(0, 23, 0, 2, 0, 1)_{36982} \\
\ell_{392} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082833} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082833} = \mathbf{Pl}(0, 14, 0, 3, 0, 1)_{37036} \\
\ell_{393} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082787} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082787} = \mathbf{Pl}(0, 12, 0, 23, 0, 1)_{38294}
\end{aligned}$$

$$\begin{aligned}
\ell_{394} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083102} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083102} = \mathbf{Pl}(0, 22, 0, 8, 0, 1)_{37359} \\
\ell_{395} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082513} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082513} = \mathbf{Pl}(0, 4, 0, 13, 0, 1)_{37656} \\
\ell_{396} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083194} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083194} = \mathbf{Pl}(0, 25, 0, 1, 0, 1)_{36921} \\
\ell_{397} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082913} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082913} = \mathbf{Pl}(0, 16, 0, 17, 0, 1)_{37920} \\
\ell_{398} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082618} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082618} = \mathbf{Pl}(0, 7, 0, 19, 0, 1)_{38037} \\
\ell_{399} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082872} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082872} = \mathbf{Pl}(0, 15, 0, 9, 0, 1)_{37415} \\
\ell_{400} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082591} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082591} = \mathbf{Pl}(0, 6, 0, 25, 0, 1)_{38414} \\
\ell_{401} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082826} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082826} = \mathbf{Pl}(0, 13, 0, 29, 0, 1)_{38673} \\
\ell_{402} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082735} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082735} = \mathbf{Pl}(0, 11, 0, 4, 0, 1)_{37096} \\
\ell_{403} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083171} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083171} = \mathbf{Pl}(0, 24, 0, 11, 0, 1)_{37550} \\
\ell_{404} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082454} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082454} = \mathbf{Pl}(0, 2, 0, 20, 0, 1)_{38095} \\
\ell_{405} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083337} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083337} = \mathbf{Pl}(0, 29, 0, 12, 0, 1)_{37618} \\
\ell_{406} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083376} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083376} = \mathbf{Pl}(0, 30, 0, 18, 0, 1)_{37997} \\
\ell_{407} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083257} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083257} = \mathbf{Pl}(0, 26, 0, 31, 0, 1)_{38812} \\
\ell_{408} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082658} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082658} = \mathbf{Pl}(0, 8, 0, 26, 0, 1)_{38479} \\
\ell_{409} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082540} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082540} = \mathbf{Pl}(0, 5, 0, 7, 0, 1)_{37279} \\
\ell_{410} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082956} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082956} = \mathbf{Pl}(0, 17, 0, 27, 0, 1)_{38551} \\
\ell_{411} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082712} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082712} = \mathbf{Pl}(0, 10, 0, 14, 0, 1)_{37725} \\
\ell_{412} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083083} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083083} = \mathbf{Pl}(0, 21, 0, 22, 0, 1)_{38240} \\
\ell_{413} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083415} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083415} = \mathbf{Pl}(0, 31, 0, 24, 0, 1)_{38376} \\
\ell_{414} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082497} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082497} = \mathbf{Pl}(0, 3, 0, 30, 0, 1)_{38726}
\end{aligned}$$

$$\begin{aligned}
\ell_{415} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083010} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083010} = \mathbf{Pl}(0, 19, 0, 15, 0, 1)_{37797} \\
\ell_{416} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083056} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083056} = \mathbf{Pl}(0, 20, 0, 28, 0, 1)_{38617} \\
\ell_{417} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083280} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083280} = \mathbf{Pl}(0, 27, 0, 21, 0, 1)_{38183} \\
\ell_{418} &= \begin{bmatrix} 0 & 1 & \eta^4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082928} = \begin{bmatrix} 0 & 1 & 16 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082928} = \mathbf{Pl}(0, 16, 0, 1, 0, 0)_{112} \\
\ell_{419} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082412} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082412} = \mathbf{Pl}(0, 1, 0, 11, 0, 1)_{37527} \\
\ell_{420} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082985} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082985} = \mathbf{Pl}(0, 18, 0, 23, 0, 1)_{38300} \\
\ell_{421} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083318} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083318} = \mathbf{Pl}(0, 28, 0, 26, 0, 1)_{38499} \\
\ell_{422} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082690} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082690} = \mathbf{Pl}(0, 9, 0, 25, 0, 1)_{38417} \\
\ell_{423} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083148} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083148} = \mathbf{Pl}(0, 23, 0, 21, 0, 1)_{38179} \\
\ell_{424} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082843} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082843} = \mathbf{Pl}(0, 14, 0, 13, 0, 1)_{37666} \\
\ell_{425} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082791} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082791} = \mathbf{Pl}(0, 12, 0, 27, 0, 1)_{38546} \\
\ell_{426} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083124} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083124} = \mathbf{Pl}(0, 22, 0, 30, 0, 1)_{38745} \\
\ell_{427} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082509} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082509} = \mathbf{Pl}(0, 4, 0, 9, 0, 1)_{37404} \\
\ell_{428} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083217} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083217} = \mathbf{Pl}(0, 25, 0, 24, 0, 1)_{38370} \\
\ell_{429} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082897} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082897} = \mathbf{Pl}(0, 16, 0, 1, 0, 1)_{36912} \\
\ell_{430} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082619} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082619} = \mathbf{Pl}(0, 7, 0, 20, 0, 1)_{38100} \\
\ell_{431} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082869} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082869} = \mathbf{Pl}(0, 15, 0, 6, 0, 1)_{37226} \\
\ell_{432} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082597} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082597} = \mathbf{Pl}(0, 6, 0, 31, 0, 1)_{38792} \\
\ell_{433} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082813} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082813} = \mathbf{Pl}(0, 13, 0, 16, 0, 1)_{37854} \\
\ell_{434} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082746} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082746} = \mathbf{Pl}(0, 11, 0, 15, 0, 1)_{37789} \\
\ell_{435} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083179} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083179} = \mathbf{Pl}(0, 24, 0, 19, 0, 1)_{38054}
\end{aligned}$$

$$\begin{aligned}
\ell_{436} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082456} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082456} = \mathbf{PI}(0, 2, 0, 22, 0, 1)_{38221} \\
\ell_{437} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083342} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083342} = \mathbf{PI}(0, 29, 0, 17, 0, 1)_{37933} \\
\ell_{438} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083370} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083370} = \mathbf{PI}(0, 30, 0, 12, 0, 1)_{37619} \\
\ell_{439} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083231} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083231} = \mathbf{PI}(0, 26, 0, 5, 0, 1)_{37174} \\
\ell_{440} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082650} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082650} = \mathbf{PI}(0, 8, 0, 18, 0, 1)_{37975} \\
\ell_{441} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082535} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082535} = \mathbf{PI}(0, 5, 0, 2, 0, 1)_{36964} \\
\ell_{442} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082939} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082939} = \mathbf{PI}(0, 17, 0, 10, 0, 1)_{37480} \\
\ell_{443} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082702} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082702} = \mathbf{PI}(0, 10, 0, 4, 0, 1)_{37095} \\
\ell_{444} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083064} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083064} = \mathbf{PI}(0, 21, 0, 3, 0, 1)_{37043} \\
\ell_{445} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083398} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083398} = \mathbf{PI}(0, 31, 0, 7, 0, 1)_{37305} \\
\ell_{446} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082496} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082496} = \mathbf{PI}(0, 3, 0, 29, 0, 1)_{38663} \\
\ell_{447} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083023} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083023} = \mathbf{PI}(0, 19, 0, 28, 0, 1)_{38616} \\
\ell_{448} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083036} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083036} = \mathbf{PI}(0, 20, 0, 8, 0, 1)_{37357} \\
\ell_{449} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083273} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083273} = \mathbf{PI}(0, 27, 0, 14, 0, 1)_{37742} \\
\ell_{450} &= \begin{bmatrix} 0 & 1 & \eta^{11} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082631} = \begin{bmatrix} 0 & 1 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082631} = \mathbf{PI}(0, 7, 0, 1, 0, 0)_{103} \\
\ell_{451} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082413} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082413} = \mathbf{PI}(0, 1, 0, 12, 0, 1)_{37590} \\
\ell_{452} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082968} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082968} = \mathbf{PI}(0, 18, 0, 6, 0, 1)_{37229} \\
\ell_{453} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083296} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083296} = \mathbf{PI}(0, 28, 0, 4, 0, 1)_{37113} \\
\ell_{454} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082668} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082668} = \mathbf{PI}(0, 9, 0, 3, 0, 1)_{37031} \\
\ell_{455} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083158} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083158} = \mathbf{PI}(0, 23, 0, 31, 0, 1)_{38809} \\
\ell_{456} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082832} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082832} = \mathbf{PI}(0, 14, 0, 2, 0, 1)_{36973}
\end{aligned}$$

$$\begin{aligned}
\ell_{457} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082790} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082790} = \mathbf{PI}(0, 12, 0, 26, 0, 1)_{38483} \\
\ell_{458} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083113} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083113} = \mathbf{PI}(0, 22, 0, 19, 0, 1)_{38052} \\
\ell_{459} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082521} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082521} = \mathbf{PI}(0, 4, 0, 21, 0, 1)_{38160} \\
\ell_{460} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083222} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083222} = \mathbf{PI}(0, 25, 0, 29, 0, 1)_{38685} \\
\ell_{461} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082926} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082926} = \mathbf{PI}(0, 16, 0, 30, 0, 1)_{38739} \\
\ell_{462} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082600} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082600} = \mathbf{PI}(0, 7, 0, 1, 0, 1)_{36903} \\
\ell_{463} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082877} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082877} = \mathbf{PI}(0, 15, 0, 14, 0, 1)_{37730} \\
\ell_{464} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082579} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082579} = \mathbf{PI}(0, 6, 0, 13, 0, 1)_{37658} \\
\ell_{465} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082819} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082819} = \mathbf{PI}(0, 13, 0, 22, 0, 1)_{38232} \\
\ell_{466} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082758} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082758} = \mathbf{PI}(0, 11, 0, 27, 0, 1)_{38545} \\
\ell_{467} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083177} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083177} = \mathbf{PI}(0, 24, 0, 17, 0, 1)_{37928} \\
\ell_{468} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082458} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082458} = \mathbf{PI}(0, 2, 0, 24, 0, 1)_{38347} \\
\ell_{469} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083333} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083333} = \mathbf{PI}(0, 29, 0, 8, 0, 1)_{37366} \\
\ell_{470} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083386} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083386} = \mathbf{PI}(0, 30, 0, 28, 0, 1)_{38627} \\
\ell_{471} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083235} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083235} = \mathbf{PI}(0, 26, 0, 9, 0, 1)_{37426} \\
\ell_{472} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082647} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082647} = \mathbf{PI}(0, 8, 0, 15, 0, 1)_{37786} \\
\ell_{473} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082558} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082558} = \mathbf{PI}(0, 5, 0, 25, 0, 1)_{38413} \\
\ell_{474} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082947} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082947} = \mathbf{PI}(0, 17, 0, 18, 0, 1)_{37984} \\
\ell_{475} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082721} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082721} = \mathbf{PI}(0, 10, 0, 23, 0, 1)_{38292} \\
\ell_{476} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083068} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083068} = \mathbf{PI}(0, 21, 0, 7, 0, 1)_{37295} \\
\ell_{477} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083407} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083407} = \mathbf{PI}(0, 31, 0, 16, 0, 1)_{37872}
\end{aligned}$$

