Rank-65546 over GF(32)

January 15, 2021

The equation

The equation of the surface is :

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

(1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(32) is 1108379718

General information

Number of lines	1058
Number of points	1089
Number of singular points	33
Number of Eckardt points	0
Number of double points	0
Number of single points	32
Number of points off lines	0
Number of Hesse planes	0
Number of axes	0
Type of points on lines	33^{1058}
Type of lines on points	$34, 33^{1056}, 1^{32}$

Singular Points

The surface has 33 singular points:

0 : $P_3 = \mathbf{P}(0,0,0,1) = \mathbf{P}(0,0,0,1)$
1 : $P_4 = \mathbf{P}(1,1,1,1) = \mathbf{P}(1,1,1,1)$
2 : $P_{68} = \mathbf{P}(1,1,1,0) = \mathbf{P}(1,1,1,0)$
3 : $P_{3171} = \mathbf{P}(\eta,\eta,\eta,1) = \mathbf{P}(2,2,2,1)$
4 : $P_{4228} = \mathbf{P}(\eta^{18},\eta^{18},\eta^{18},1) = \mathbf{P}(3,3,3,1)$
5 : $P_{5285} = \mathbf{P}(\eta^2,\eta^2,\eta^2,1) = \mathbf{P}(4,4,4,1)$
6 : $P_{6342} = \mathbf{P}(\eta^5,\eta^5,\eta^5,1) = \mathbf{P}(5,5,5,1)$
7 : $P_{7399} = \mathbf{P}(\eta^{19},\eta^{19},\eta^{19},1) = \mathbf{P}(6,6,6,1)$
8 : $P_{8456} = \mathbf{P}(\eta^{11},\eta^{11},\eta^{11},1) = \mathbf{P}(7,7,7,1)$
9 : $P_{9513} = \mathbf{P}(\eta^3,\eta^3,\eta^3,1) = \mathbf{P}(8,8,8,1)$
10 : $P_{10570} = \mathbf{P}(\eta^{29},\eta^{29},\eta^{29},1) = \mathbf{P}(9,9,9,1)$
11 : $P_{11627} = \mathbf{P}(\eta^6,\eta^6,\eta^6,1) = \mathbf{P}(10,10,10,1)$
12 : $P_{12684} = \mathbf{P}(\eta^{27},\eta^{27},\eta^{27},1) = \mathbf{P}(11,11,11,1)$
13 : $P_{13741} = \mathbf{P}(\eta^{20},\eta^{20},\eta^{20},1) = \mathbf{P}(12,12,12,1)$
14 : $P_{14798} = \mathbf{P}(\eta^8,\eta^8,\eta^8,1) = \mathbf{P}(13,13,13,1)$
15 : $P_{15855} = \mathbf{P}(\eta^{12},\eta^{12},\eta^{12},1) = \mathbf{P}(14,14,14,1)$
16 : $P_{16912} = \mathbf{P}(\eta^{23},\eta^{23},\eta^{23},1) = \mathbf{P}(15,15,15,1)$
17 : $P_{17969} = \mathbf{P}(\eta^4,\eta^4,\eta^4,1) = \mathbf{P}(16,16,16,1)$

$18 : P_{19026} = \mathbf{P}(\eta^{10}, \eta^{10}, \eta^{10}, 1) = \mathbf{P}(17, 17, 17, 1)$ $26 : P_{27482} = \mathbf{P}(\eta^{25}, \eta^{25}, \eta^{25}, 1) = \mathbf{P}(25, 25, 25, 1)$

$19 : P_{20083} = \mathbf{P}(\eta^{30}, \eta^{30}, \eta^{30}, 1) = \mathbf{P}(18, 18, 18, 1)$ $27 : P_{28539} = \mathbf{P}(\eta^{9}, \eta^{9}, \eta^{9}, 1) = \mathbf{P}(26, 26, 26, 1)$

$20 : P_{21140} = \mathbf{P}(\eta^{17}, \eta^{17}, \eta^{17}, 1) = \mathbf{P}(19, 19, 19, 1)$ $28 : P_{29596} = \mathbf{P}(\eta^{16}, \eta^{16}, \eta^{16}, 1) = \mathbf{P}(27, 27, 27, 1)$

$21 : P_{22197} = \mathbf{P}(\eta^{7}, \eta^{7}, \eta^{7}, 1) = \mathbf{P}(20, 20, 20, 1)$ $29 : P_{30653} = \mathbf{P}(\eta^{13}, \eta^{13}, \eta^{13}, 1) = \mathbf{P}(28, 28, 28, 1)$

$22 : P_{23254} = \mathbf{P}(\eta^{22}, \eta^{22}, \eta^{22}, 1) = \mathbf{P}(21, 21, 21, 1)$ $30 : P_{31710} = \mathbf{P}(\eta^{14}, \eta^{14}, \eta^{14}, 1) = \mathbf{P}(29, 29, 29, 1)$

$23 : P_{24311} = \mathbf{P}(\eta^{28}, \eta^{28}, \eta^{28}, 1) = \mathbf{P}(22, 22, 22, 1)$ $31 : P_{32767} = \mathbf{P}(\eta^{24}, \eta^{24}, \eta^{24}, 1) = \mathbf{P}(30, 30, 30, 1)$

$24 : P_{25368} = \mathbf{P}(\eta^{26}, \eta^{26}, \eta^{26}, 1) = \mathbf{P}(23, 23, 23, 1)$ $32 : P_{33824} = \mathbf{P}(\eta^{15}, \eta^{15}, \eta^{15}, 1) = \mathbf{P}(31, 31, 31, 1)$

$25 : P_{26425} = \mathbf{P}(\eta^{21}, \eta^{21}, \eta^{21}, 1) = \mathbf{P}(24, 24, 24, 1)$

The 1058 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{1058} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{1058} = \mathbf{Pl}(1, 0, 1, 0, 0, 1)_{34913}$$

$$\ell_1 = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2113} = \begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{2113} = \mathbf{Pl}(0, 0, 0, 1, 1, 0)_{3105}$$

$$\ell_2 = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{34914} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{34914} = \mathbf{Pl}(1, 0, 1, 1, 1, 1)_{70563}$$

$$\ell_3 = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{610466} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{610466} = \mathbf{Pl}(2, 0, 2, 18, 18, 1)_{627139}$$

$$\ell_4 = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{949026} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{949026} = \mathbf{Pl}(3, 0, 3, 28, 28, 1)_{954563}$$

$$\ell_5 = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{305762} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{305762} = \mathbf{Pl}(4, 0, 4, 9, 9, 1)_{332643}$$

$$\ell_6 = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{779746} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{779746} = \mathbf{Pl}(5, 0, 5, 23, 23, 1)_{791011}$$

$$\ell_7 = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{475042} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{475042} = \mathbf{Pl}(6, 0, 6, 14, 14, 1)_{496451}$$

$$\ell_8 = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{407330} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{407330} = \mathbf{Pl}(7, 0, 7, 12, 12, 1)_{431043}$$

$$\ell_9 = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{745890} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{745890} = \mathbf{Pl}(8, 0, 8, 22, 22, 1)_{758467}$$

$$\ell_{10} = \begin{bmatrix} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{136482} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{136482} = \mathbf{Pl}(9, 0, 9, 4, 4, 1)_{169283}$$

$$\ell_{11} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{847458} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{847458} = \mathbf{Pl}(10, 0, 10, 25, 25, 1)_{856803}$$

$$\ell_{12} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{542754} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{542754} = \mathbf{Pl}(11, 0, 11, 16, 16, 1)_{562243}$$

$$\ell_{13} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{238050} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{238050} = \mathbf{Pl}(12, 0, 12, 7, 7, 1)_{267683}$$

$$\ell_{14} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{508898} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{508898} = \mathbf{Pl}(13, 0, 13, 15, 15, 1)_{529635}$$

$$\ell_{15} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{204194} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{204194} = \mathbf{Pl}(14, 0, 14, 6, 6, 1)_{235075}$$

$$\ell_{16} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^8 \end{array}\right]_{441186} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 13 \end{array}\right]_{441186} = \mathbf{Pl}(15,0,15,13,13,1)_{464291}$$

$$\ell_{17} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{373474} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 11 \end{array}\right]_{373474} = \mathbf{Pl}(16,0,16,11,11,1)_{398883}$$

$$\ell_{18} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{813602} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 24 \end{array}\right]_{813602} = \mathbf{Pl}(17,0,17,24,24,1)_{824515}$$

$$\ell_{19} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta \end{array}\right]_{68770} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 2 \end{array}\right]_{68770} = \mathbf{Pl}(18,0,18,2,2,1)_{104387}$$