$$\begin{aligned}
\ell_{478} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082487} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082487} = \mathbf{PI}(0, 3, 0, 20, 0, 1)_{38096} \\
\ell_{479} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083005} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083005} = \mathbf{PI}(0, 19, 0, 10, 0, 1)_{37482} \\
\ell_{480} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083039} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083039} = \mathbf{PI}(0, 20, 0, 11, 0, 1)_{37546} \\
\ell_{481} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083264} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083264} = \mathbf{PI}(0, 27, 0, 5, 0, 1)_{37175} \\
\ell_{482} &= \begin{bmatrix} 0 & 1 & \eta^{23} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082895} = \begin{bmatrix} 0 & 1 & 15 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082895} = \mathbf{PI}(0, 15, 0, 1, 0, 0)_{111} \\
\ell_{483} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082414} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082414} = \mathbf{PI}(0, 1, 0, 13, 0, 1)_{37653} \\
\ell_{484} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082982} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082982} = \mathbf{PI}(0, 18, 0, 20, 0, 1)_{38111} \\
\ell_{485} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083316} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083316} = \mathbf{PI}(0, 28, 0, 24, 0, 1)_{38373} \\
\ell_{486} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082675} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082675} = \mathbf{PI}(0, 9, 0, 10, 0, 1)_{37472} \\
\ell_{487} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083135} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083135} = \mathbf{PI}(0, 23, 0, 8, 0, 1)_{37360} \\
\ell_{488} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082842} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082842} = \mathbf{PI}(0, 14, 0, 12, 0, 1)_{37603} \\
\ell_{489} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082786} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082786} = \mathbf{PI}(0, 12, 0, 22, 0, 1)_{38231} \\
\ell_{490} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083099} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083099} = \mathbf{PI}(0, 22, 0, 5, 0, 1)_{37170} \\
\ell_{491} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082517} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082517} = \mathbf{PI}(0, 4, 0, 17, 0, 1)_{37908} \\
\ell_{492} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083197} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083197} = \mathbf{PI}(0, 25, 0, 4, 0, 1)_{37110} \\
\ell_{493} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082910} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082910} = \mathbf{PI}(0, 16, 0, 14, 0, 1)_{37731} \\
\ell_{494} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082605} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082605} = \mathbf{PI}(0, 7, 0, 6, 0, 1)_{37218} \\
\ell_{495} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082864} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082864} = \mathbf{PI}(0, 15, 0, 1, 0, 1)_{36911} \\
\ell_{496} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082577} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082577} = \mathbf{PI}(0, 6, 0, 11, 0, 1)_{37532} \\
\ell_{497} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082824} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082824} = \mathbf{PI}(0, 13, 0, 27, 0, 1)_{38547} \\
\ell_{498} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082747} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082747} = \mathbf{PI}(0, 11, 0, 16, 0, 1)_{37852}
\end{aligned}$$

$$\begin{aligned}
\ell_{499} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083169} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083169} = \mathbf{Pl}(0, 24, 0, 9, 0, 1)_{37424} \\
\ell_{500} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082460} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082460} = \mathbf{Pl}(0, 2, 0, 26, 0, 1)_{38473} \\
\ell_{501} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083346} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083346} = \mathbf{Pl}(0, 29, 0, 21, 0, 1)_{38185} \\
\ell_{502} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083360} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083360} = \mathbf{Pl}(0, 30, 0, 2, 0, 1)_{36989} \\
\ell_{503} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083245} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083245} = \mathbf{Pl}(0, 26, 0, 19, 0, 1)_{38056} \\
\ell_{504} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082639} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082639} = \mathbf{Pl}(0, 8, 0, 7, 0, 1)_{37282} \\
\ell_{505} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082561} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082561} = \mathbf{Pl}(0, 5, 0, 28, 0, 1)_{38602} \\
\ell_{506} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082932} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082932} = \mathbf{Pl}(0, 17, 0, 3, 0, 1)_{37039} \\
\ell_{507} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082727} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082727} = \mathbf{Pl}(0, 10, 0, 29, 0, 1)_{38670} \\
\ell_{508} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083079} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083079} = \mathbf{Pl}(0, 21, 0, 18, 0, 1)_{37988} \\
\ell_{509} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083406} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083406} = \mathbf{Pl}(0, 31, 0, 15, 0, 1)_{37809} \\
\ell_{510} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082490} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082490} = \mathbf{Pl}(0, 3, 0, 23, 0, 1)_{38285} \\
\ell_{511} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083020} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083020} = \mathbf{Pl}(0, 19, 0, 25, 0, 1)_{38427} \\
\ell_{512} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083059} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083059} = \mathbf{Pl}(0, 20, 0, 31, 0, 1)_{38806} \\
\ell_{513} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083289} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083289} = \mathbf{Pl}(0, 27, 0, 30, 0, 1)_{38750} \\
\ell_{514} &= \begin{bmatrix} 0 & 1 & \eta^{19} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082598} = \begin{bmatrix} 0 & 1 & 6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082598} = \mathbf{Pl}(0, 6, 0, 1, 0, 0)_{102} \\
\ell_{515} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082415} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082415} = \mathbf{Pl}(0, 1, 0, 14, 0, 1)_{37716} \\
\ell_{516} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082969} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082969} = \mathbf{Pl}(0, 18, 0, 7, 0, 1)_{37292} \\
\ell_{517} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083317} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083317} = \mathbf{Pl}(0, 28, 0, 25, 0, 1)_{38436} \\
\ell_{518} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082682} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082682} = \mathbf{Pl}(0, 9, 0, 17, 0, 1)_{37913} \\
\ell_{519} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083147} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083147} = \mathbf{Pl}(0, 23, 0, 20, 0, 1)_{38116}
\end{aligned}$$

$$\begin{aligned}
\ell_{520} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082860} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082860} = \mathbf{PI}(0, 14, 0, 30, 0, 1)_{38737} \\
\ell_{521} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082766} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082766} = \mathbf{PI}(0, 12, 0, 2, 0, 1)_{36971} \\
\ell_{522} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083120} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083120} = \mathbf{PI}(0, 22, 0, 26, 0, 1)_{38493} \\
\ell_{523} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082529} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082529} = \mathbf{PI}(0, 4, 0, 29, 0, 1)_{38664} \\
\ell_{524} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083203} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083203} = \mathbf{PI}(0, 25, 0, 10, 0, 1)_{37488} \\
\ell_{525} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082923} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082923} = \mathbf{PI}(0, 16, 0, 27, 0, 1)_{38550} \\
\ell_{526} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082614} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082614} = \mathbf{PI}(0, 7, 0, 15, 0, 1)_{37785} \\
\ell_{527} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082879} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082879} = \mathbf{PI}(0, 15, 0, 16, 0, 1)_{37856} \\
\ell_{528} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082567} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082567} = \mathbf{PI}(0, 6, 0, 1, 0, 1)_{36902} \\
\ell_{529} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082809} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082809} = \mathbf{PI}(0, 13, 0, 12, 0, 1)_{37602} \\
\ell_{530} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082744} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082744} = \mathbf{PI}(0, 11, 0, 13, 0, 1)_{37663} \\
\ell_{531} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083164} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083164} = \mathbf{PI}(0, 24, 0, 4, 0, 1)_{37109} \\
\ell_{532} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082462} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082462} = \mathbf{PI}(0, 2, 0, 28, 0, 1)_{38599} \\
\ell_{533} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083348} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083348} = \mathbf{PI}(0, 29, 0, 23, 0, 1)_{38311} \\
\ell_{534} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083363} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083363} = \mathbf{PI}(0, 30, 0, 5, 0, 1)_{37178} \\
\ell_{535} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083250} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083250} = \mathbf{PI}(0, 26, 0, 24, 0, 1)_{38371} \\
\ell_{536} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082663} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082663} = \mathbf{PI}(0, 8, 0, 31, 0, 1)_{38794} \\
\ell_{537} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082552} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082552} = \mathbf{PI}(0, 5, 0, 19, 0, 1)_{38035} \\
\ell_{538} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082950} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082950} = \mathbf{PI}(0, 17, 0, 21, 0, 1)_{38173} \\
\ell_{539} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082701} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082701} = \mathbf{PI}(0, 10, 0, 3, 0, 1)_{37032} \\
\ell_{540} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083069} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083069} = \mathbf{PI}(0, 21, 0, 8, 0, 1)_{37358}
\end{aligned}$$

$$\begin{aligned}
\ell_{541} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083402} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083402} = \mathbf{Pl}(0, 31, 0, 11, 0, 1)_{37557} \\
\ell_{542} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082485} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082485} = \mathbf{Pl}(0, 3, 0, 18, 0, 1)_{37970} \\
\ell_{543} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083004} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083004} = \mathbf{Pl}(0, 19, 0, 9, 0, 1)_{37419} \\
\ell_{544} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083034} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083034} = \mathbf{Pl}(0, 20, 0, 6, 0, 1)_{37231} \\
\ell_{545} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083281} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083281} = \mathbf{Pl}(0, 27, 0, 22, 0, 1)_{38246} \\
\ell_{546} &= \begin{bmatrix} 0 & 1 & \eta^8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082829} = \begin{bmatrix} 0 & 1 & 13 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082829} = \mathbf{Pl}(0, 13, 0, 1, 0, 0)_{109} \\
\ell_{547} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082416} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082416} = \mathbf{Pl}(0, 1, 0, 15, 0, 1)_{37779} \\
\ell_{548} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082983} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082983} = \mathbf{Pl}(0, 18, 0, 21, 0, 1)_{38174} \\
\ell_{549} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083297} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083297} = \mathbf{Pl}(0, 28, 0, 5, 0, 1)_{37176} \\
\ell_{550} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082689} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082689} = \mathbf{Pl}(0, 9, 0, 24, 0, 1)_{38354} \\
\ell_{551} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083130} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083130} = \mathbf{Pl}(0, 23, 0, 3, 0, 1)_{37045} \\
\ell_{552} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082846} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082846} = \mathbf{Pl}(0, 14, 0, 16, 0, 1)_{37855} \\
\ell_{553} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082778} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082778} = \mathbf{Pl}(0, 12, 0, 14, 0, 1)_{37727} \\
\ell_{554} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083106} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083106} = \mathbf{Pl}(0, 22, 0, 12, 0, 1)_{37611} \\
\ell_{555} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082525} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082525} = \mathbf{Pl}(0, 4, 0, 25, 0, 1)_{38412} \\
\ell_{556} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083212} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083212} = \mathbf{Pl}(0, 25, 0, 19, 0, 1)_{38055} \\
\ell_{557} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082907} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082907} = \mathbf{Pl}(0, 16, 0, 11, 0, 1)_{37542} \\
\ell_{558} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082607} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082607} = \mathbf{Pl}(0, 7, 0, 8, 0, 1)_{37344} \\
\ell_{559} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082894} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082894} = \mathbf{Pl}(0, 15, 0, 31, 0, 1)_{38801} \\
\ell_{560} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082573} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082573} = \mathbf{Pl}(0, 6, 0, 7, 0, 1)_{37280} \\
\ell_{561} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082798} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082798} = \mathbf{Pl}(0, 13, 0, 1, 0, 1)_{36909}
\end{aligned}$$

$$\begin{aligned}
\ell_{562} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082737} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082737} = \mathbf{PI}(0, 11, 0, 6, 0, 1)_{37222} \\
\ell_{563} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083188} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083188} = \mathbf{PI}(0, 24, 0, 28, 0, 1)_{38621} \\
\ell_{564} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082464} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082464} = \mathbf{PI}(0, 2, 0, 30, 0, 1)_{38725} \\
\ell_{565} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083335} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083335} = \mathbf{PI}(0, 29, 0, 10, 0, 1)_{37492} \\
\ell_{566} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083385} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083385} = \mathbf{PI}(0, 30, 0, 27, 0, 1)_{38564} \\
\ell_{567} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083228} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083228} = \mathbf{PI}(0, 26, 0, 2, 0, 1)_{36985} \\
\ell_{568} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082655} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082655} = \mathbf{PI}(0, 8, 0, 23, 0, 1)_{38290} \\
\ell_{569} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082555} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082555} = \mathbf{PI}(0, 5, 0, 22, 0, 1)_{38224} \\
\ell_{570} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082933} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082933} = \mathbf{PI}(0, 17, 0, 4, 0, 1)_{37102} \\
\ell_{571} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082707} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082707} = \mathbf{PI}(0, 10, 0, 9, 0, 1)_{37410} \\
\ell_{572} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083090} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083090} = \mathbf{PI}(0, 21, 0, 29, 0, 1)_{38681} \\
\ell_{573} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083411} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083411} = \mathbf{PI}(0, 31, 0, 20, 0, 1)_{38124} \\
\ell_{574} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082484} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082484} = \mathbf{PI}(0, 3, 0, 17, 0, 1)_{37907} \\
\ell_{575} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083021} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083021} = \mathbf{PI}(0, 19, 0, 26, 0, 1)_{38490} \\
\ell_{576} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083046} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083046} = \mathbf{PI}(0, 20, 0, 18, 0, 1)_{37987} \\
\ell_{577} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083272} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083272} = \mathbf{PI}(0, 27, 0, 13, 0, 1)_{37679} \\
\ell_{578} &= \begin{bmatrix} 0 & 1 & \eta^{27} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082763} = \begin{bmatrix} 0 & 1 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082763} = \mathbf{PI}(0, 11, 0, 1, 0, 0)_{107} \\
\ell_{579} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082417} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082417} = \mathbf{PI}(0, 1, 0, 16, 0, 1)_{37842} \\
\ell_{580} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082970} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082970} = \mathbf{PI}(0, 18, 0, 8, 0, 1)_{37355} \\
\ell_{581} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083311} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083311} = \mathbf{PI}(0, 28, 0, 19, 0, 1)_{38058} \\
\ell_{582} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082669} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082669} = \mathbf{PI}(0, 9, 0, 4, 0, 1)_{37094}
\end{aligned}$$