$$\ell_{20} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{982882} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 29 \end{array}\right]_{982882} = \mathbf{Pl}(19,0,19,29,29,1)_{988323}$$

$$\ell_{21} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{1016738} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 30 \end{array}\right]_{1016738} = \mathbf{Pl}(20,0,20,30,30,1)_{1021123}$$

$$\ell_{22} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^9 \end{array}\right]_{881314} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 26 \end{array}\right]_{881314} = \mathbf{Pl}(21,0,21,26,26,1)_{890243}$$

$$\ell_{23} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^3 \end{array}\right]_{271906} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 8 \end{array}\right]_{271906} = \mathbf{Pl}(22,0,22,8,8,1)_{301059}$$

$$\ell_{24} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^5 \end{array}\right]_{170338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 5 \end{array}\right]_{170338} = \mathbf{Pl}(23,0,23,5,5,1)_{202915}$$

$$\ell_{25} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{576610} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 17 \end{array}\right]_{576610} = \mathbf{Pl}(24,0,24,17,17,1)_{595811}$$

$$\ell_{26} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^6 \end{array}\right]_{339618} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 10 \end{array}\right]_{339618} = \mathbf{Pl}(25,0,25,10,10,1)_{366723}$$

$$\ell_{27} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{712034} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 21 \end{array}\right]_{712034} = \mathbf{Pl}(26,0,26,21,21,1)_{726883}$$

$$\ell_{28} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{1050594} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 31 \end{array}\right]_{1050594} = \mathbf{Pl}(27,0,27,31,31,1)_{1054307}$$

$$\ell_{29} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{102626} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 3 \end{array}\right]_{102626} = \mathbf{Pl}(28,0,28,3,3,1)_{137763}$$

$$\ell_{30} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{644322} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 19 \end{array}\right]_{644322} = \mathbf{Pl}(29,0,29,19,19,1)_{661603}$$

$$\ell_{31} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^7 \end{array}\right]_{678178} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 20 \end{array}\right]_{678178} = \mathbf{Pl}(30,0,30,20,20,1)_{694403}$$

$$\ell_{32} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{915170} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 27 \end{array}\right]_{915170} = \mathbf{Pl}(31,0,31,27,27,1)_{923619}$$

$$\ell_{33} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{34880} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{34880} = \mathbf{Pl}(0,1,0,0,1,0)_{1121}$$

$$\ell_{34} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 1 \end{array}\right]_{1090} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 1 \end{array}\right]_{1090} = \mathbf{Pl}(1,1,1,0,1,1)_{68640}$$

$$\ell_{35} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{1634} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 18 \end{array}\right]_{1634} = \mathbf{Pl}(2,18,2,0,18,1)_{625184}$$

$$\ell_{36} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{1954} = \left[\begin{array}{cccc} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 28 \end{array}\right]_{1954} = \mathbf{Pl}(3,28,3,0,28,1)_{952576}$$

$$\ell_{37} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{1346} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{1346} = \mathbf{Pl}(4, 9, 4, 0, 9, 1)_{330624}$$

$$\ell_{38} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{1794} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{1794} = \mathbf{Pl}(5, 23, 5, 0, 23, 1)_{788960}$$

$$\ell_{39} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{1506} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{1506} = \mathbf{Pl}(6, 14, 6, 0, 14, 1)_{494368}$$

$$\ell_{40} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{1442} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{1442} = \mathbf{Pl}(7, 12, 7, 0, 12, 1)_{428928}$$

$$\ell_{41} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{1762} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{1762} = \mathbf{Pl}(8, 22, 8, 0, 22, 1)_{756320}$$

$$\ell_{42} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{1186} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{1186} = \mathbf{Pl}(9, 4, 9, 0, 4, 1)_{167104}$$

$$\ell_{43} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{1858} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{1858} = \mathbf{Pl}(10, 25, 10, 0, 25, 1)_{854592}$$

$$\ell_{44} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{1570} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{1570} = \mathbf{Pl}(11, 16, 11, 0, 16, 1)_{560000}$$

$$\ell_{45} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{1282} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{1282} = \mathbf{Pl}(12, 7, 12, 0, 7, 1)_{265408}$$

$$\ell_{46} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{1538} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{1538} = \mathbf{Pl}(13, 15, 13, 0, 15, 1)_{527328}$$

$$\ell_{47} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{1250} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{1250} = \mathbf{Pl}(14, 6, 14, 0, 6, 1)_{232736}$$

$$\ell_{48} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{1474} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{1474} = \mathbf{Pl}(15, 13, 15, 0, 13, 1)_{461920}$$

$$\ell_{49} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{1410} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{1410} = \mathbf{Pl}(16, 11, 16, 0, 11, 1)_{396480}$$

$$\ell_{50} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{1826} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{1826} = \mathbf{Pl}(17, 24, 17, 0, 24, 1)_{822080}$$

$$\ell_{51} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta \end{bmatrix}_{1122} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{1122} = \mathbf{Pl}(18, 2, 18, 0, 2, 1)_{101920}$$

$$\ell_{52} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{1986} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{1986} = \mathbf{Pl}(19, 29, 19, 0, 29, 1)_{985824}$$

$$\ell_{53} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{2018} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{2018} = \mathbf{Pl}(20, 30, 20, 0, 30, 1)_{1018592}$$

$$\ell_{54} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{1890} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{1890} = \mathbf{Pl}(21, 26, 21, 0, 26, 1)_{887680}$$

$$\ell_{55} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{1314} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{1314} = \mathbf{Pl}(22, 8, 22, 0, 8, 1)_{298464}$$

$$\ell_{56} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{5} \end{bmatrix}_{1218} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{1218} = \mathbf{Pl}(23, 5, 23, 0, 5, 1)_{200288}$$

$$\ell_{57} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{1602} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{1602} = \mathbf{Pl}(24, 17, 24, 0, 17, 1)_{593152}$$

$$\ell_{58} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{1378} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{1378} = \mathbf{Pl}(25,10,25,0,10,1)_{364032}$$

$$\ell_{59} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{1730} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{1730} = \mathbf{Pl}(26,21,26,0,21,1)_{724160}$$

$$\ell_{60} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{2050} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{2050} = \mathbf{Pl}(27,31,27,0,31,1)_{1051552}$$

$$\ell_{61} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{1154} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{1154} = \mathbf{Pl}(28,3,28,0,3,1)_{134976}$$

$$\ell_{62} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{1666} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{1666} = \mathbf{Pl}(29,19,29,0,19,1)_{658784}$$

$$\ell_{63} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^7 \end{bmatrix}_{1698} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{1698} = \mathbf{Pl}(30,20,30,0,20,1)_{691552}$$

$$\ell_{64} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{1922} = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{1922} = \mathbf{Pl}(31,27,31,0,27,1)_{920736}$$

$$\ell_{65} = \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082433} = \begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1082433} = \mathbf{Pl}(0,1,0,1,0,0)_{97}$$

$$\ell_{66} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{34882} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{34882} = \mathbf{Pl}(1,1,1,1,0,1)_{38818}$$

$$\ell_{67} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{609890} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{609890} = \mathbf{Pl}(2,18,1,18,0,1)_{55156}$$

$$\ell_{68} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{948130} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{948130} = \mathbf{Pl}(3,28,1,28,0,1)_{64767}$$

$$\ell_{69} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{305474} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{305474} = \mathbf{Pl}(4,9,1,9,0,1)_{46509}$$

$$\ell_{70} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{779010} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{779010} = \mathbf{Pl}(5,23,1,23,0,1)_{59964}$$

$$\ell_{71} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{474594} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{474594} = \mathbf{Pl}(6,14,1,14,0,1)_{51316}$$

$$\ell_{72} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{406946} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{406946} = \mathbf{Pl}(7,12,1,12,0,1)_{49395}$$

$$\ell_{73} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{745186} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{745186} = \mathbf{Pl}(8,22,1,22,0,1)_{59006}$$

$$\ell_{74} = \begin{bmatrix} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{136354} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{136354} = \mathbf{Pl}(9,4,1,4,0,1)_{41709}$$

$$\ell_{75} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{846658} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{846658} = \mathbf{Pl}(10,25,1,25,0,1)_{61891}$$

$$\ell_{76} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{542242} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{542242} = \mathbf{Pl}(11,16,1,16,0,1)_{53243}$$

$$\ell_{77} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{237826} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{237826} = \mathbf{Pl}(12,7,1,7,0,1)_{44595}$$

$$\ell_{78} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{508418} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{508418} = \mathbf{Pl}(13,15,1,15,0,1)_{52284}$$

$$\ell_{79} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{204002} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{204002} = \mathbf{Pl}(14, 6, 1, 6, 0, 1)_{43636}$$

$$\ell_{80} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{440770} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{440770} = \mathbf{Pl}(15, 13, 1, 13, 0, 1)_{50364}$$

$$\ell_{81} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{373122} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{373122} = \mathbf{Pl}(16, 11, 1, 11, 0, 1)_{48443}$$

$$\ell_{82} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{812834} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{812834} = \mathbf{Pl}(17, 24, 1, 24, 0, 1)_{60937}$$

$$\ell_{83} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & 0 \end{bmatrix}_{68706} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{68706} = \mathbf{Pl}(18, 2, 1, 2, 0, 1)_{39796}$$

$$\ell_{84} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{981954} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{981954} = \mathbf{Pl}(19, 29, 1, 29, 0, 1)_{65744}$$

$$\ell_{85} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{1015778} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{1015778} = \mathbf{Pl}(20, 30, 1, 30, 0, 1)_{66706}$$

$$\ell_{86} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{880482} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{880482} = \mathbf{Pl}(21, 26, 1, 26, 0, 1)_{62863}$$

$$\ell_{87} = \begin{bmatrix} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{271650} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{271650} = \mathbf{Pl}(22, 8, 1, 8, 0, 1)_{45566}$$

$$\ell_{88} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{170178} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{170178} = \mathbf{Pl}(23, 5, 1, 5, 0, 1)_{42684}$$

$$\ell_{89} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{576066} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{576066} = \mathbf{Pl}(24, 17, 1, 17, 0, 1)_{54217}$$

$$\ell_{90} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{339298} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{339298} = \mathbf{Pl}(25, 10, 1, 10, 0, 1)_{47491}$$

$$\ell_{91} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{711362} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{711362} = \mathbf{Pl}(26, 21, 1, 21, 0, 1)_{58063}$$

$$\ell_{92} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{1049602} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{1049602} = \mathbf{Pl}(27, 31, 1, 31, 0, 1)_{67674}$$

$$\ell_{93} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{102530} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{102530} = \mathbf{Pl}(28, 3, 1, 3, 0, 1)_{40767}$$

$$\ell_{94} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{643714} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{643714} = \mathbf{Pl}(29, 19, 1, 19, 0, 1)_{56144}$$

$$\ell_{95} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{677538} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{677538} = \mathbf{Pl}(30, 20, 1, 20, 0, 1)_{57106}$$

$$\ell_{96} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & 0 \end{bmatrix}_{914306} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 0 \end{bmatrix}_{914306} = \mathbf{Pl}(31, 27, 1, 27, 0, 1)_{63834}$$

$$\ell_{97} = \begin{bmatrix} 1 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{35937} = \begin{bmatrix} 1 & 1 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{35937} = \mathbf{Pl}(0, 1, 0, 1, 1, 0)_{3137}$$

$$\ell_{98} = \begin{bmatrix} 1 & \eta^{14} & \eta^{13} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{978781} = \begin{bmatrix} 1 & 29 & 28 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{978781} = \mathbf{Pl}(0, 28, 0, 29, 1, 0)_{4928}$$

$$\ell_{99} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{68802} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{68802} = \mathbf{Pl}(1, 1, 18, 2, 3, 1)_{154634}$$

$$\ell_{100} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{35490} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 19 \end{array}\right]_{35490} = \mathbf{Pl}(2,18,1,1,19,1)_{662601}$$

$$\ell_{101} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & 1 \end{array}\right]_{981986} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 1 \end{array}\right]_{981986} = \mathbf{Pl}(3,28,19,29,1,1)_{90094}$$

$$\ell_{102} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{610754} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 27 \end{array}\right]_{610754} = \mathbf{Pl}(4,9,2,18,27,1)_{925421}$$

$$\ell_{103} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{374018} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 28 \end{array}\right]_{374018} = \mathbf{Pl}(5,23,16,11,28,1)_{971178}$$

$$\ell_{104} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{948706} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 18 \end{array}\right]_{948706} = \mathbf{Pl}(6,14,3,28,18,1)_{631729}$$

$$\ell_{105} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{813474} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 20 \end{array}\right]_{813474} = \mathbf{Pl}(7,12,17,24,20,1)_{710222}$$

$$\ell_{106} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{306466} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 31 \end{array}\right]_{306466} = \mathbf{Pl}(8,22,4,9,31,1)_{1058229}$$

$$\ell_{107} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{272034} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 12 \end{array}\right]_{272034} = \mathbf{Pl}(9,4,22,8,12,1)_{452986}$$

$$\ell_{108} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{779458} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 14 \end{array}\right]_{779458} = \mathbf{Pl}(10,25,5,23,14,1)_{502649}$$

$$\ell_{109} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{170850} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 21 \end{array}\right]_{170850} = \mathbf{Pl}(11,16,23,5,21,1)_{748542}$$

$$\ell_{110} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{474882} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 9 \end{array}\right]_{474882} = \mathbf{Pl}(12,7,6,14,9,1)_{339901}$$

$$\ell_{111} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{1016322} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 17 \end{array}\right]_{1016322} = \mathbf{Pl}(13,15,20,30,17,1)_{614810}$$

$$\ell_{112} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{407266} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 10 \end{array}\right]_{407266} = \mathbf{Pl}(14,6,7,12,10,1)_{373569}$$

$$\ell_{113} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{881218} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 23 \end{array}\right]_{881218} = \mathbf{Pl}(15,13,21,26,23,1)_{812158}$$

$$\ell_{114} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{746114} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 29 \end{array}\right]_{746114} = \mathbf{Pl}(16,11,8,22,29,1)_{996485}$$

$$\ell_{115} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{711778} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 13 \end{array}\right]_{711778} = \mathbf{Pl}(17,24,26,21,13,1)_{489450}$$

$$\ell_{116} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{136546} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 6 \end{array}\right]_{136546} = \mathbf{Pl}(18,2,9,4,6,1)_{244489}$$

$$\ell_{117} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta \end{array}\right]_{1049666} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 2 \end{array}\right]_{1049666} = \mathbf{Pl}(19,29,27,31,2,1)_{130286}$$

$$\ell_{118} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{846882} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 7 \end{array}\right]_{846882} = \mathbf{Pl}(20,30,10,25,7,1)_{278157}$$

$$\ell_{119} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{576418} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 11 \end{array}\right]_{576418} = \mathbf{Pl}(21,26,24,17,11,1)_{422122}$$

$$\ell_{120} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{543010} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 24 \end{array}\right]_{543010} = \mathbf{Pl}(22,8,11,16,24,1)_{835601}$$

$$\ell_{121} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{339778} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{339778} = \mathbf{Pl}(23,5,25,10,15,1)_{553998}$$

$$\ell_{122} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{238530} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{238530} = \mathbf{Pl}(24,17,12,7,22,1)_{771061}$$

$$\ell_{123} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{678498} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{678498} = \mathbf{Pl}(25,10,30,20,30,1)_{1049690}$$

$$\ell_{124} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{509250} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{509250} = \mathbf{Pl}(26,21,13,15,26,1)_{902937}$$

$$\ell_{125} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^2 \end{bmatrix}_{914434} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{914434} = \mathbf{Pl}(27,31,31,27,4,1)_{199486}$$

$$\ell_{126} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{204162} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{204162} = \mathbf{Pl}(28,3,14,6,5,1)_{216413}$$

$$\ell_{127} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{103042} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{103042} = \mathbf{Pl}(29,19,28,3,16,1)_{589530}$$

$$\ell_{128} = \begin{bmatrix} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{441570} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{441570} = \mathbf{Pl}(30,20,15,13,25,1)_{872065}$$

$$\ell_{129} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^3 \end{bmatrix}_{643970} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{643970} = \mathbf{Pl}(31,27,29,19,8,1)_{328574}$$

$$\ell_{130} = \begin{bmatrix} 1 & \eta^{17} & \eta^{30} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{629971} = \begin{bmatrix} 1 & 19 & 18 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{629971} = \mathbf{Pl}(0,18,0,19,1,0)_{4288}$$

$$\ell_{131} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{102594} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{102594} = \mathbf{Pl}(1,1,28,3,2,1)_{130888}$$

$$\ell_{132} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{643746} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{643746} = \mathbf{Pl}(2,18,29,19,1,1)_{99083}$$

$$\ell_{133} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{35810} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{35810} = \mathbf{Pl}(3,28,1,1,29,1)_{989652}$$

$$\ell_{134} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{914882} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{914882} = \mathbf{Pl}(4,9,31,27,18,1)_{657457}$$

$$\ell_{135} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{948482} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{948482} = \mathbf{Pl}(5,23,3,28,11,1)_{402266}$$

$$\ell_{136} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{610786} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{610786} = \mathbf{Pl}(6,14,2,18,28,1)_{957849}$$