$$\begin{aligned}
\ell_{583} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083145} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083145} = \mathbf{Pl}(0, 23, 0, 18, 0, 1)_{37990} \\
\ell_{584} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082857} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082857} = \mathbf{Pl}(0, 14, 0, 27, 0, 1)_{38548} \\
\ell_{585} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082794} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082794} = \mathbf{Pl}(0, 12, 0, 30, 0, 1)_{38735} \\
\ell_{586} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083096} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083096} = \mathbf{Pl}(0, 22, 0, 2, 0, 1)_{36981} \\
\ell_{587} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082510} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082510} = \mathbf{Pl}(0, 4, 0, 10, 0, 1)_{37467} \\
\ell_{588} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083202} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083202} = \mathbf{Pl}(0, 25, 0, 9, 0, 1)_{37425} \\
\ell_{589} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082909} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082909} = \mathbf{Pl}(0, 16, 0, 13, 0, 1)_{37668} \\
\ell_{590} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082630} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082630} = \mathbf{Pl}(0, 7, 0, 31, 0, 1)_{38793} \\
\ell_{591} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082874} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082874} = \mathbf{Pl}(0, 15, 0, 11, 0, 1)_{37541} \\
\ell_{592} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082581} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082581} = \mathbf{Pl}(0, 6, 0, 15, 0, 1)_{37784} \\
\ell_{593} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082811} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082811} = \mathbf{Pl}(0, 13, 0, 14, 0, 1)_{37728} \\
\ell_{594} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082732} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082732} = \mathbf{Pl}(0, 11, 0, 1, 0, 1)_{36907} \\
\ell_{595} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083185} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083185} = \mathbf{Pl}(0, 24, 0, 25, 0, 1)_{38432} \\
\ell_{596} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082439} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082439} = \mathbf{Pl}(0, 2, 0, 5, 0, 1)_{37150} \\
\ell_{597} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083328} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083328} = \mathbf{Pl}(0, 29, 0, 3, 0, 1)_{37051} \\
\ell_{598} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083380} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083380} = \mathbf{Pl}(0, 30, 0, 22, 0, 1)_{38249} \\
\ell_{599} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083254} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083254} = \mathbf{Pl}(0, 26, 0, 28, 0, 1)_{38623} \\
\ell_{600} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082652} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082652} = \mathbf{Pl}(0, 8, 0, 20, 0, 1)_{38101} \\
\ell_{601} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082559} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082559} = \mathbf{Pl}(0, 5, 0, 26, 0, 1)_{38476} \\
\ell_{602} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082958} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082958} = \mathbf{Pl}(0, 17, 0, 29, 0, 1)_{38677} \\
\ell_{603} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082715} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082715} = \mathbf{Pl}(0, 10, 0, 17, 0, 1)_{37914}
\end{aligned}$$

$$\begin{aligned}
\ell_{604} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083084} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083084} = \mathbf{Pl}(0, 21, 0, 23, 0, 1)_{38303} \\
\ell_{605} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083397} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083397} = \mathbf{Pl}(0, 31, 0, 6, 0, 1)_{37242} \\
\ell_{606} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082488} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082488} = \mathbf{Pl}(0, 3, 0, 21, 0, 1)_{38159} \\
\ell_{607} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083019} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083019} = \mathbf{Pl}(0, 19, 0, 24, 0, 1)_{38364} \\
\ell_{608} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083035} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083035} = \mathbf{Pl}(0, 20, 0, 7, 0, 1)_{37294} \\
\ell_{609} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083271} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083271} = \mathbf{Pl}(0, 27, 0, 12, 0, 1)_{37616} \\
\ell_{610} &= \begin{bmatrix} 0 & 1 & \eta^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083192} = \begin{bmatrix} 0 & 1 & 24 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083192} = \mathbf{Pl}(0, 24, 0, 1, 0, 0)_{120} \\
\ell_{611} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082418} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082418} = \mathbf{Pl}(0, 1, 0, 17, 0, 1)_{37905} \\
\ell_{612} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082988} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082988} = \mathbf{Pl}(0, 18, 0, 26, 0, 1)_{38489} \\
\ell_{613} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083307} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083307} = \mathbf{Pl}(0, 28, 0, 15, 0, 1)_{37806} \\
\ell_{614} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082678} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082678} = \mathbf{Pl}(0, 9, 0, 13, 0, 1)_{37661} \\
\ell_{615} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083132} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083132} = \mathbf{Pl}(0, 23, 0, 5, 0, 1)_{37171} \\
\ell_{616} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082851} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082851} = \mathbf{Pl}(0, 14, 0, 21, 0, 1)_{38170} \\
\ell_{617} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082782} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082782} = \mathbf{Pl}(0, 12, 0, 18, 0, 1)_{37979} \\
\ell_{618} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083114} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083114} = \mathbf{Pl}(0, 22, 0, 20, 0, 1)_{38115} \\
\ell_{619} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082514} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082514} = \mathbf{Pl}(0, 4, 0, 14, 0, 1)_{37719} \\
\ell_{620} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083209} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083209} = \mathbf{Pl}(0, 25, 0, 16, 0, 1)_{37866} \\
\ell_{621} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082925} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082925} = \mathbf{Pl}(0, 16, 0, 29, 0, 1)_{38676} \\
\ell_{622} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082623} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082623} = \mathbf{Pl}(0, 7, 0, 24, 0, 1)_{38352} \\
\ell_{623} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082867} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082867} = \mathbf{Pl}(0, 15, 0, 4, 0, 1)_{37100} \\
\ell_{624} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082575} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082575} = \mathbf{Pl}(0, 6, 0, 9, 0, 1)_{37406}
\end{aligned}$$

$$\begin{aligned}
\ell_{625} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082800} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082800} = \mathbf{Pl}(0, 13, 0, 3, 0, 1)_{37035} \\
\ell_{626} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082741} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082741} = \mathbf{Pl}(0, 11, 0, 10, 0, 1)_{37474} \\
\ell_{627} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083161} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083161} = \mathbf{Pl}(0, 24, 0, 1, 0, 1)_{36920} \\
\ell_{628} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082441} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082441} = \mathbf{Pl}(0, 2, 0, 7, 0, 1)_{37276} \\
\ell_{629} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083355} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083355} = \mathbf{Pl}(0, 29, 0, 30, 0, 1)_{38752} \\
\ell_{630} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083366} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083366} = \mathbf{Pl}(0, 30, 0, 8, 0, 1)_{37367} \\
\ell_{631} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083232} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083232} = \mathbf{Pl}(0, 26, 0, 6, 0, 1)_{37237} \\
\ell_{632} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082660} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082660} = \mathbf{Pl}(0, 8, 0, 28, 0, 1)_{38605} \\
\ell_{633} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082564} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082564} = \mathbf{Pl}(0, 5, 0, 31, 0, 1)_{38791} \\
\ell_{634} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082941} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082941} = \mathbf{Pl}(0, 17, 0, 12, 0, 1)_{37606} \\
\ell_{635} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082725} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082725} = \mathbf{Pl}(0, 10, 0, 27, 0, 1)_{38544} \\
\ell_{636} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083063} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083063} = \mathbf{Pl}(0, 21, 0, 2, 0, 1)_{36980} \\
\ell_{637} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083416} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083416} = \mathbf{Pl}(0, 31, 0, 25, 0, 1)_{38439} \\
\ell_{638} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082489} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082489} = \mathbf{Pl}(0, 3, 0, 22, 0, 1)_{38222} \\
\ell_{639} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083006} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083006} = \mathbf{Pl}(0, 19, 0, 11, 0, 1)_{37545} \\
\ell_{640} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083047} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083047} = \mathbf{Pl}(0, 20, 0, 19, 0, 1)_{38050} \\
\ell_{641} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083282} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083282} = \mathbf{Pl}(0, 27, 0, 23, 0, 1)_{38309} \\
\ell_{642} &= \begin{bmatrix} 0 & 1 & \eta & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082466} = \begin{bmatrix} 0 & 1 & 2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082466} = \mathbf{Pl}(0, 2, 0, 1, 0, 0)_{98} \\
\ell_{643} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082419} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082419} = \mathbf{Pl}(0, 1, 0, 18, 0, 1)_{37968} \\
\ell_{644} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082971} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082971} = \mathbf{Pl}(0, 18, 0, 9, 0, 1)_{37418} \\
\ell_{645} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083306} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083306} = \mathbf{Pl}(0, 28, 0, 14, 0, 1)_{37743}
\end{aligned}$$

$$\begin{aligned}
\ell_{646} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082687} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082687} = \mathbf{Pl}(0, 9, 0, 22, 0, 1)_{38228} \\
\ell_{647} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083152} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083152} = \mathbf{Pl}(0, 23, 0, 25, 0, 1)_{38431} \\
\ell_{648} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082837} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082837} = \mathbf{Pl}(0, 14, 0, 7, 0, 1)_{37288} \\
\ell_{649} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082770} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082770} = \mathbf{Pl}(0, 12, 0, 6, 0, 1)_{37223} \\
\ell_{650} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083105} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083105} = \mathbf{Pl}(0, 22, 0, 11, 0, 1)_{37548} \\
\ell_{651} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082502} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082502} = \mathbf{Pl}(0, 4, 0, 2, 0, 1)_{36963} \\
\ell_{652} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083223} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083223} = \mathbf{Pl}(0, 25, 0, 30, 0, 1)_{38748} \\
\ell_{653} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082904} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082904} = \mathbf{Pl}(0, 16, 0, 8, 0, 1)_{37353} \\
\ell_{654} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082616} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082616} = \mathbf{Pl}(0, 7, 0, 17, 0, 1)_{37911} \\
\ell_{655} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082884} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082884} = \mathbf{Pl}(0, 15, 0, 21, 0, 1)_{38171} \\
\ell_{656} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082569} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082569} = \mathbf{Pl}(0, 6, 0, 3, 0, 1)_{37028} \\
\ell_{657} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082817} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082817} = \mathbf{Pl}(0, 13, 0, 20, 0, 1)_{38106} \\
\ell_{658} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082754} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082754} = \mathbf{Pl}(0, 11, 0, 23, 0, 1)_{38293} \\
\ell_{659} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083172} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083172} = \mathbf{Pl}(0, 24, 0, 12, 0, 1)_{37613} \\
\ell_{660} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082435} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082435} = \mathbf{Pl}(0, 2, 0, 1, 0, 1)_{36898} \\
\ell_{661} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083353} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083353} = \mathbf{Pl}(0, 29, 0, 28, 0, 1)_{38626} \\
\ell_{662} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083373} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083373} = \mathbf{Pl}(0, 30, 0, 15, 0, 1)_{37808} \\
\ell_{663} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083239} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083239} = \mathbf{Pl}(0, 26, 0, 13, 0, 1)_{37678} \\
\ell_{664} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082636} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082636} = \mathbf{Pl}(0, 8, 0, 4, 0, 1)_{37093} \\
\ell_{665} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082549} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082549} = \mathbf{Pl}(0, 5, 0, 16, 0, 1)_{37846} \\
\ell_{666} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082955} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082955} = \mathbf{Pl}(0, 17, 0, 26, 0, 1)_{38488}
\end{aligned}$$

$$\begin{aligned}
\ell_{667} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082703} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082703} = \mathbf{PI}(0, 10, 0, 5, 0, 1)_{37158} \\
\ell_{668} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083085} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083085} = \mathbf{PI}(0, 21, 0, 24, 0, 1)_{38366} \\
\ell_{669} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083420} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083420} = \mathbf{PI}(0, 31, 0, 29, 0, 1)_{38691} \\
\ell_{670} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082486} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082486} = \mathbf{PI}(0, 3, 0, 19, 0, 1)_{38033} \\
\ell_{671} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083022} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083022} = \mathbf{PI}(0, 19, 0, 27, 0, 1)_{38553} \\
\ell_{672} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083038} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083038} = \mathbf{PI}(0, 20, 0, 10, 0, 1)_{37483} \\
\ell_{673} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083290} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083290} = \mathbf{PI}(0, 27, 0, 31, 0, 1)_{38813} \\
\ell_{674} &= \begin{bmatrix} 0 & 1 & \eta^{14} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083357} = \begin{bmatrix} 0 & 1 & 29 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083357} = \mathbf{PI}(0, 29, 0, 1, 0, 0)_{125} \\
\ell_{675} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082420} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082420} = \mathbf{PI}(0, 1, 0, 19, 0, 1)_{38031} \\
\ell_{676} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082989} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082989} = \mathbf{PI}(0, 18, 0, 27, 0, 1)_{38552} \\
\ell_{677} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083310} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083310} = \mathbf{PI}(0, 28, 0, 18, 0, 1)_{37995} \\
\ell_{678} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082696} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082696} = \mathbf{PI}(0, 9, 0, 31, 0, 1)_{38795} \\
\ell_{679} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083141} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083141} = \mathbf{PI}(0, 23, 0, 14, 0, 1)_{37738} \\
\ell_{680} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082839} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082839} = \mathbf{PI}(0, 14, 0, 9, 0, 1)_{37414} \\
\ell_{681} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082774} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082774} = \mathbf{PI}(0, 12, 0, 10, 0, 1)_{37475} \\
\ell_{682} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083123} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083123} = \mathbf{PI}(0, 22, 0, 29, 0, 1)_{38682} \\
\ell_{683} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082506} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082506} = \mathbf{PI}(0, 4, 0, 6, 0, 1)_{37215} \\
\ell_{684} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083200} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083200} = \mathbf{PI}(0, 25, 0, 7, 0, 1)_{37299} \\
\ell_{685} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082920} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082920} = \mathbf{PI}(0, 16, 0, 24, 0, 1)_{38361} \\
\ell_{686} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082621} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082621} = \mathbf{PI}(0, 7, 0, 22, 0, 1)_{38226} \\
\ell_{687} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082889} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082889} = \mathbf{PI}(0, 15, 0, 26, 0, 1)_{38486}
\end{aligned}$$

$$\begin{aligned}
\ell_{688} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082571} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082571} = \mathbf{Pl}(0, 6, 0, 5, 0, 1)_{37154} \\
\ell_{689} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082822} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082822} = \mathbf{Pl}(0, 13, 0, 25, 0, 1)_{38421} \\
\ell_{690} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082759} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082759} = \mathbf{Pl}(0, 11, 0, 28, 0, 1)_{38608} \\
\ell_{691} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083180} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083180} = \mathbf{Pl}(0, 24, 0, 20, 0, 1)_{38117} \\
\ell_{692} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082437} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082437} = \mathbf{Pl}(0, 2, 0, 3, 0, 1)_{37024} \\
\ell_{693} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083326} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083326} = \mathbf{Pl}(0, 29, 0, 1, 0, 1)_{36925} \\
\ell_{694} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083375} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083375} = \mathbf{Pl}(0, 30, 0, 17, 0, 1)_{37934} \\
\ell_{695} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083249} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083249} = \mathbf{Pl}(0, 26, 0, 23, 0, 1)_{38308} \\
\ell_{696} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082644} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082644} = \mathbf{Pl}(0, 8, 0, 12, 0, 1)_{37597} \\
\ell_{697} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082554} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082554} = \mathbf{Pl}(0, 5, 0, 21, 0, 1)_{38161} \\
\ell_{698} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082940} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082940} = \mathbf{Pl}(0, 17, 0, 11, 0, 1)_{37543} \\
\ell_{699} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082713} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082713} = \mathbf{Pl}(0, 10, 0, 15, 0, 1)_{37788} \\
\ell_{700} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083074} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083074} = \mathbf{Pl}(0, 21, 0, 13, 0, 1)_{37673} \\
\ell_{701} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083393} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083393} = \mathbf{Pl}(0, 31, 0, 2, 0, 1)_{36990} \\
\ell_{702} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082483} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082483} = \mathbf{Pl}(0, 3, 0, 16, 0, 1)_{37844} \\
\ell_{703} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083003} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083003} = \mathbf{Pl}(0, 19, 0, 8, 0, 1)_{37356} \\
\ell_{704} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083058} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083058} = \mathbf{Pl}(0, 20, 0, 30, 0, 1)_{38743} \\
\ell_{705} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083263} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083263} = \mathbf{Pl}(0, 27, 0, 4, 0, 1)_{37112} \\
\ell_{706} &= \begin{bmatrix} 0 & 1 & \eta^{24} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083390} = \begin{bmatrix} 0 & 1 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083390} = \mathbf{Pl}(0, 30, 0, 1, 0, 0)_{126} \\
\ell_{707} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082421} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082421} = \mathbf{Pl}(0, 1, 0, 20, 0, 1)_{38094} \\
\ell_{708} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082972} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082972} = \mathbf{Pl}(0, 18, 0, 10, 0, 1)_{37481}
\end{aligned}$$

$$\begin{aligned}
\ell_{709} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083304} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083304} = \mathbf{Pl}(0, 28, 0, 12, 0, 1)_{37617} \\
\ell_{710} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082670} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082670} = \mathbf{Pl}(0, 9, 0, 5, 0, 1)_{37157} \\
\ell_{711} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083131} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083131} = \mathbf{Pl}(0, 23, 0, 4, 0, 1)_{37108} \\
\ell_{712} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082836} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082836} = \mathbf{Pl}(0, 14, 0, 6, 0, 1)_{37225} \\
\ell_{713} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082775} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082775} = \mathbf{Pl}(0, 12, 0, 11, 0, 1)_{37538} \\
\ell_{714} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083110} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083110} = \mathbf{Pl}(0, 22, 0, 16, 0, 1)_{37863} \\
\ell_{715} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082526} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082526} = \mathbf{Pl}(0, 4, 0, 26, 0, 1)_{38475} \\
\ell_{716} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083195} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083195} = \mathbf{Pl}(0, 25, 0, 2, 0, 1)_{36984} \\
\ell_{717} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082903} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082903} = \mathbf{Pl}(0, 16, 0, 7, 0, 1)_{37290} \\
\ell_{718} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082602} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082602} = \mathbf{Pl}(0, 7, 0, 3, 0, 1)_{37029} \\
\ell_{719} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082881} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082881} = \mathbf{Pl}(0, 15, 0, 18, 0, 1)_{37982} \\
\ell_{720} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082589} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082589} = \mathbf{Pl}(0, 6, 0, 23, 0, 1)_{38288} \\
\ell_{721} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082828} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082828} = \mathbf{Pl}(0, 13, 0, 31, 0, 1)_{38799} \\
\ell_{722} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082739} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082739} = \mathbf{Pl}(0, 11, 0, 8, 0, 1)_{37348} \\
\ell_{723} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083182} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083182} = \mathbf{Pl}(0, 24, 0, 22, 0, 1)_{38243} \\
\ell_{724} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082447} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082447} = \mathbf{Pl}(0, 2, 0, 13, 0, 1)_{37654} \\
\ell_{725} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083349} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083349} = \mathbf{Pl}(0, 29, 0, 24, 0, 1)_{38374} \\
\ell_{726} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083359} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083359} = \mathbf{Pl}(0, 30, 0, 1, 0, 1)_{36926} \\
\ell_{727} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083253} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083253} = \mathbf{Pl}(0, 26, 0, 27, 0, 1)_{38560} \\
\ell_{728} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082649} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082649} = \mathbf{Pl}(0, 8, 0, 17, 0, 1)_{37912} \\
\ell_{729} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082547} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082547} = \mathbf{Pl}(0, 5, 0, 14, 0, 1)_{37720}
\end{aligned}$$

$$\begin{aligned}
\ell_{730} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082948} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082948} = \mathbf{Pl}(0, 17, 0, 19, 0, 1)_{38047} \\
\ell_{731} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082726} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082726} = \mathbf{Pl}(0, 10, 0, 28, 0, 1)_{38607} \\
\ell_{732} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083070} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083070} = \mathbf{Pl}(0, 21, 0, 9, 0, 1)_{37421} \\
\ell_{733} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083412} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083412} = \mathbf{Pl}(0, 31, 0, 21, 0, 1)_{38187} \\
\ell_{734} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082492} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082492} = \mathbf{Pl}(0, 3, 0, 25, 0, 1)_{38411} \\
\ell_{735} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083025} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083025} = \mathbf{Pl}(0, 19, 0, 30, 0, 1)_{38742} \\
\ell_{736} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083057} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083057} = \mathbf{Pl}(0, 20, 0, 29, 0, 1)_{38680} \\
\ell_{737} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083274} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083274} = \mathbf{Pl}(0, 27, 0, 15, 0, 1)_{37805} \\
\ell_{738} &= \begin{bmatrix} 0 & 1 & \eta^9 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083258} = \begin{bmatrix} 0 & 1 & 26 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083258} = \mathbf{Pl}(0, 26, 0, 1, 0, 0)_{122} \\
\ell_{739} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082422} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082422} = \mathbf{Pl}(0, 1, 0, 21, 0, 1)_{38157} \\
\ell_{740} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082986} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082986} = \mathbf{Pl}(0, 18, 0, 24, 0, 1)_{38363} \\
\ell_{741} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083308} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083308} = \mathbf{Pl}(0, 28, 0, 16, 0, 1)_{37869} \\
\ell_{742} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082677} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082677} = \mathbf{Pl}(0, 9, 0, 12, 0, 1)_{37598} \\
\ell_{743} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083146} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083146} = \mathbf{Pl}(0, 23, 0, 19, 0, 1)_{38053} \\
\ell_{744} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082838} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082838} = \mathbf{Pl}(0, 14, 0, 8, 0, 1)_{37351} \\
\ell_{745} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082771} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082771} = \mathbf{Pl}(0, 12, 0, 7, 0, 1)_{37286} \\
\ell_{746} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083100} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083100} = \mathbf{Pl}(0, 22, 0, 6, 0, 1)_{37233} \\
\ell_{747} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082530} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082530} = \mathbf{Pl}(0, 4, 0, 30, 0, 1)_{38727} \\
\ell_{748} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083220} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083220} = \mathbf{Pl}(0, 25, 0, 27, 0, 1)_{38559} \\
\ell_{749} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082919} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082919} = \mathbf{Pl}(0, 16, 0, 23, 0, 1)_{38298} \\
\ell_{750} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082603} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082603} = \mathbf{Pl}(0, 7, 0, 4, 0, 1)_{37092}
\end{aligned}$$

$$\begin{aligned}
\ell_{751} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082892} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082892} = \mathbf{Pl}(0, 15, 0, 29, 0, 1)_{38675} \\
\ell_{752} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082583} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082583} = \mathbf{Pl}(0, 6, 0, 17, 0, 1)_{37910} \\
\ell_{753} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082815} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082815} = \mathbf{Pl}(0, 13, 0, 18, 0, 1)_{37980} \\
\ell_{754} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082734} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082734} = \mathbf{Pl}(0, 11, 0, 3, 0, 1)_{37033} \\
\ell_{755} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083174} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083174} = \mathbf{Pl}(0, 24, 0, 14, 0, 1)_{37739} \\
\ell_{756} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082449} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082449} = \mathbf{Pl}(0, 2, 0, 15, 0, 1)_{37780} \\
\ell_{757} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083330} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083330} = \mathbf{Pl}(0, 29, 0, 5, 0, 1)_{37177} \\
\ell_{758} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083389} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083389} = \mathbf{Pl}(0, 30, 0, 31, 0, 1)_{38816} \\
\ell_{759} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083227} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083227} = \mathbf{Pl}(0, 26, 0, 1, 0, 1)_{36922} \\
\ell_{760} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082657} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082657} = \mathbf{Pl}(0, 8, 0, 25, 0, 1)_{38416} \\
\ell_{761} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082544} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082544} = \mathbf{Pl}(0, 5, 0, 11, 0, 1)_{37531} \\
\ell_{762} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082931} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082931} = \mathbf{Pl}(0, 17, 0, 2, 0, 1)_{36976} \\
\ell_{763} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082720} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082720} = \mathbf{Pl}(0, 10, 0, 22, 0, 1)_{38229} \\
\ell_{764} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083089} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083089} = \mathbf{Pl}(0, 21, 0, 28, 0, 1)_{38618} \\
\ell_{765} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083401} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083401} = \mathbf{Pl}(0, 31, 0, 10, 0, 1)_{37494} \\
\ell_{766} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082493} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082493} = \mathbf{Pl}(0, 3, 0, 26, 0, 1)_{38474} \\
\ell_{767} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083008} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083008} = \mathbf{Pl}(0, 19, 0, 13, 0, 1)_{37671} \\
\ell_{768} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083037} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083037} = \mathbf{Pl}(0, 20, 0, 9, 0, 1)_{37420} \\
\ell_{769} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083279} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083279} = \mathbf{Pl}(0, 27, 0, 20, 0, 1)_{38120} \\
\ell_{770} &= \begin{bmatrix} 0 & 1 & \eta^3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082664} = \begin{bmatrix} 0 & 1 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082664} = \mathbf{Pl}(0, 8, 0, 1, 0, 0)_{104} \\
\ell_{771} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082423} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082423} = \mathbf{Pl}(0, 1, 0, 22, 0, 1)_{38220}
\end{aligned}$$