$$\ell_{137} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{678306} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{678306} = \mathbf{Pl}(7,12,30,20,24,1)_{852946}$$

$$\ell_{138} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{1049890} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{1049890} = \mathbf{Pl}(8,22,27,31,9,1)_{359117}$$

$$\ell_{139} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^3 \end{bmatrix}_{407202} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{407202} = \mathbf{Pl}(9,4,7,12,8,1)_{307782}$$

$$\ell_{140} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{475330} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{475330} = \mathbf{Pl}(10,25,6,14,23,1)_{797893}$$

$$\ell_{141} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{711522} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{711522} = \mathbf{Pl}(11,16,26,21,5,1)_{227246}$$

$$\ell_{142} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{305922} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 14 \end{array}\right]_{305922} = \mathbf{Pl}(12,7,4,9,14,1)_{501411}$$

$$\ell_{143} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{577026} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 30 \end{array}\right]_{577026} = \mathbf{Pl}(13,15,24,17,30,1)_{1043788}$$

$$\ell_{144} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{339682} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 12 \end{array}\right]_{339682} = \mathbf{Pl}(14,6,25,10,12,1)_{455471}$$

$$\ell_{145} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{9} \end{array}\right]_{779842} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 26 \end{array}\right]_{779842} = \mathbf{Pl}(15,13,5,23,26,1)_{895176}$$

$$\ell_{146} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{982658} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 22 \end{array}\right]_{982658} = \mathbf{Pl}(16,11,19,29,22,1)_{777253}$$

$$\ell_{147} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{441442} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 21 \end{array}\right]_{441442} = \mathbf{Pl}(17,24,15,13,21,1)_{740798}$$

$$\ell_{148} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{204130} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 4 \end{array}\right]_{204130} = \mathbf{Pl}(18,2,14,6,4,1)_{183357}$$

$$\ell_{149} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{69698} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 31 \end{array}\right]_{69698} = \mathbf{Pl}(19,29,18,2,31,1)_{1070950}$$

$$\ell_{150} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{238626} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 25 \end{array}\right]_{238626} = \mathbf{Pl}(20,30,12,7,25,1)_{868955}$$

$$\ell_{151} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{373666} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 17 \end{array}\right]_{373666} = \mathbf{Pl}(21,26,16,11,17,1)_{610788}$$

$$\ell_{152} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{4} \end{array}\right]_{813346} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 16 \end{array}\right]_{813346} = \mathbf{Pl}(22,8,17,24,16,1)_{578983}$$

$$\ell_{153} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{508738} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 10 \end{array}\right]_{508738} = \mathbf{Pl}(23,5,13,15,10,1)_{378848}$$

$$\ell_{154} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{745410} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 7 \end{array}\right]_{745410} = \mathbf{Pl}(24,17,8,22,7,1)_{275991}$$

$$\ell_{155} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{1016418} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 20 \end{array}\right]_{1016418} = \mathbf{Pl}(25,10,20,30,20,1)_{712720}$$

$$\ell_{156} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{880962} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 15 \end{array}\right]_{880962} = \mathbf{Pl}(26,21,21,26,15,1)_{549971}$$

$$\ell_{157} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{137218} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 27 \end{array}\right]_{137218} = \mathbf{Pl}(27,31,9,4,27,1)_{931644}$$

$$\ell_{158} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{170370} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 6 \end{array}\right]_{170370} = \mathbf{Pl}(28,3,23,5,6,1)_{257209}$$

$$\ell_{159} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{542338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 3 \end{array}\right]_{542338} = \mathbf{Pl}(29,19,11,16,3,1)_{147842}$$

$$\ell_{160} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{847074} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 13 \end{array}\right]_{847074} = \mathbf{Pl}(30,20,10,25,13,1)_{474273}$$

$$\ell_{161} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{272258} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 19 \end{array}\right]_{272258} = \mathbf{Pl}(31,27,22,8,19,1)_{681850}$$

$$\ell_{162} = \left[\begin{array}{cccc} 1 & \eta^{28} & \eta^{26} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{802262} = \left[\begin{array}{cccc} 1 & 22 & 23 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{802262} = \mathbf{Pl}(0,23,0,22,1,0)_{4482}$$

$$\ell_{163} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^5 \end{array}\right]_{136514} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 5 \end{array}\right]_{136514} = \mathbf{Pl}(1,1,9,4,5,1)_{211519}$$

$$\ell_{164} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^4 \end{array}\right]_{69218} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 16 \end{array}\right]_{69218} = \mathbf{Pl}(2,18,18,2,16,1)_{579986}$$

$$\ell_{165} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{1049698} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 3 \end{array}\right]_{1049698} = \mathbf{Pl}(3,28,27,31,3,1)_{162789}$$

$$\ell_{166} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^3 \end{array}\right]_{35138} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 8 \end{array}\right]_{35138} = \mathbf{Pl}(4,9,1,1,8,1)_{302290}$$

$$\ell_{167} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & 1 \end{array}\right]_{745218} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 1 \end{array}\right]_{745218} = \mathbf{Pl}(5,23,8,22,1,1)_{79649}$$

$$\ell_{168} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{982562} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 19 \end{array}\right]_{982562} = \mathbf{Pl}(6,14,19,29,19,1)_{679128}$$

$$\ell_{169} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{712162} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 25 \end{array}\right]_{712162} = \mathbf{Pl}(7,12,26,21,25,1)_{882055}$$

$$\ell_{170} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^2 \end{array}\right]_{610018} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 4 \end{array}\right]_{610018} = \mathbf{Pl}(8,22,2,18,4,1)_{172280}$$

$$\ell_{171} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^7 \end{array}\right]_{542882} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 20 \end{array}\right]_{542882} = \mathbf{Pl}(9,4,11,16,20,1)_{704427}$$

$$\ell_{172} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{373698} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 18 \end{array}\right]_{373698} = \mathbf{Pl}(10,25,16,11,18,1)_{643606}$$

$$\ell_{173} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^9 \end{array}\right]_{340130} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 26 \end{array}\right]_{340130} = \mathbf{Pl}(11,16,25,10,26,1)_{913865}$$

$$\ell_{174} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{948994} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 27 \end{array}\right]_{948994} = \mathbf{Pl}(12,7,3,28,27,1)_{926142}$$

$$\ell_{175} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{847362} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 22 \end{array}\right]_{847362} = \mathbf{Pl}(13,15,10,25,22,1)_{768973}$$

$$\ell_{176} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{813794} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 30 \end{array}\right]_{813794} = \mathbf{Pl}(14,6,17,24,30,1)_{1037372}$$

$$\ell_{177} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{576962} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 28 \end{array}\right]_{576962} = \mathbf{Pl}(15,13,24,17,28,1)_{978411}$$

$$\ell_{178} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta \end{array}\right]_{305538} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 2 \end{array}\right]_{305538} = \mathbf{Pl}(16,11,4,9,2,1)_{108676}$$

$$\ell_{179} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{509154} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 23 \end{array}\right]_{509154} = \mathbf{Pl}(17,24,13,15,23,1)_{804503}$$

$$\ell_{180} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^6 \end{array}\right]_{271970} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 10 \end{array}\right]_{271970} = \mathbf{Pl}(18,2,22,8,10,1)_{387306}$$

$$\ell_{181} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{914498} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 6 \end{array}\right]_{914498} = \mathbf{Pl}(19,29,31,27,6,1)_{264733}$$

$$\ell_{182} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{779298} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 9 \end{array}\right]_{779298} = \mathbf{Pl}(20,30,5,23,9,1)_{338762}$$

$$\ell_{183} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{238754} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 29 \end{array}\right]_{238754} = \mathbf{Pl}(21,26,12,7,29,1)_{999993}$$

$$\ell_{184} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^8 \end{array} \right]_{170594} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 13 \end{array} \right]_{170594} = \mathbf{Pl}(22, 8, 23, 5, 13, 1)_{486448}$$

$$\ell_{185} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{10} \end{array} \right]_{678082} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 17 \end{array} \right]_{678082} = \mathbf{Pl}(23, 5, 30, 20, 17, 1)_{623903}$$

$$\ell_{186} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{15} \end{array} \right]_{475586} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 31 \end{array} \right]_{475586} = \mathbf{Pl}(24, 17, 6, 14, 31, 1)_{1059888}$$

$$\ell_{187} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^{11} \end{array} \right]_{440994} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 7 \end{array} \right]_{440994} = \mathbf{Pl}(25, 10, 15, 13, 7, 1)_{282595}$$

$$\ell_{188} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{27} \end{array} \right]_{1016130} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 11 \end{array} \right]_{1016130} = \mathbf{Pl}(26, 21, 20, 30, 11, 1)_{418190}$$