$$\begin{aligned}
\ell_{772} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082973} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082973} = \mathbf{PI}(0, 18, 0, 11, 0, 1)_{37544} \\
\ell_{773} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083309} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083309} = \mathbf{PI}(0, 28, 0, 17, 0, 1)_{37932} \\
\ell_{774} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082688} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082688} = \mathbf{PI}(0, 9, 0, 23, 0, 1)_{38291} \\
\ell_{775} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083142} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083142} = \mathbf{PI}(0, 23, 0, 15, 0, 1)_{37801} \\
\ell_{776} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082856} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082856} = \mathbf{PI}(0, 14, 0, 26, 0, 1)_{38485} \\
\ell_{777} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082783} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082783} = \mathbf{PI}(0, 12, 0, 19, 0, 1)_{38042} \\
\ell_{778} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083119} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083119} = \mathbf{PI}(0, 22, 0, 25, 0, 1)_{38430} \\
\ell_{779} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082518} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082518} = \mathbf{PI}(0, 4, 0, 18, 0, 1)_{37971} \\
\ell_{780} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083214} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083214} = \mathbf{PI}(0, 25, 0, 21, 0, 1)_{38181} \\
\ell_{781} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082898} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082898} = \mathbf{PI}(0, 16, 0, 2, 0, 1)_{36975} \\
\ell_{782} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082612} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082612} = \mathbf{PI}(0, 7, 0, 13, 0, 1)_{37659} \\
\ell_{783} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082875} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082875} = \mathbf{PI}(0, 15, 0, 12, 0, 1)_{37604} \\
\ell_{784} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082593} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082593} = \mathbf{PI}(0, 6, 0, 27, 0, 1)_{38540} \\
\ell_{785} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082802} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082802} = \mathbf{PI}(0, 13, 0, 5, 0, 1)_{37161} \\
\ell_{786} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082761} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082761} = \mathbf{PI}(0, 11, 0, 30, 0, 1)_{38734} \\
\ell_{787} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083163} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083163} = \mathbf{PI}(0, 24, 0, 3, 0, 1)_{37046} \\
\ell_{788} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082443} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082443} = \mathbf{PI}(0, 2, 0, 9, 0, 1)_{37402} \\
\ell_{789} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083332} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083332} = \mathbf{PI}(0, 29, 0, 7, 0, 1)_{37303} \\
\ell_{790} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083382} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083382} = \mathbf{PI}(0, 30, 0, 24, 0, 1)_{38375} \\
\ell_{791} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083236} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083236} = \mathbf{PI}(0, 26, 0, 10, 0, 1)_{37489} \\
\ell_{792} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082633} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082633} = \mathbf{PI}(0, 8, 0, 1, 0, 1)_{36904}
\end{aligned}$$

$$\begin{aligned}
\ell_{793} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082537} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082537} = \mathbf{Pl}(0, 5, 0, 4, 0, 1)_{37090} \\
\ell_{794} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082949} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082949} = \mathbf{Pl}(0, 17, 0, 20, 0, 1)_{38110} \\
\ell_{795} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082706} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082706} = \mathbf{Pl}(0, 10, 0, 8, 0, 1)_{37347} \\
\ell_{796} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083067} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083067} = \mathbf{Pl}(0, 21, 0, 6, 0, 1)_{37232} \\
\ell_{797} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083405} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083405} = \mathbf{Pl}(0, 31, 0, 14, 0, 1)_{37746} \\
\ell_{798} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082498} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082498} = \mathbf{Pl}(0, 3, 0, 31, 0, 1)_{38789} \\
\ell_{799} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083024} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083024} = \mathbf{Pl}(0, 19, 0, 29, 0, 1)_{38679} \\
\ell_{800} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083044} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083044} = \mathbf{Pl}(0, 20, 0, 16, 0, 1)_{37861} \\
\ell_{801} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083287} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083287} = \mathbf{Pl}(0, 27, 0, 28, 0, 1)_{38624} \\
\ell_{802} &= \begin{bmatrix} 0 & 1 & \eta^5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082565} = \begin{bmatrix} 0 & 1 & 5 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082565} = \mathbf{Pl}(0, 5, 0, 1, 0, 0)_{101} \\
\ell_{803} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082424} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082424} = \mathbf{Pl}(0, 1, 0, 23, 0, 1)_{38283} \\
\ell_{804} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082987} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082987} = \mathbf{Pl}(0, 18, 0, 25, 0, 1)_{38426} \\
\ell_{805} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083305} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083305} = \mathbf{Pl}(0, 28, 0, 13, 0, 1)_{37680} \\
\ell_{806} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082695} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082695} = \mathbf{Pl}(0, 9, 0, 30, 0, 1)_{38732} \\
\ell_{807} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083151} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083151} = \mathbf{Pl}(0, 23, 0, 24, 0, 1)_{38368} \\
\ell_{808} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082850} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082850} = \mathbf{Pl}(0, 14, 0, 20, 0, 1)_{38107} \\
\ell_{809} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082795} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082795} = \mathbf{Pl}(0, 12, 0, 31, 0, 1)_{38798} \\
\ell_{810} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083109} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083109} = \mathbf{Pl}(0, 22, 0, 15, 0, 1)_{37800} \\
\ell_{811} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082522} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082522} = \mathbf{Pl}(0, 4, 0, 22, 0, 1)_{38223} \\
\ell_{812} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083205} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083205} = \mathbf{Pl}(0, 25, 0, 12, 0, 1)_{37614} \\
\ell_{813} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082914} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082914} = \mathbf{Pl}(0, 16, 0, 18, 0, 1)_{37983}
\end{aligned}$$

$$\begin{aligned}
\ell_{814} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082609} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082609} = \mathbf{Pl}(0, 7, 0, 10, 0, 1)_{37470} \\
\ell_{815} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082866} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082866} = \mathbf{Pl}(0, 15, 0, 3, 0, 1)_{37037} \\
\ell_{816} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082595} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082595} = \mathbf{Pl}(0, 6, 0, 29, 0, 1)_{38666} \\
\ell_{817} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082805} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082805} = \mathbf{Pl}(0, 13, 0, 8, 0, 1)_{37350} \\
\ell_{818} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082752} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082752} = \mathbf{Pl}(0, 11, 0, 21, 0, 1)_{38167} \\
\ell_{819} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083187} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083187} = \mathbf{Pl}(0, 24, 0, 27, 0, 1)_{38558} \\
\ell_{820} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082445} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082445} = \mathbf{Pl}(0, 2, 0, 11, 0, 1)_{37528} \\
\ell_{821} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083351} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083351} = \mathbf{Pl}(0, 29, 0, 26, 0, 1)_{38500} \\
\ell_{822} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083364} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083364} = \mathbf{Pl}(0, 30, 0, 6, 0, 1)_{37241} \\
\ell_{823} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083242} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083242} = \mathbf{Pl}(0, 26, 0, 16, 0, 1)_{37867} \\
\ell_{824} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082641} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082641} = \mathbf{Pl}(0, 8, 0, 9, 0, 1)_{37408} \\
\ell_{825} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082534} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082534} = \mathbf{Pl}(0, 5, 0, 1, 0, 1)_{36901} \\
\ell_{826} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082934} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082934} = \mathbf{Pl}(0, 17, 0, 5, 0, 1)_{37165} \\
\ell_{827} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082700} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082700} = \mathbf{Pl}(0, 10, 0, 2, 0, 1)_{36969} \\
\ell_{828} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083080} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083080} = \mathbf{Pl}(0, 21, 0, 19, 0, 1)_{38051} \\
\ell_{829} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083408} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083408} = \mathbf{Pl}(0, 31, 0, 17, 0, 1)_{37935} \\
\ell_{830} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082495} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082495} = \mathbf{Pl}(0, 3, 0, 28, 0, 1)_{38600} \\
\ell_{831} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083009} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083009} = \mathbf{Pl}(0, 19, 0, 14, 0, 1)_{37734} \\
\ell_{832} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083032} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083032} = \mathbf{Pl}(0, 20, 0, 4, 0, 1)_{37105} \\
\ell_{833} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083266} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083266} = \mathbf{Pl}(0, 27, 0, 7, 0, 1)_{37301} \\
\ell_{834} &= \begin{bmatrix} 0 & 1 & \eta^{10} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082961} = \begin{bmatrix} 0 & 1 & 17 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082961} = \mathbf{Pl}(0, 17, 0, 1, 0, 0)_{113}
\end{aligned}$$

$$\begin{aligned}
\ell_{835} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082425} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082425} = \mathbf{PI}(0, 1, 0, 24, 0, 1)_{38346} \\
\ell_{836} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082974} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082974} = \mathbf{PI}(0, 18, 0, 12, 0, 1)_{37607} \\
\ell_{837} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083300} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083300} = \mathbf{PI}(0, 28, 0, 8, 0, 1)_{37365} \\
\ell_{838} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082671} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082671} = \mathbf{PI}(0, 9, 0, 6, 0, 1)_{37220} \\
\ell_{839} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083154} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083154} = \mathbf{PI}(0, 23, 0, 27, 0, 1)_{38557} \\
\ell_{840} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082834} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082834} = \mathbf{PI}(0, 14, 0, 4, 0, 1)_{37099} \\
\ell_{841} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082781} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082781} = \mathbf{PI}(0, 12, 0, 17, 0, 1)_{37916} \\
\ell_{842} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083097} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083097} = \mathbf{PI}(0, 22, 0, 3, 0, 1)_{37044} \\
\ell_{843} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082515} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082515} = \mathbf{PI}(0, 4, 0, 15, 0, 1)_{37782} \\
\ell_{844} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083224} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083224} = \mathbf{PI}(0, 25, 0, 31, 0, 1)_{38811} \\
\ell_{845} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082921} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082921} = \mathbf{PI}(0, 16, 0, 25, 0, 1)_{38424} \\
\ell_{846} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082601} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082601} = \mathbf{PI}(0, 7, 0, 2, 0, 1)_{36966} \\
\ell_{847} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082891} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082891} = \mathbf{PI}(0, 15, 0, 28, 0, 1)_{38612} \\
\ell_{848} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082592} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082592} = \mathbf{PI}(0, 6, 0, 26, 0, 1)_{38477} \\
\ell_{849} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082806} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082806} = \mathbf{PI}(0, 13, 0, 9, 0, 1)_{37413} \\
\ell_{850} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082750} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082750} = \mathbf{PI}(0, 11, 0, 19, 0, 1)_{38041} \\
\ell_{851} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083167} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083167} = \mathbf{PI}(0, 24, 0, 7, 0, 1)_{37298} \\
\ell_{852} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082455} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082455} = \mathbf{PI}(0, 2, 0, 21, 0, 1)_{38158} \\
\ell_{853} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083341} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083341} = \mathbf{PI}(0, 29, 0, 16, 0, 1)_{37870} \\
\ell_{854} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083387} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083387} = \mathbf{PI}(0, 30, 0, 29, 0, 1)_{38690} \\
\ell_{855} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083244} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083244} = \mathbf{PI}(0, 26, 0, 18, 0, 1)_{37993}
\end{aligned}$$

$$\begin{aligned}
\ell_{856} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082662} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082662} = \mathbf{Pl}(0, 8, 0, 30, 0, 1)_{38731} \\
\ell_{857} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082556} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082556} = \mathbf{Pl}(0, 5, 0, 23, 0, 1)_{38287} \\
\ell_{858} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082930} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082930} = \mathbf{Pl}(0, 17, 0, 1, 0, 1)_{36913} \\
\ell_{859} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082709} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082709} = \mathbf{Pl}(0, 10, 0, 11, 0, 1)_{37536} \\
\ell_{860} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083075} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083075} = \mathbf{Pl}(0, 21, 0, 14, 0, 1)_{37736} \\
\ell_{861} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083396} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083396} = \mathbf{Pl}(0, 31, 0, 5, 0, 1)_{37179} \\
\ell_{862} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082480} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082480} = \mathbf{Pl}(0, 3, 0, 13, 0, 1)_{37655} \\
\ell_{863} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083015} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083015} = \mathbf{Pl}(0, 19, 0, 20, 0, 1)_{38112} \\
\ell_{864} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083050} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083050} = \mathbf{Pl}(0, 20, 0, 22, 0, 1)_{38239} \\
\ell_{865} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083269} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083269} = \mathbf{Pl}(0, 27, 0, 10, 0, 1)_{37490} \\
\ell_{866} &= \begin{bmatrix} 0 & 1 & \eta^6 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082730} = \begin{bmatrix} 0 & 1 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082730} = \mathbf{Pl}(0, 10, 0, 1, 0, 0)_{106} \\
\ell_{867} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082426} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082426} = \mathbf{Pl}(0, 1, 0, 25, 0, 1)_{38409} \\
\ell_{868} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082992} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082992} = \mathbf{Pl}(0, 18, 0, 30, 0, 1)_{38741} \\
\ell_{869} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083312} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083312} = \mathbf{Pl}(0, 28, 0, 20, 0, 1)_{38121} \\
\ell_{870} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082680} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082680} = \mathbf{Pl}(0, 9, 0, 15, 0, 1)_{37787} \\
\ell_{871} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083139} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083139} = \mathbf{Pl}(0, 23, 0, 12, 0, 1)_{37612} \\
\ell_{872} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082840} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082840} = \mathbf{Pl}(0, 14, 0, 10, 0, 1)_{37477} \\
\ell_{873} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082793} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082793} = \mathbf{Pl}(0, 12, 0, 29, 0, 1)_{38672} \\
\ell_{874} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083115} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083115} = \mathbf{Pl}(0, 22, 0, 21, 0, 1)_{38178} \\
\ell_{875} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082511} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082511} = \mathbf{Pl}(0, 4, 0, 11, 0, 1)_{37530} \\
\ell_{876} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083199} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083199} = \mathbf{Pl}(0, 25, 0, 6, 0, 1)_{37236}
\end{aligned}$$

$$\begin{aligned}
\ell_{877} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082905} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082905} = \mathbf{PI}(0, 16, 0, 9, 0, 1)_{37416} \\
\ell_{878} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082604} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082604} = \mathbf{PI}(0, 7, 0, 5, 0, 1)_{37155} \\
\ell_{879} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082882} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082882} = \mathbf{PI}(0, 15, 0, 19, 0, 1)_{38045} \\
\ell_{880} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082594} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082594} = \mathbf{PI}(0, 6, 0, 28, 0, 1)_{38603} \\
\ell_{881} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082801} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082801} = \mathbf{PI}(0, 13, 0, 4, 0, 1)_{37098} \\
\ell_{882} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082755} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082755} = \mathbf{PI}(0, 11, 0, 24, 0, 1)_{38356} \\
\ell_{883} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083191} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083191} = \mathbf{PI}(0, 24, 0, 31, 0, 1)_{38810} \\
\ell_{884} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082457} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082457} = \mathbf{PI}(0, 2, 0, 23, 0, 1)_{38284} \\
\ell_{885} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083338} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083338} = \mathbf{PI}(0, 29, 0, 13, 0, 1)_{37681} \\
\ell_{886} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083361} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083361} = \mathbf{PI}(0, 30, 0, 3, 0, 1)_{37052} \\
\ell_{887} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083234} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083234} = \mathbf{PI}(0, 26, 0, 8, 0, 1)_{37363} \\
\ell_{888} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082654} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082654} = \mathbf{PI}(0, 8, 0, 22, 0, 1)_{38227} \\
\ell_{889} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082551} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082551} = \mathbf{PI}(0, 5, 0, 18, 0, 1)_{37972} \\
\ell_{890} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082945} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082945} = \mathbf{PI}(0, 17, 0, 16, 0, 1)_{37858} \\
\ell_{891} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082699} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082699} = \mathbf{PI}(0, 10, 0, 1, 0, 1)_{36906} \\
\ell_{892} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083088} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083088} = \mathbf{PI}(0, 21, 0, 27, 0, 1)_{38555} \\
\ell_{893} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083417} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083417} = \mathbf{PI}(0, 31, 0, 26, 0, 1)_{38502} \\
\ell_{894} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082481} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082481} = \mathbf{PI}(0, 3, 0, 14, 0, 1)_{37718} \\
\ell_{895} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083002} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083002} = \mathbf{PI}(0, 19, 0, 7, 0, 1)_{37293} \\
\ell_{896} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083030} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083030} = \mathbf{PI}(0, 20, 0, 2, 0, 1)_{36979} \\
\ell_{897} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083276} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083276} = \mathbf{PI}(0, 27, 0, 17, 0, 1)_{37931}
\end{aligned}$$

$$\begin{aligned}
\ell_{898} &= \begin{bmatrix} 0 & 1 & \eta^{22} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083093} = \begin{bmatrix} 0 & 1 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083093} = \mathbf{Pl}(0, 21, 0, 1, 0, 0)_{117} \\
\ell_{899} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082427} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082427} = \mathbf{Pl}(0, 1, 0, 26, 0, 1)_{38472} \\
\ell_{900} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082975} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082975} = \mathbf{Pl}(0, 18, 0, 13, 0, 1)_{37670} \\
\ell_{901} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083313} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083313} = \mathbf{Pl}(0, 28, 0, 21, 0, 1)_{38184} \\
\ell_{902} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082685} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082685} = \mathbf{Pl}(0, 9, 0, 20, 0, 1)_{38102} \\
\ell_{903} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083143} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083143} = \mathbf{Pl}(0, 23, 0, 16, 0, 1)_{37864} \\
\ell_{904} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082854} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082854} = \mathbf{Pl}(0, 14, 0, 24, 0, 1)_{38359} \\
\ell_{905} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082773} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082773} = \mathbf{Pl}(0, 12, 0, 9, 0, 1)_{37412} \\
\ell_{906} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083104} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083104} = \mathbf{Pl}(0, 22, 0, 10, 0, 1)_{37485} \\
\ell_{907} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082507} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082507} = \mathbf{Pl}(0, 4, 0, 7, 0, 1)_{37278} \\
\ell_{908} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083201} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083201} = \mathbf{Pl}(0, 25, 0, 8, 0, 1)_{37362} \\
\ell_{909} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082924} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082924} = \mathbf{Pl}(0, 16, 0, 28, 0, 1)_{38613} \\
\ell_{910} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082611} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082611} = \mathbf{Pl}(0, 7, 0, 12, 0, 1)_{37596} \\
\ell_{911} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082865} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082865} = \mathbf{Pl}(0, 15, 0, 2, 0, 1)_{36974} \\
\ell_{912} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082588} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082588} = \mathbf{Pl}(0, 6, 0, 22, 0, 1)_{38225} \\
\ell_{913} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082816} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082816} = \mathbf{Pl}(0, 13, 0, 19, 0, 1)_{38043} \\
\ell_{914} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082736} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082736} = \mathbf{Pl}(0, 11, 0, 5, 0, 1)_{37159} \\
\ell_{915} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083178} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083178} = \mathbf{Pl}(0, 24, 0, 18, 0, 1)_{37991} \\
\ell_{916} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082451} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082451} = \mathbf{Pl}(0, 2, 0, 17, 0, 1)_{37906} \\
\ell_{917} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083340} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083340} = \mathbf{Pl}(0, 29, 0, 15, 0, 1)_{37807} \\
\ell_{918} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083362} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083362} = \mathbf{Pl}(0, 30, 0, 4, 0, 1)_{37115}
\end{aligned}$$

$$\begin{aligned}
\ell_{919} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083229} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083229} = \mathbf{Pl}(0, 26, 0, 3, 0, 1)_{37048} \\
\ell_{920} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082646} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082646} = \mathbf{Pl}(0, 8, 0, 14, 0, 1)_{37723} \\
\ell_{921} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082562} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082562} = \mathbf{Pl}(0, 5, 0, 29, 0, 1)_{38665} \\
\ell_{922} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082935} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082935} = \mathbf{Pl}(0, 17, 0, 6, 0, 1)_{37228} \\
\ell_{923} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082729} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082729} = \mathbf{Pl}(0, 10, 0, 31, 0, 1)_{38796} \\
\ell_{924} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083062} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083062} = \mathbf{Pl}(0, 21, 0, 1, 0, 1)_{36917} \\
\ell_{925} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083421} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083421} = \mathbf{Pl}(0, 31, 0, 30, 0, 1)_{38754} \\
\ell_{926} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082478} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082478} = \mathbf{Pl}(0, 3, 0, 11, 0, 1)_{37529} \\
\ell_{927} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083018} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083018} = \mathbf{Pl}(0, 19, 0, 23, 0, 1)_{38301} \\
\ell_{928} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1083055} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1083055} = \mathbf{Pl}(0, 20, 0, 27, 0, 1)_{38554} \\
\ell_{929} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083284} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083284} = \mathbf{Pl}(0, 27, 0, 25, 0, 1)_{38435} \\
\ell_{930} &= \begin{bmatrix} 0 & 1 & \eta^{15} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083423} = \begin{bmatrix} 0 & 1 & 31 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083423} = \mathbf{Pl}(0, 31, 0, 1, 0, 0)_{127} \\
\ell_{931} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082428} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082428} = \mathbf{Pl}(0, 1, 0, 27, 0, 1)_{38535} \\
\ell_{932} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082993} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082993} = \mathbf{Pl}(0, 18, 0, 31, 0, 1)_{38804} \\
\ell_{933} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083301} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083301} = \mathbf{Pl}(0, 28, 0, 9, 0, 1)_{37428} \\
\ell_{934} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082694} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082694} = \mathbf{Pl}(0, 9, 0, 29, 0, 1)_{38669} \\
\ell_{935} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083134} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083134} = \mathbf{Pl}(0, 23, 0, 7, 0, 1)_{37297} \\
\ell_{936} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082852} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082852} = \mathbf{Pl}(0, 14, 0, 22, 0, 1)_{38233} \\
\ell_{937} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082769} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082769} = \mathbf{Pl}(0, 12, 0, 5, 0, 1)_{37160} \\
\ell_{938} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1083122} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1083122} = \mathbf{Pl}(0, 22, 0, 28, 0, 1)_{38619} \\
\ell_{939} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082503} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082503} = \mathbf{Pl}(0, 4, 0, 3, 0, 1)_{37026}
\end{aligned}$$

$$\begin{aligned}
\ell_{940} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083210} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083210} = \mathbf{PI}(0, 25, 0, 17, 0, 1)_{37929} \\
\ell_{941} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082908} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082908} = \mathbf{PI}(0, 16, 0, 12, 0, 1)_{37605} \\
\ell_{942} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082610} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082610} = \mathbf{PI}(0, 7, 0, 11, 0, 1)_{37533} \\
\ell_{943} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1082876} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1082876} = \mathbf{PI}(0, 15, 0, 13, 0, 1)_{37667} \\
\ell_{944} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082582} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082582} = \mathbf{PI}(0, 6, 0, 16, 0, 1)_{37847} \\
\ell_{945} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082827} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082827} = \mathbf{PI}(0, 13, 0, 30, 0, 1)_{38736} \\
\ell_{946} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082745} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082745} = \mathbf{PI}(0, 11, 0, 14, 0, 1)_{37726} \\
\ell_{947} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083170} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083170} = \mathbf{PI}(0, 24, 0, 10, 0, 1)_{37487} \\
\ell_{948} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082453} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082453} = \mathbf{PI}(0, 2, 0, 19, 0, 1)_{38032} \\
\ell_{949} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083343} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083343} = \mathbf{PI}(0, 29, 0, 18, 0, 1)_{37996} \\
\ell_{950} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083384} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083384} = \mathbf{PI}(0, 30, 0, 26, 0, 1)_{38501} \\
\ell_{951} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1083251} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1083251} = \mathbf{PI}(0, 26, 0, 25, 0, 1)_{38434} \\
\ell_{952} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082638} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082638} = \mathbf{PI}(0, 8, 0, 6, 0, 1)_{37219} \\
\ell_{953} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082557} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082557} = \mathbf{PI}(0, 5, 0, 24, 0, 1)_{38350} \\
\ell_{954} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082952} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082952} = \mathbf{PI}(0, 17, 0, 23, 0, 1)_{38299} \\
\ell_{955} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082719} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082719} = \mathbf{PI}(0, 10, 0, 21, 0, 1)_{38166} \\
\ell_{956} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083081} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083081} = \mathbf{PI}(0, 21, 0, 20, 0, 1)_{38114} \\
\ell_{957} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083392} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083392} = \mathbf{PI}(0, 31, 0, 1, 0, 1)_{36927} \\
\ell_{958} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082475} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082475} = \mathbf{PI}(0, 3, 0, 8, 0, 1)_{37340} \\
\ell_{959} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082999} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082999} = \mathbf{PI}(0, 19, 0, 4, 0, 1)_{37104} \\
\ell_{960} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083043} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083043} = \mathbf{PI}(0, 20, 0, 15, 0, 1)_{37798}
\end{aligned}$$