$$\ell_{189} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{20} \end{array} \right]_{644098} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 12 \end{array} \right]_{644098} = \mathbf{Pl}(27, 31, 29, 19, 12, 1)_{459297}$$

$$\ell_{190} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{23} \end{array} \right]_{407426} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 15 \end{array} \right]_{407426} = \mathbf{Pl}(28, 3, 7, 12, 15, 1)_{537046}$$

$$\ell_{191} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{22} \end{array} \right]_{204674} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 21 \end{array} \right]_{204674} = \mathbf{Pl}(29, 19, 14, 6, 21, 1)_{739973}$$

$$\ell_{192} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^{12} \end{array} \right]_{880930} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 14 \end{array} \right]_{880930} = \mathbf{Pl}(30, 20, 21, 26, 14, 1)_{517332}$$

$$\ell_{193} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{21} \end{array} \right]_{103298} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 24 \end{array} \right]_{103298} = \mathbf{Pl}(31, 27, 28, 3, 24, 1)_{851203}$$

$$\ell_{194} = \left[\begin{array}{cccc} 1 & \eta^3 & \eta^{29} & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{313928} = \left[\begin{array}{cccc} 1 & 8 & 9 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{313928} = \mathbf{Pl}(0, 9, 0, 8, 1, 0)_{3586}$$

$$\ell_{195} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^2 \end{array} \right]_{170306} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 4 \end{array} \right]_{170306} = \mathbf{Pl}(1, 1, 23, 5, 4, 1)_{191369}$$

$$\ell_{196} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta \end{array} \right]_{542306} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 2 \end{array} \right]_{542306} = \mathbf{Pl}(2, 18, 11, 16, 2, 1)_{114738}$$

$$\ell_{197} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{15} \end{array} \right]_{103522} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 31 \end{array} \right]_{103522} = \mathbf{Pl}(3, 28, 28, 3, 31, 1)_{1079893}$$

$$\ell_{198} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & 1 \end{array} \right]_{271682} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 1 \end{array} \right]_{271682} = \mathbf{Pl}(4, 9, 22, 8, 1, 1)_{92234}$$

$$\ell_{199} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{28} \end{array} \right]_{35586} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 22 \end{array} \right]_{35586} = \mathbf{Pl}(5, 23, 1, 1, 22, 1)_{760161}$$

$$\ell_{200} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{14} \end{array} \right]_{644642} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 29 \end{array} \right]_{644642} = \mathbf{Pl}(6, 14, 29, 19, 29, 1)_{1015354}$$

$$\ell_{201} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{22} \end{array} \right]_{847330} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 21 \end{array} \right]_{847330} = \mathbf{Pl}(7, 12, 10, 25, 21, 1)_{735797}$$

$$\ell_{202} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{30} \end{array} \right]_{136930} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 18 \end{array} \right]_{136930} = \mathbf{Pl}(8, 22, 9, 4, 18, 1)_{636660}$$

$$\ell_{203} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^4 \end{array} \right]_{678050} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 16 \end{array} \right]_{678050} = \mathbf{Pl}(9, 4, 30, 20, 16, 1)_{590719}$$

$$\ell_{204} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{27} \end{array} \right]_{610242} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 11 \end{array} \right]_{610242} = \mathbf{Pl}(10, 25, 2, 18, 11, 1)_{401000}$$

$$\ell_{205} = \begin{bmatrix} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{880802} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{880802} = \mathbf{Pl}(11, 16, 21, 26, 10, 1)_{385935}$$

$$\ell_{206} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{915202} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{915202} = \mathbf{Pl}(12, 7, 31, 27, 28, 1)_{984484}$$

$$\ell_{207} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{745986} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{745986} = \mathbf{Pl}(13, 15, 8, 22, 25, 1)_{864887}$$

$$\ell_{208} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{1016546} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{1016546} = \mathbf{Pl}(14, 6, 20, 30, 24, 1)_{843312}$$

$$\ell_{209} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{948674} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{948674} = \mathbf{Pl}(15, 13, 3, 28, 17, 1)_{598351}$$

$$\ell_{210} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{68994} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{68994} = \mathbf{Pl}(16, 11, 18, 2, 9, 1)_{350414}$$

$$\ell_{211} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{779490} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{779490} = \mathbf{Pl}(17, 24, 5, 23, 15, 1)_{534741}$$

$$\ell_{212} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^3 \end{bmatrix}_{339554} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{339554} = \mathbf{Pl}(18, 2, 25, 10, 8, 1)_{324190}$$

$$\ell_{213} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{204866} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{204866} = \mathbf{Pl}(19, 29, 14, 6, 27, 1)_{935945}$$

$$\ell_{214} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{306210} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{306210} = \mathbf{Pl}(20, 30, 4, 9, 23, 1)_{795702}$$

$$\ell_{215} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{982178} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{982178} = \mathbf{Pl}(21, 26, 19, 29, 7, 1)_{285877}$$

$$\ell_{216} = \begin{bmatrix} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{440930} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{440930} = \mathbf{Pl}(22, 8, 15, 13, 5, 1)_{216686}$$

$$\ell_{217} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^7 \end{bmatrix}_{576706} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{576706} = \mathbf{Pl}(23, 5, 24, 17, 20, 1)_{716097}$$

$$\ell_{218} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{1050050} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{1050050} = \mathbf{Pl}(24, 17, 27, 31, 14, 1)_{522472}$$

$$\ell_{219} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{238242} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{238242} = \mathbf{Pl}(25, 10, 12, 7, 13, 1)_{475787}$$

$$\ell_{220} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{374082} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{374082} = \mathbf{Pl}(26, 21, 16, 11, 30, 1)_{1036020}$$

$$\ell_{221} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{407554} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{407554} = \mathbf{Pl}(27, 31, 7, 12, 19, 1)_{667555}$$

$$\ell_{222} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{508802} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{508802} = \mathbf{Pl}(28, 3, 13, 15, 12, 1)_{443984}$$

$$\ell_{223} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{711554} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{711554} = \mathbf{Pl}(29, 19, 26, 21, 6, 1)_{259659}$$

$$\ell_{224} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{475426} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{475426} = \mathbf{Pl}(30, 20, 6, 14, 26, 1)_{895780}$$

$$\ell_{225} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{812930} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{812930} = \mathbf{Pl}(31, 27, 17, 24, 3, 1)_{153083}$$

$$\ell_{226} = \left[\begin{array}{cccc} 1 & \eta^8 & \eta^{20} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{420685} = \left[\begin{array}{cccc} 1 & 13 & 12 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{420685} = \mathbf{Pl}(0, 12, 0, 13, 1, 0)_{3904}$$

$$\ell_{227} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{204226} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 7 \end{array}\right]_{204226} = \mathbf{Pl}(1, 1, 14, 6, 7, 1)_{281362}$$

$$\ell_{228} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{103074} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 17 \end{array}\right]_{103074} = \mathbf{Pl}(2, 18, 28, 3, 17, 1)_{621743}$$

$$\ell_{229} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{69666} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 30 \end{array}\right]_{69666} = \mathbf{Pl}(3, 28, 18, 2, 30, 1)_{1038012}$$

$$\ell_{230} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^9 \end{array}\right]_{644546} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 26 \end{array}\right]_{644546} = \mathbf{Pl}(4, 9, 29, 19, 26, 1)_{917299}$$

$$\ell_{231} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^6 \end{array}\right]_{982274} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 10 \end{array}\right]_{982274} = \mathbf{Pl}(5, 23, 19, 29, 10, 1)_{384224}$$

$$\ell_{232} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{35362} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 15 \end{array}\right]_{35362} = \mathbf{Pl}(6, 14, 1, 1, 15, 1)_{531165}$$

$$\ell_{233} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & 1 \end{array}\right]_{440802} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 1 \end{array}\right]_{440802} = \mathbf{Pl}(7, 12, 15, 13, 1, 1)_{85882}$$

$$\ell_{234} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^8 \end{array}\right]_{914722} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 13 \end{array}\right]_{914722} = \mathbf{Pl}(8, 22, 31, 27, 13, 1)_{493595}$$

$$\ell_{235} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{813730} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 28 \end{array}\right]_{813730} = \mathbf{Pl}(9, 4, 17, 24, 28, 1)_{971616}$$

$$\ell_{236} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^5 \end{array}\right]_{948290} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 5 \end{array}\right]_{948290} = \mathbf{Pl}(10, 25, 3, 28, 5, 1)_{205669}$$

$$\ell_{237} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{509410} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 31 \end{array}\right]_{509410} = \mathbf{Pl}(11, 16, 13, 15, 31, 1)_{1066106}$$