$$\begin{aligned}
\ell_{961} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1083261} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1083261} = \mathbf{Pl}(0, 27, 0, 2, 0, 1)_{36986} \\
\ell_{962} &= \begin{bmatrix} 0 & 1 & \eta^{18} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082499} = \begin{bmatrix} 0 & 1 & 3 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082499} = \mathbf{Pl}(0, 3, 0, 1, 0, 0)_{99} \\
\ell_{963} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082429} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082429} = \mathbf{Pl}(0, 1, 0, 28, 0, 1)_{38598} \\
\ell_{964} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082976} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082976} = \mathbf{Pl}(0, 18, 0, 14, 0, 1)_{37733} \\
\ell_{965} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1083315} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1083315} = \mathbf{Pl}(0, 28, 0, 23, 0, 1)_{38310} \\
\ell_{966} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082672} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082672} = \mathbf{Pl}(0, 9, 0, 7, 0, 1)_{37283} \\
\ell_{967} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083140} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083140} = \mathbf{Pl}(0, 23, 0, 13, 0, 1)_{37675} \\
\ell_{968} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082855} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082855} = \mathbf{Pl}(0, 14, 0, 25, 0, 1)_{38422} \\
\ell_{969} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082768} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082768} = \mathbf{Pl}(0, 12, 0, 4, 0, 1)_{37097} \\
\ell_{970} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083111} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083111} = \mathbf{Pl}(0, 22, 0, 17, 0, 1)_{37926} \\
\ell_{971} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082531} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082531} = \mathbf{Pl}(0, 4, 0, 31, 0, 1)_{38790} \\
\ell_{972} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083213} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083213} = \mathbf{Pl}(0, 25, 0, 20, 0, 1)_{38118} \\
\ell_{973} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082915} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082915} = \mathbf{Pl}(0, 16, 0, 19, 0, 1)_{38046} \\
\ell_{974} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082629} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082629} = \mathbf{Pl}(0, 7, 0, 30, 0, 1)_{38730} \\
\ell_{975} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082868} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082868} = \mathbf{Pl}(0, 15, 0, 5, 0, 1)_{37163} \\
\ell_{976} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082568} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082568} = \mathbf{Pl}(0, 6, 0, 2, 0, 1)_{36965} \\
\ell_{977} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082821} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082821} = \mathbf{Pl}(0, 13, 0, 24, 0, 1)_{38358} \\
\ell_{978} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1082757} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1082757} = \mathbf{Pl}(0, 11, 0, 26, 0, 1)_{38482} \\
\ell_{979} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1083168} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1083168} = \mathbf{Pl}(0, 24, 0, 8, 0, 1)_{37361} \\
\ell_{980} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082463} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082463} = \mathbf{Pl}(0, 2, 0, 29, 0, 1)_{38662} \\
\ell_{981} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083336} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083336} = \mathbf{Pl}(0, 29, 0, 11, 0, 1)_{37555}
\end{aligned}$$

$$\begin{aligned}
\ell_{982} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083368} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083368} = \mathbf{Pl}(0, 30, 0, 10, 0, 1)_{37493} \\
\ell_{983} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083247} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083247} = \mathbf{Pl}(0, 26, 0, 21, 0, 1)_{38182} \\
\ell_{984} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082659} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082659} = \mathbf{Pl}(0, 8, 0, 27, 0, 1)_{38542} \\
\ell_{985} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082536} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082536} = \mathbf{Pl}(0, 5, 0, 3, 0, 1)_{37027} \\
\ell_{986} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082944} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082944} = \mathbf{Pl}(0, 17, 0, 15, 0, 1)_{37795} \\
\ell_{987} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082704} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082704} = \mathbf{Pl}(0, 10, 0, 6, 0, 1)_{37221} \\
\ell_{988} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083077} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083077} = \mathbf{Pl}(0, 21, 0, 16, 0, 1)_{37862} \\
\ell_{989} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083413} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083413} = \mathbf{Pl}(0, 31, 0, 22, 0, 1)_{38250} \\
\ell_{990} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082468} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082468} = \mathbf{Pl}(0, 3, 0, 1, 0, 1)_{36899} \\
\ell_{991} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083013} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083013} = \mathbf{Pl}(0, 19, 0, 18, 0, 1)_{37986} \\
\ell_{992} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1083040} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1083040} = \mathbf{Pl}(0, 20, 0, 12, 0, 1)_{37609} \\
\ell_{993} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083268} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083268} = \mathbf{Pl}(0, 27, 0, 9, 0, 1)_{37427} \\
\ell_{994} &= \begin{bmatrix} 0 & 1 & \eta^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083027} = \begin{bmatrix} 0 & 1 & 19 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083027} = \mathbf{Pl}(0, 19, 0, 1, 0, 0)_{115} \\
\ell_{995} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082430} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082430} = \mathbf{Pl}(0, 1, 0, 29, 0, 1)_{38661} \\
\ell_{996} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082990} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082990} = \mathbf{Pl}(0, 18, 0, 28, 0, 1)_{38615} \\
\ell_{997} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1083303} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1083303} = \mathbf{Pl}(0, 28, 0, 11, 0, 1)_{37554} \\
\ell_{998} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082679} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082679} = \mathbf{Pl}(0, 9, 0, 14, 0, 1)_{37724} \\
\ell_{999} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083153} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083153} = \mathbf{Pl}(0, 23, 0, 26, 0, 1)_{38494} \\
\ell_{1000} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082853} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082853} = \mathbf{Pl}(0, 14, 0, 23, 0, 1)_{38296} \\
\ell_{1001} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082772} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082772} = \mathbf{Pl}(0, 12, 0, 8, 0, 1)_{37349} \\
\ell_{1002} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1083101} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1083101} = \mathbf{Pl}(0, 22, 0, 7, 0, 1)_{37296}
\end{aligned}$$

$$\begin{aligned}
\ell_{1003} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082527} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082527} = \mathbf{Pl}(0, 4, 0, 27, 0, 1)_{38538} \\
\ell_{1004} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083206} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083206} = \mathbf{Pl}(0, 25, 0, 13, 0, 1)_{37677} \\
\ell_{1005} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082899} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082899} = \mathbf{Pl}(0, 16, 0, 3, 0, 1)_{37038} \\
\ell_{1006} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082624} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082624} = \mathbf{Pl}(0, 7, 0, 25, 0, 1)_{38415} \\
\ell_{1007} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1082873} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1082873} = \mathbf{Pl}(0, 15, 0, 10, 0, 1)_{37478} \\
\ell_{1008} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082570} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082570} = \mathbf{Pl}(0, 6, 0, 4, 0, 1)_{37091} \\
\ell_{1009} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082818} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082818} = \mathbf{Pl}(0, 13, 0, 21, 0, 1)_{38169} \\
\ell_{1010} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1082748} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1082748} = \mathbf{Pl}(0, 11, 0, 17, 0, 1)_{37915} \\
\ell_{1011} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1083176} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1083176} = \mathbf{Pl}(0, 24, 0, 16, 0, 1)_{37865} \\
\ell_{1012} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082465} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082465} = \mathbf{Pl}(0, 2, 0, 31, 0, 1)_{38788} \\
\ell_{1013} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083347} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083347} = \mathbf{Pl}(0, 29, 0, 22, 0, 1)_{38248} \\
\ell_{1014} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083378} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083378} = \mathbf{Pl}(0, 30, 0, 20, 0, 1)_{38123} \\
\ell_{1015} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1083241} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1083241} = \mathbf{Pl}(0, 26, 0, 15, 0, 1)_{37804} \\
\ell_{1016} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082651} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082651} = \mathbf{Pl}(0, 8, 0, 19, 0, 1)_{38038} \\
\ell_{1017} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082539} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082539} = \mathbf{Pl}(0, 5, 0, 6, 0, 1)_{37216} \\
\ell_{1018} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082959} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082959} = \mathbf{Pl}(0, 17, 0, 30, 0, 1)_{38740} \\
\ell_{1019} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082710} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082710} = \mathbf{Pl}(0, 10, 0, 12, 0, 1)_{37599} \\
\ell_{1020} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083066} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083066} = \mathbf{Pl}(0, 21, 0, 5, 0, 1)_{37169} \\
\ell_{1021} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083400} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083400} = \mathbf{Pl}(0, 31, 0, 9, 0, 1)_{37431} \\
\ell_{1022} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082469} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082469} = \mathbf{Pl}(0, 3, 0, 2, 0, 1)_{36962} \\
\ell_{1023} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082996} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1082996} = \mathbf{Pl}(0, 19, 0, 1, 0, 1)_{36915}
\end{aligned}$$

$$\begin{aligned}
\ell_{1024} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083052} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083052} = \mathbf{Pl}(0, 20, 0, 24, 0, 1)_{38365} \\
\ell_{1025} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083277} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083277} = \mathbf{Pl}(0, 27, 0, 18, 0, 1)_{37994} \\
\ell_{1026} &= \begin{bmatrix} 0 & 1 & \eta^7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083060} = \begin{bmatrix} 0 & 1 & 20 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083060} = \mathbf{Pl}(0, 20, 0, 1, 0, 0)_{116} \\
\ell_{1027} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1082431} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1082431} = \mathbf{Pl}(0, 1, 0, 30, 0, 1)_{38724} \\
\ell_{1028} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082977} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082977} = \mathbf{Pl}(0, 18, 0, 15, 0, 1)_{37796} \\
\ell_{1029} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083302} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083302} = \mathbf{Pl}(0, 28, 0, 10, 0, 1)_{37491} \\
\ell_{1030} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1082686} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1082686} = \mathbf{Pl}(0, 9, 0, 21, 0, 1)_{38165} \\
\ell_{1031} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1083133} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1083133} = \mathbf{Pl}(0, 23, 0, 6, 0, 1)_{37234} \\
\ell_{1032} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1082835} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1082835} = \mathbf{Pl}(0, 14, 0, 5, 0, 1)_{37162} \\
\ell_{1033} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082792} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082792} = \mathbf{Pl}(0, 12, 0, 28, 0, 1)_{38609} \\
\ell_{1034} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1083118} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1083118} = \mathbf{Pl}(0, 22, 0, 24, 0, 1)_{38367} \\
\ell_{1035} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082523} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082523} = \mathbf{Pl}(0, 4, 0, 23, 0, 1)_{38286} \\
\ell_{1036} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1083196} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1083196} = \mathbf{Pl}(0, 25, 0, 3, 0, 1)_{37047} \\
\ell_{1037} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1082918} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1082918} = \mathbf{Pl}(0, 16, 0, 22, 0, 1)_{38235} \\
\ell_{1038} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082615} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082615} = \mathbf{Pl}(0, 7, 0, 16, 0, 1)_{37848} \\
\ell_{1039} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082890} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082890} = \mathbf{Pl}(0, 15, 0, 27, 0, 1)_{38549} \\
\ell_{1040} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1082580} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1082580} = \mathbf{Pl}(0, 6, 0, 14, 0, 1)_{37721} \\
\ell_{1041} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082799} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082799} = \mathbf{Pl}(0, 13, 0, 2, 0, 1)_{36972} \\
\ell_{1042} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082743} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082743} = \mathbf{Pl}(0, 11, 0, 12, 0, 1)_{37600} \\
\ell_{1043} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1083189} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1083189} = \mathbf{Pl}(0, 24, 0, 29, 0, 1)_{38684} \\
\ell_{1044} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082459} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082459} = \mathbf{Pl}(0, 2, 0, 25, 0, 1)_{38410}
\end{aligned}$$