$$\ell_{238} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{610562} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 21 \end{array}\right]_{610562} = \mathbf{Pl}(12, 7, 2, 18, 21, 1)_{728517}$$

$$\ell_{239} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^3 \end{array}\right]_{238082} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 8 \end{array}\right]_{238082} = \mathbf{Pl}(13, 15, 12, 7, 8, 1)_{312250}$$

$$\ell_{240} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{678114} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 18 \end{array}\right]_{678114} = \mathbf{Pl}(14, 6, 30, 20, 18, 1)_{656351}$$

$$\ell_{241} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{373314} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 6 \end{array}\right]_{373314} = \mathbf{Pl}(15, 13, 16, 11, 6, 1)_{250500}$$

$$\ell_{242} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^7 \end{array}\right]_{1050242} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 20 \end{array}\right]_{1050242} = \mathbf{Pl}(16, 11, 27, 31, 20, 1)_{719035}$$

$$\ell_{243} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta \end{array}\right]_{880546} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 2 \end{array}\right]_{880546} = \mathbf{Pl}(17, 24, 21, 26, 2, 1)_{124208}$$

$$\ell_{244} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{407394} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 14 \end{array}\right]_{407394} = \mathbf{Pl}(18, 2, 7, 12, 14, 1)_{504021}$$

$$\ell_{245} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{137154} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 25 \end{array}\right]_{137154} = \mathbf{Pl}(19, 29, 9, 4, 25, 1)_{865978}$$

$$\ell_{246} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^4 \end{array}\right]_{475106} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 16 \end{array}\right]_{475106} = \mathbf{Pl}(20, 30, 6, 14, 16, 1)_{568565}$$

$$\ell_{247} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{745570} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 12 \end{array}\right]_{745570} = \mathbf{Pl}(21, 26, 8, 22, 12, 1)_{439482}$$

$$\ell_{248} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{712290} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 29 \end{array}\right]_{712290} = \mathbf{Pl}(22, 8, 26, 21, 29, 1)_{1012735}$$

$$\ell_{249} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{1016642} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 27 \end{array}\right]_{1016642} = \mathbf{Pl}(23, 5, 20, 30, 27, 1)_{941684}$$

$$\ell_{250} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{306242} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 24 \end{array}\right]_{306242} = \mathbf{Pl}(24, 17, 4, 9, 24, 1)_{828597}$$

$$\ell_{251} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{847266} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 19 \end{array}\right]_{847266} = \mathbf{Pl}(25, 10, 10, 25, 19, 1)_{670498}$$

$$\ell_{252} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{576194} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 4 \end{array}\right]_{576194} = \mathbf{Pl}(26, 21, 24, 17, 4, 1)_{192479}$$

$$\ell_{253} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{272386} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 23 \end{array}\right]_{272386} = \mathbf{Pl}(27, 31, 22, 8, 23, 1)_{812604}$$

$$\ell_{254} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{339586} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 9 \end{array}\right]_{339586} = \mathbf{Pl}(28, 3, 25, 10, 9, 1)_{357091}$$

$$\ell_{255} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{170882} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 22 \end{array}\right]_{170882} = \mathbf{Pl}(29, 19, 23, 5, 22, 1)_{780800}$$

$$\ell_{256} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{779106} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 3 \end{array}\right]_{779106} = \mathbf{Pl}(30, 20, 5, 23, 3, 1)_{142077}$$

$$\ell_{257} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{542594} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 11 \end{array}\right]_{542594} = \mathbf{Pl}(31, 27, 11, 16, 11, 1)_{409546}$$

$$\ell_{258} = \left[\begin{array}{cccc} 1 & \eta^{23} & \eta^{12} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{490447} = \left[\begin{array}{cccc} 1 & 15 & 14 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{490447} = \mathbf{Pl}(0, 14, 0, 15, 1, 0)_{4032}$$

$$\ell_{259} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{238018} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 6 \end{array}\right]_{238018} = \mathbf{Pl}(1, 1, 12, 7, 6, 1)_{246828}$$

$$\ell_{260} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{576162} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 3 \end{array}\right]_{576162} = \mathbf{Pl}(2, 18, 24, 17, 3, 1)_{159781}$$

$$\ell_{261} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta \end{array}\right]_{1015842} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 2 \end{array}\right]_{1015842} = \mathbf{Pl}(3, 28, 20, 30, 2, 1)_{123326}$$

$$\ell_{262} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{881090} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 19 \end{array}\right]_{881090} = \mathbf{Pl}(4, 9, 21, 26, 19, 1)_{680769}$$

$$\ell_{263} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{340226} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 29 \end{array}\right]_{340226} = \mathbf{Pl}(5, 23, 25, 10, 29, 1)_{1011850}$$

$$\ell_{264} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & 1 \end{array}\right]_{508450} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 1 \end{array}\right]_{508450} = \mathbf{Pl}(6, 14, 13, 15, 1, 1)_{84083}$$

$$\ell_{265} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{35298} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 13 \end{array}\right]_{35298} = \mathbf{Pl}(7, 12, 1, 1, 13, 1)_{465756}$$

$$\ell_{266} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{441634} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 27 \end{array}\right]_{441634} = \mathbf{Pl}(8, 22, 15, 13, 27, 1)_{937081}$$

$$\ell_{267} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{948898} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 24 \end{array}\right]_{948898} = \mathbf{Pl}(9, 4, 3, 28, 24, 1)_{827714}$$

$$\ell_{268} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{171074} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 28 \end{array}\right]_{171074} = \mathbf{Pl}(10, 25, 23, 5, 28, 1)_{977259}$$

$$\ell_{269} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{1050082} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 15 \end{array}\right]_{1050082} = \mathbf{Pl}(11, 16, 27, 31, 15, 1)_{555412}$$

$$\ell_{270} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{711938} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 18 \end{array}\right]_{711938} = \mathbf{Pl}(12, 7, 26, 21, 18, 1)_{652691}$$

$$\ell_{271} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{271874} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 7 \end{array}\right]_{271874} = \mathbf{Pl}(13, 15, 22, 8, 7, 1)_{288876}$$

$$\ell_{272} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^7 \end{array}\right]_{610530} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 20 \end{array}\right]_{610530} = \mathbf{Pl}(14, 6, 2, 18, 20, 1)_{695845}$$

$$\ell_{273} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{204354} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 11 \end{array}\right]_{204354} = \mathbf{Pl}(15, 13, 14, 6, 11, 1)_{412382}$$

$$\ell_{274} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{678530} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 31 \end{array}\right]_{678530} = \mathbf{Pl}(16, 11, 30, 20, 31, 1)_{1081983}$$

$$\ell_{275} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^9 \end{array}\right]_{69538} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 26 \end{array}\right]_{69538} = \mathbf{Pl}(17, 24, 18, 2, 26, 1)_{907144}$$

$$\ell_{276} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{474978} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 12 \end{array}\right]_{474978} = \mathbf{Pl}(18, 2, 6, 14, 12, 1)_{437681}$$

$$\ell_{277} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^2 \end{array}\right]_{846786} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 4 \end{array}\right]_{846786} = \mathbf{Pl}(19, 29, 10, 25, 4, 1)_{179514}$$

$$\ell_{278} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{542690} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 14 \end{array}\right]_{542690} = \mathbf{Pl}(20, 30, 11, 16, 14, 1)_{507805}$$

$$\ell_{279} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{407650} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 22 \end{array}\right]_{407650} = \mathbf{Pl}(21, 26, 7, 12, 22, 1)_{765974}$$

$$\ell_{280} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{982626} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 21 \end{array}\right]_{982626} = \mathbf{Pl}(22, 8, 19, 29, 21, 1)_{744399}$$

$$\ell_{281} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{915266} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 30 \end{array}\right]_{915266} = \mathbf{Pl}(23, 5, 31, 27, 30, 1)_{1050184}$$

$$\ell_{282} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{813122} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 9 \end{array}\right]_{813122} = \mathbf{Pl}(24, 17, 17, 24, 9, 1)_{349709}$$

$$\ell_{283} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{644514} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 25 \end{array}\right]_{644514} = \mathbf{Pl}(25, 10, 29, 19, 25, 1)_{884646}$$

$$\ell_{284} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{136898} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 17 \end{array}\right]_{136898} = \mathbf{Pl}(26, 21, 9, 4, 17, 1)_{604159}$$

$$\ell_{285} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^3 \end{array}\right]_{779266} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 8 \end{array}\right]_{779266} = \mathbf{Pl}(27, 31, 5, 23, 8, 1)_{305816}$$

$$\ell_{286} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^6 \end{array}\right]_{305794} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 10 \end{array}\right]_{305794} = \mathbf{Pl}(28, 3, 4, 9, 10, 1)_{370359}$$

$$\ell_{287} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^5 \end{array}\right]_{745346} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 5 \end{array}\right]_{745346} = \mathbf{Pl}(29, 19, 8, 22, 5, 1)_{210400}$$

$$\ell_{288} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{103266} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 23 \end{array}\right]_{103266} = \mathbf{Pl}(30, 20, 28, 3, 23, 1)_{818249}$$