$$\begin{aligned}
\ell_{1045} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1083345} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1083345} = \mathbf{Pl}(0, 29, 0, 20, 0, 1)_{38122} \\
\ell_{1046} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1083377} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1083377} = \mathbf{Pl}(0, 30, 0, 19, 0, 1)_{38060} \\
\ell_{1047} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1083230} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1083230} = \mathbf{Pl}(0, 26, 0, 4, 0, 1)_{37111} \\
\ell_{1048} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082643} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082643} = \mathbf{Pl}(0, 8, 0, 11, 0, 1)_{37534} \\
\ell_{1049} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1082542} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1082542} = \mathbf{Pl}(0, 5, 0, 9, 0, 1)_{37405} \\
\ell_{1050} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082937} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082937} = \mathbf{Pl}(0, 17, 0, 8, 0, 1)_{37354} \\
\ell_{1051} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1082716} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1082716} = \mathbf{Pl}(0, 10, 0, 18, 0, 1)_{37977} \\
\ell_{1052} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1083092} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1083092} = \mathbf{Pl}(0, 21, 0, 31, 0, 1)_{38807} \\
\ell_{1053} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083404} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083404} = \mathbf{Pl}(0, 31, 0, 13, 0, 1)_{37683} \\
\ell_{1054} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082474} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082474} = \mathbf{Pl}(0, 3, 0, 7, 0, 1)_{37277} \\
\ell_{1055} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083012} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083012} = \mathbf{Pl}(0, 19, 0, 17, 0, 1)_{37923} \\
\ell_{1056} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083029} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083029} = \mathbf{Pl}(0, 20, 0, 1, 0, 1)_{36916} \\
\ell_{1057} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083285} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083285} = \mathbf{Pl}(0, 27, 0, 26, 0, 1)_{38498} \\
\ell_{1058} &= \begin{bmatrix} 0 & 1 & \eta^{16} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083291} = \begin{bmatrix} 0 & 1 & 27 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1083291} = \mathbf{Pl}(0, 27, 0, 1, 0, 0)_{123} \\
\ell_{1059} &= \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & \eta^{15} \end{bmatrix}_{1082432} = \begin{bmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 31 \end{bmatrix}_{1082432} = \mathbf{Pl}(0, 1, 0, 31, 0, 1)_{38787} \\
\ell_{1060} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{30} \\ 0 & 0 & 1 & \eta^{14} \end{bmatrix}_{1082991} = \begin{bmatrix} 0 & 1 & 0 & 18 \\ 0 & 0 & 1 & 29 \end{bmatrix}_{1082991} = \mathbf{Pl}(0, 18, 0, 29, 0, 1)_{38678} \\
\ell_{1061} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{13} \\ 0 & 0 & 1 & \eta^{28} \end{bmatrix}_{1083314} = \begin{bmatrix} 0 & 1 & 0 & 28 \\ 0 & 0 & 1 & 22 \end{bmatrix}_{1083314} = \mathbf{Pl}(0, 28, 0, 22, 0, 1)_{38247} \\
\ell_{1062} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{29} \\ 0 & 0 & 1 & \eta^{13} \end{bmatrix}_{1082693} = \begin{bmatrix} 0 & 1 & 0 & 9 \\ 0 & 0 & 1 & 28 \end{bmatrix}_{1082693} = \mathbf{Pl}(0, 9, 0, 28, 0, 1)_{38606} \\
\ell_{1063} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{26} \\ 0 & 0 & 1 & \eta^{10} \end{bmatrix}_{1083144} = \begin{bmatrix} 0 & 1 & 0 & 23 \\ 0 & 0 & 1 & 17 \end{bmatrix}_{1083144} = \mathbf{Pl}(0, 23, 0, 17, 0, 1)_{37927} \\
\ell_{1064} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{12} \\ 0 & 0 & 1 & \eta^{27} \end{bmatrix}_{1082841} = \begin{bmatrix} 0 & 1 & 0 & 14 \\ 0 & 0 & 1 & 11 \end{bmatrix}_{1082841} = \mathbf{Pl}(0, 14, 0, 11, 0, 1)_{37540} \\
\ell_{1065} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{20} \\ 0 & 0 & 1 & \eta^4 \end{bmatrix}_{1082780} = \begin{bmatrix} 0 & 1 & 0 & 12 \\ 0 & 0 & 1 & 16 \end{bmatrix}_{1082780} = \mathbf{Pl}(0, 12, 0, 16, 0, 1)_{37853}
\end{aligned}$$

$$\begin{aligned}
\ell_{1066} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{28} \\ 0 & 0 & 1 & \eta^{12} \end{bmatrix}_{1083108} = \begin{bmatrix} 0 & 1 & 0 & 22 \\ 0 & 0 & 1 & 14 \end{bmatrix}_{1083108} = \mathbf{Pl}(0, 22, 0, 14, 0, 1)_{37737} \\
\ell_{1067} &= \begin{bmatrix} 0 & 1 & 0 & \eta^2 \\ 0 & 0 & 1 & \eta^{17} \end{bmatrix}_{1082519} = \begin{bmatrix} 0 & 1 & 0 & 4 \\ 0 & 0 & 1 & 19 \end{bmatrix}_{1082519} = \mathbf{Pl}(0, 4, 0, 19, 0, 1)_{38034} \\
\ell_{1068} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{25} \\ 0 & 0 & 1 & \eta^9 \end{bmatrix}_{1083219} = \begin{bmatrix} 0 & 1 & 0 & 25 \\ 0 & 0 & 1 & 26 \end{bmatrix}_{1083219} = \mathbf{Pl}(0, 25, 0, 26, 0, 1)_{38496} \\
\ell_{1069} &= \begin{bmatrix} 0 & 1 & 0 & \eta^4 \\ 0 & 0 & 1 & \eta^{19} \end{bmatrix}_{1082902} = \begin{bmatrix} 0 & 1 & 0 & 16 \\ 0 & 0 & 1 & 6 \end{bmatrix}_{1082902} = \mathbf{Pl}(0, 16, 0, 6, 0, 1)_{37227} \\
\ell_{1070} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{11} \\ 0 & 0 & 1 & \eta^{26} \end{bmatrix}_{1082622} = \begin{bmatrix} 0 & 1 & 0 & 7 \\ 0 & 0 & 1 & 23 \end{bmatrix}_{1082622} = \mathbf{Pl}(0, 7, 0, 23, 0, 1)_{38289} \\
\ell_{1071} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{23} \\ 0 & 0 & 1 & \eta^7 \end{bmatrix}_{1082883} = \begin{bmatrix} 0 & 1 & 0 & 15 \\ 0 & 0 & 1 & 20 \end{bmatrix}_{1082883} = \mathbf{Pl}(0, 15, 0, 20, 0, 1)_{38108} \\
\ell_{1072} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{19} \\ 0 & 0 & 1 & \eta^3 \end{bmatrix}_{1082574} = \begin{bmatrix} 0 & 1 & 0 & 6 \\ 0 & 0 & 1 & 8 \end{bmatrix}_{1082574} = \mathbf{Pl}(0, 6, 0, 8, 0, 1)_{37343} \\
\ell_{1073} &= \begin{bmatrix} 0 & 1 & 0 & \eta^8 \\ 0 & 0 & 1 & \eta^{23} \end{bmatrix}_{1082812} = \begin{bmatrix} 0 & 1 & 0 & 13 \\ 0 & 0 & 1 & 15 \end{bmatrix}_{1082812} = \mathbf{Pl}(0, 13, 0, 15, 0, 1)_{37791} \\
\ell_{1074} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{27} \\ 0 & 0 & 1 & \eta^{11} \end{bmatrix}_{1082738} = \begin{bmatrix} 0 & 1 & 0 & 11 \\ 0 & 0 & 1 & 7 \end{bmatrix}_{1082738} = \mathbf{Pl}(0, 11, 0, 7, 0, 1)_{37285} \\
\ell_{1075} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{21} \\ 0 & 0 & 1 & \eta^5 \end{bmatrix}_{1083165} = \begin{bmatrix} 0 & 1 & 0 & 24 \\ 0 & 0 & 1 & 5 \end{bmatrix}_{1083165} = \mathbf{Pl}(0, 24, 0, 5, 0, 1)_{37172} \\
\ell_{1076} &= \begin{bmatrix} 0 & 1 & 0 & \eta \\ 0 & 0 & 1 & \eta^{16} \end{bmatrix}_{1082461} = \begin{bmatrix} 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 27 \end{bmatrix}_{1082461} = \mathbf{Pl}(0, 2, 0, 27, 0, 1)_{38536} \\
\ell_{1077} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{14} \\ 0 & 0 & 1 & \eta^{29} \end{bmatrix}_{1083334} = \begin{bmatrix} 0 & 1 & 0 & 29 \\ 0 & 0 & 1 & 9 \end{bmatrix}_{1083334} = \mathbf{Pl}(0, 29, 0, 9, 0, 1)_{37429} \\
\ell_{1078} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{24} \\ 0 & 0 & 1 & \eta^8 \end{bmatrix}_{1083371} = \begin{bmatrix} 0 & 1 & 0 & 30 \\ 0 & 0 & 1 & 13 \end{bmatrix}_{1083371} = \mathbf{Pl}(0, 30, 0, 13, 0, 1)_{37682} \\
\ell_{1079} &= \begin{bmatrix} 0 & 1 & 0 & \eta^9 \\ 0 & 0 & 1 & \eta^{24} \end{bmatrix}_{1083256} = \begin{bmatrix} 0 & 1 & 0 & 26 \\ 0 & 0 & 1 & 30 \end{bmatrix}_{1083256} = \mathbf{Pl}(0, 26, 0, 30, 0, 1)_{38749} \\
\ell_{1080} &= \begin{bmatrix} 0 & 1 & 0 & \eta^3 \\ 0 & 0 & 1 & \eta^{18} \end{bmatrix}_{1082635} = \begin{bmatrix} 0 & 1 & 0 & 8 \\ 0 & 0 & 1 & 3 \end{bmatrix}_{1082635} = \mathbf{Pl}(0, 8, 0, 3, 0, 1)_{37030} \\
\ell_{1081} &= \begin{bmatrix} 0 & 1 & 0 & \eta^5 \\ 0 & 0 & 1 & \eta^{20} \end{bmatrix}_{1082545} = \begin{bmatrix} 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 12 \end{bmatrix}_{1082545} = \mathbf{Pl}(0, 5, 0, 12, 0, 1)_{37594} \\
\ell_{1082} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{10} \\ 0 & 0 & 1 & \eta^{25} \end{bmatrix}_{1082954} = \begin{bmatrix} 0 & 1 & 0 & 17 \\ 0 & 0 & 1 & 25 \end{bmatrix}_{1082954} = \mathbf{Pl}(0, 17, 0, 25, 0, 1)_{38425} \\
\ell_{1083} &= \begin{bmatrix} 0 & 1 & 0 & \eta^6 \\ 0 & 0 & 1 & \eta^{21} \end{bmatrix}_{1082722} = \begin{bmatrix} 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & 24 \end{bmatrix}_{1082722} = \mathbf{Pl}(0, 10, 0, 24, 0, 1)_{38355} \\
\ell_{1084} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{22} \\ 0 & 0 & 1 & \eta^6 \end{bmatrix}_{1083071} = \begin{bmatrix} 0 & 1 & 0 & 21 \\ 0 & 0 & 1 & 10 \end{bmatrix}_{1083071} = \mathbf{Pl}(0, 21, 0, 10, 0, 1)_{37484} \\
\ell_{1085} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{15} \\ 0 & 0 & 1 & \eta^{30} \end{bmatrix}_{1083409} = \begin{bmatrix} 0 & 1 & 0 & 31 \\ 0 & 0 & 1 & 18 \end{bmatrix}_{1083409} = \mathbf{Pl}(0, 31, 0, 18, 0, 1)_{37998} \\
\ell_{1086} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{18} \\ 0 & 0 & 1 & \eta^2 \end{bmatrix}_{1082471} = \begin{bmatrix} 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 4 \end{bmatrix}_{1082471} = \mathbf{Pl}(0, 3, 0, 4, 0, 1)_{37088}
\end{aligned}$$

$$\begin{aligned}\ell_{1087} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{17} \\ 0 & 0 & 1 & \eta \end{bmatrix}_{1082997} = \begin{bmatrix} 0 & 1 & 0 & 19 \\ 0 & 0 & 1 & 2 \end{bmatrix}_{1082997} = \mathbf{Pl}(0, 19, 0, 2, 0, 1)_{36978} \\ \ell_{1088} &= \begin{bmatrix} 0 & 1 & 0 & \eta^7 \\ 0 & 0 & 1 & \eta^{22} \end{bmatrix}_{1083049} = \begin{bmatrix} 0 & 1 & 0 & 20 \\ 0 & 0 & 1 & 21 \end{bmatrix}_{1083049} = \mathbf{Pl}(0, 20, 0, 21, 0, 1)_{38176} \\ \ell_{1089} &= \begin{bmatrix} 0 & 1 & 0 & \eta^{16} \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083260} = \begin{bmatrix} 0 & 1 & 0 & 27 \\ 0 & 0 & 1 & 1 \end{bmatrix}_{1083260} = \mathbf{Pl}(0, 27, 0, 1, 0, 1)_{36923}\end{aligned}$$

Rank of lines: (0, 1024, 1082368, 33, 68, 101, 144, 177, 212, 245, 266, 299, 334, 367, 410, 443, 478, 511, 525, 556, 585, 616, 669, 700, 729, 760, 775, 806, 835, 866, 919, 950, 979, 1010, 1082400, 1082369, 1082386, 1082396, 1082377, 1082391, 1082382, 1082380, 1082390, 1082372, 1082393, 1082384, 1082375, 1082383, 1082374, 1082381, ...1082997, 1083049, 1083260)

Rank of points on Klein quadric: (0, 2, 34849, 1153, 1233, 1306, 1350, 1427, 1481, 1542, 1615, 1660, 1744, 1798, 1852, 1923, 1977, 2047, 2108, 2184, 2225, 2315, 2379, 2438, 2483, 2543, 2618, 2674, 2748, 2821, 2856, 2935, 2999, 3069, 65, 36865, 37936, 38566, 37369, 38251, 37684, 37558, 38188, 37054, 38377, 37810, 37243, 37747, 37180, 37621, ...36978, 38176, 36923)

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 1023 single points:

Too many to print.

Points on surface but on no line

The surface has 0 points not on any line:

The points on the surface but not on lines are:

Line Intersection Graph

Too many lines to print.

Neighbor sets in the line intersection graph:

Too many lines to print.

The surface has 2081 points:

Too many to print.