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$$\ell_{289} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{4} \end{array}\right]_{373634} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 16 \end{array}\right]_{373634} = \mathbf{Pl}(31, 27, 16, 11, 16, 1)_{577938}$$

$$\ell_{290} = \left[\begin{array}{cccc} 1 & \eta^{5} & \eta^{2} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{141637} = \left[\begin{array}{cccc} 1 & 5 & 4 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{141637} = \mathbf{Pl}(0, 4, 0, 5, 1, 0)_{3392}$$

$$\ell_{291} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{271938} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 9 \end{array}\right]_{271938} = \mathbf{Pl}(1, 1, 22, 8, 9, 1)_{354026}$$

$$\ell_{292} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{137058} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 22 \end{array}\right]_{137058} = \mathbf{Pl}(2, 18, 9, 4, 22, 1)_{767505}$$

$$\ell_{293} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{914530} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 7 \end{array}\right]_{914530} = \mathbf{Pl}(3, 28, 31, 27, 7, 1)_{296926}$$

$$\ell_{294} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{69058} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 11 \end{array}\right]_{69058} = \mathbf{Pl}(4, 9, 18, 2, 11, 1)_{415781}$$

$$\ell_{295} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{306434} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 30 \end{array}\right]_{306434} = \mathbf{Pl}(5, 23, 4, 9, 30, 1)_{1024746}$$

$$\ell_{296} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{1050146} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 17 \end{array}\right]_{1050146} = \mathbf{Pl}(6, 14, 27, 31, 17, 1)_{620569}$$

$$\ell_{297} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{508514} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 3 \end{array}\right]_{508514} = \mathbf{Pl}(7, 12, 13, 15, 3, 1)_{149246}$$

$$\ell_{298} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{35618} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 23 \end{array}\right]_{35618} = \mathbf{Pl}(8, 22, 1, 1, 23, 1)_{792807}$$

$$\ell_{299} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & 1 \end{array}\right]_{170210} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 1 \end{array}\right]_{170210} = \mathbf{Pl}(9, 4, 23, 5, 1, 1)_{93076}$$

$$\ell_{300} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{745666} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 15 \end{array}\right]_{745666} = \mathbf{Pl}(10, 25, 8, 22, 15, 1)_{537431}$$

$$\ell_{301} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{677666} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 4 \end{array}\right]_{677666} = \mathbf{Pl}(11, 16, 30, 20, 4, 1)_{197796}$$

$$\ell_{302} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{9} \end{array}\right]_{982786} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 26 \end{array}\right]_{982786} = \mathbf{Pl}(12, 7, 19, 29, 26, 1)_{907759}$$

$$\ell_{303} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{779778} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 24 \end{array}\right]_{779778} = \mathbf{Pl}(13, 15, 5, 23, 24, 1)_{829268}$$

$$\ell_{304} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{711970} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 19 \end{array}\right]_{711970} = \mathbf{Pl}(14, 6, 26, 21, 19, 1)_{685119}$$

$$\ell_{305} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{238146} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 10 \end{array}\right]_{238146} = \mathbf{Pl}(15, 13, 12, 7, 10, 1)_{377476}$$

$$\ell_{306} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{610690} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 25 \end{array}\right]_{610690} = \mathbf{Pl}(16, 11, 2, 18, 25, 1)_{859217}$$

$$\ell_{307} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{1015970} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 6 \end{array}\right]_{1015970} = \mathbf{Pl}(17, 24, 20, 30, 6, 1)_{253974}$$

$$\ell_{308} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{542818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 18 \end{array}\right]_{542818} = \mathbf{Pl}(18, 2, 11, 16, 18, 1)_{638437}$$

$$\ell_{309} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{644162} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 14 \end{array}\right]_{644162} = \mathbf{Pl}(19, 29, 29, 19, 14, 1)_{524234}$$

$$\ell_{310} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{373794} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{373794} = \mathbf{Pl}(20,30,16,11,21,1)_{741297}$$

$$\ell_{311} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{7} \end{bmatrix}_{475234} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{475234} = \mathbf{Pl}(21,26,6,14,20,1)_{699262}$$

$$\ell_{312} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{339362} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{339362} = \mathbf{Pl}(22,8,25,10,2,1)_{127685}$$

$$\ell_{313} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{441026} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{441026} = \mathbf{Pl}(23,5,15,13,8,1)_{314802}$$

$$\ell_{314} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{948546} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{948546} = \mathbf{Pl}(24,17,3,28,13,1)_{467323}$$

$$\ell_{315} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{880994} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{880994} = \mathbf{Pl}(25,10,21,26,16,1)_{582272}$$

$$\ell_{316} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{847042} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{847042} = \mathbf{Pl}(26,21,10,25,12,1)_{441099}$$

$$\ell_{317} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{103426} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{103426} = \mathbf{Pl}(27,31,28,3,28,1)_{981616}$$

$$\ell_{318} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{813698} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{813698} = \mathbf{Pl}(28,3,17,24,27,1)_{938651}$$

$$\ell_{319} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{407938} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{407938} = \mathbf{Pl}(29,19,7,12,31,1)_{1060296}$$

$$\ell_{320} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{5} \end{bmatrix}_{576226} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{576226} = \mathbf{Pl}(30,20,24,17,5,1)_{224971}$$

$$\ell_{321} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{204930} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{204930} = \mathbf{Pl}(31,27,14,6,29,1)_{1001336}$$

$$\ell_{322} = \begin{bmatrix} 1 & \eta^{26} & \eta^{28} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{769495} = \begin{bmatrix} 1 & 23 & 22 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{769495} = \mathbf{Pl}(0,22,0,23,1,0)_{4544}$$

$$\ell_{323} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{305730} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{305730} = \mathbf{Pl}(1,1,4,9,8,1)_{305108}$$

$$\ell_{324} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{745314} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{745314} = \mathbf{Pl}(2,18,8,22,4,1)_{177885}$$

$$\ell_{325} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{238690} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{238690} = \mathbf{Pl}(3,28,12,7,27,1)_{934534}$$

$$\ell_{326} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{373186} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{373186} = \mathbf{Pl}(4,9,16,11,2,1)_{119855}$$

$$\ell_{327} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{1016066} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{1016066} = \mathbf{Pl}(5,23,20,30,9,1)_{352728}$$

$$\ell_{328} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{577058} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{577058} = \mathbf{Pl}(6,14,24,17,31,1)_{1076641}$$

$$\ell_{329} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{103010} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{103010} = \mathbf{Pl}(7,12,28,3,15,1)_{556586}$$

$$\ell_{330} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{779042} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{779042} = \mathbf{Pl}(8,22,5,23,1,1)_{76893}$$

$$\ell_{331} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{35042} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{35042} = \mathbf{Pl}(9,4,1,1,5,1)_{204118}$$

$$\ell_{332} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{509122} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{509122} = \mathbf{Pl}(10,25,13,15,22,1)_{771791}$$

$$\ell_{333} = \begin{bmatrix} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^7 \end{bmatrix}_{136994} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{136994} = \mathbf{Pl}(11,16,9,4,20,1)_{702600}$$

$$\ell_{334} = \begin{bmatrix} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{881410} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{881410} = \mathbf{Pl}(12,7,21,26,29,1)_{1008385}$$

$$\ell_{335} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{813570} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{813570} = \mathbf{Pl}(13,15,17,24,23,1)_{808250}$$

$$\ell_{336} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{644386} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{644386} = \mathbf{Pl}(14,6,29,19,21,1)_{753939}$$

$$\ell_{337} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{339522} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{339522} = \mathbf{Pl}(15,13,25,10,7,1)_{291916}$$

$$\ell_{338} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{847234} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{847234} = \mathbf{Pl}(16,11,10,25,18,1)_{638063}$$

$$\ell_{339} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{204962} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{204962} = \mathbf{Pl}(17,24,14,6,30,1)_{1034616}$$

$$\ell_{340} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{610402} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{610402} = \mathbf{Pl}(18,2,2,18,16,1)_{565153}$$

$$\ell_{341} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{475202} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{475202} = \mathbf{Pl}(19,29,6,14,19,1)_{667082}$$

$$\ell_{342} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{711714} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{711714} = \mathbf{Pl}(20,30,26,21,11,1)_{423795}$$

$$\ell_{343} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{677986} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{677986} = \mathbf{Pl}(21,26,30,20,14,1)_{525724}$$

$$\ell_{344} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{69026} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{69026} = \mathbf{Pl}(22,8,18,2,10,1)_{383621}$$

$$\ell_{345} = \begin{bmatrix} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{272066} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{272066} = \mathbf{Pl}(23,5,22,8,13,1)_{485550}$$

$$\ell_{346} = \begin{bmatrix} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{441666} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{441666} = \mathbf{Pl}(24,17,15,13,28,1)_{970081}$$

$$\ell_{347} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{543074} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{543074} = \mathbf{Pl}(25,10,11,16,26,1)_{900890}$$

$$\ell_{348} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{407746} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{407746} = \mathbf{Pl}(26,21,7,12,25,1)_{864435}$$

$$\ell_{349} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{948226} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{948226} = \mathbf{Pl}(27,31,3,28,3,1)_{140524}$$

$$\ell_{350} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{915074} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{915074} = \mathbf{Pl}(28,3,31,27,24,1)_{854021}$$

$$\ell_{351} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{1049986} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{1049986} = \mathbf{Pl}(29,19,27,31,12,1)_{457470}$$

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$$\ell_{352} = \begin{bmatrix} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{170722} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{170722} = \mathbf{Pl}(30, 20, 23, 5, 17, 1)_{617431}$$

$$\ell_{353} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{982146} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{982146} = \mathbf{Pl}(31, 27, 19, 29, 6, 1)_{253616}$$

$$\ell_{354} = \begin{bmatrix} 1 & \eta^{10} & \eta^4 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{560209} = \begin{bmatrix} 1 & 17 & 16 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{560209} = \mathbf{Pl}(0, 16, 0, 17, 1, 0)_{4160}$$

$$\ell_{355} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{339650} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{339650} = \mathbf{Pl}(1, 1, 25, 10, 11, 1)_{422660}$$

$$\ell_{356} = \begin{bmatrix} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{170914} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{170914} = \mathbf{Pl}(2, 18, 23, 5, 23, 1)_{813633}$$

$$\ell_{357} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{204834} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{204834} = \mathbf{Pl}(3, 28, 14, 6, 26, 1)_{903472}$$

$$\ell_{358} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{543042} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{543042} = \mathbf{Pl}(4, 9, 11, 16, 25, 1)_{867947}$$

$$\ell_{359} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{69378} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{69378} = \mathbf{Pl}(5, 23, 18, 2, 21, 1)_{743514}$$

$$\ell_{360} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{102946} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{102946} = \mathbf{Pl}(6, 14, 28, 3, 13, 1)_{490927}$$

$$\ell_{361} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{779874} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{779874} = \mathbf{Pl}(7, 12, 5, 23, 27, 1)_{927842}$$

$$\ell_{362} = \begin{bmatrix} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{272610} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{272610} = \mathbf{Pl}(8, 22, 22, 8, 30, 1)_{1041861}$$

$$\ell_{363} = \begin{bmatrix} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{441058} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{441058} = \mathbf{Pl}(9, 4, 15, 13, 9, 1)_{347896}$$

$$\ell_{364} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{35650} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{35650} = \mathbf{Pl}(10, 25, 1, 1, 24, 1)_{825917}$$

$$\ell_{365} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{576098} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{576098} = \mathbf{Pl}(11, 16, 24, 17, 1, 1)_{94380}$$

$$\ell_{366} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^7 \end{bmatrix}_{644354} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{644354} = \mathbf{Pl}(12, 7, 29, 19, 20, 1)_{721015}$$

$$\ell_{367} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{305666} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{305666} = \mathbf{Pl}(13, 15, 4, 9, 6, 1)_{239462}$$

$$\ell_{368} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{847650} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{847650} = \mathbf{Pl}(14, 6, 10, 25, 31, 1)_{1063443}$$

$$\ell_{369} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{982466} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{982466} = \mathbf{Pl}(15, 13, 19, 29, 16, 1)_{580774}$$

$$\ell_{370} = \begin{bmatrix} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{136834} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{136834} = \mathbf{Pl}(16, 11, 9, 4, 15, 1)_{538739}$$

$$\ell_{371} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{373730} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{373730} = \mathbf{Pl}(17, 24, 16, 11, 19, 1)_{676194}$$

$$\ell_{372} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{678242} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{678242} = \mathbf{Pl}(18, 2, 30, 20, 22, 1)_{787423}$$

$$\ell_{373} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{407490} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 17 \end{array}\right]_{407490} = \mathbf{Pl}(19,29,7,12,17,1)_{602354}$$

$$\ell_{374} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{610274} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 12 \end{array}\right]_{610274} = \mathbf{Pl}(20,30,2,18,12,1)_{434025}$$

$$\ell_{375} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{5} \end{array}\right]_{1049762} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 5 \end{array}\right]_{1049762} = \mathbf{Pl}(21,26,27,31,5,1)_{228124}$$

$$\ell_{376} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{881058} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 18 \end{array}\right]_{881058} = \mathbf{Pl}(22,8,21,26,18,1)_{648113}$$

$$\ell_{377} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta \end{array}\right]_{237890} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 2 \end{array}\right]_{237890} = \mathbf{Pl}(23,5,12,7,2,1)_{115968}$$

$$\ell_{378} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{914626} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 10 \end{array}\right]_{914626} = \mathbf{Pl}(24,17,31,27,10,1)_{395527}$$

$$\ell_{379} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{474722} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 4 \end{array}\right]_{474722} = \mathbf{Pl}(25,10,6,14,4,1)_{175862}$$

$$\ell_{380} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{745282} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 3 \end{array}\right]_{745282} = \mathbf{Pl}(26,21,8,22,3,1)_{144987}$$

$$\ell_{381} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{813058} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 7 \end{array}\right]_{813058} = \mathbf{Pl}(27,31,17,24,7,1)_{284302}$$

$$\ell_{382} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{1016706} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 29 \end{array}\right]_{1016706} = \mathbf{Pl}(28,3,20,30,29,1)_{1007285}$$

$$\ell_{383} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{509314} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 28 \end{array}\right]_{509314} = \mathbf{Pl}(29,19,13,15,28,1)_{968040}$$

$$\ell_{384} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{3} \end{array}\right]_{948386} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 8 \end{array}\right]_{948386} = \mathbf{Pl}(30,20,3,28,8,1)_{304021}$$

$$\ell_{385} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{711810} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 14 \end{array}\right]_{711810} = \mathbf{Pl}(31,27,26,21,14,1)_{521828}$$

$$\ell_{386} = \left[\begin{array}{cccc} 1 & \eta^{21} & \eta^{25} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{872024} = \left[\begin{array}{cccc} 1 & 24 & 25 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{872024} = \mathbf{Pl}(0,25,0,24,1,0)_{4610}$$

$$\ell_{387} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{373442} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 10 \end{array}\right]_{373442} = \mathbf{Pl}(1,1,16,11,10,1)_{381771}$$

$$\ell_{388} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{5} \end{array}\right]_{779170} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 5 \end{array}\right]_{779170} = \mathbf{Pl}(2,18,5,23,5,1)_{207862}$$

$$\ell_{389} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{880674} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 6 \end{array}\right]_{880674} = \mathbf{Pl}(3,28,21,26,6,1)_{255479}$$

$$\ell_{390} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{4} \end{array}\right]_{847170} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 16 \end{array}\right]_{847170} = \mathbf{Pl}(4,9,10,25,16,1)_{572610}$$

$$\ell_{391} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta \end{array}\right]_{711426} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 2 \end{array}\right]_{711426} = \mathbf{Pl}(5,23,26,21,2,1)_{129187}$$

$$\ell_{392} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{440866} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 3 \end{array}\right]_{440866} = \mathbf{Pl}(6,14,15,13,3,1)_{151694}$$

$$\ell_{393} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{915042} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 23 \end{array}\right]_{915042} = \mathbf{Pl}(7,12,31,27,23,1)_{821295}$$

$$\ell_{394} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{1016034} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{1016034} = \mathbf{Pl}(8, 22, 20, 30, 8, 1)_{320026}$$

$$\ell_{395} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{305890} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{305890} = \mathbf{Pl}(9, 4, 4, 9, 13, 1)_{468827}$$

$$\ell_{396} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{812866} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{812866} = \mathbf{Pl}(10, 25, 17, 24, 1, 1)_{88086}$$

$$\ell_{397} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{35426} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{35426} = \mathbf{Pl}(11, 16, 1, 1, 17, 1)_{596983}$$

$$\ell_{398} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{678146} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{678146} = \mathbf{Pl}(12, 7, 30, 20, 19, 1)_{689426}$$

$$\ell_{399} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{204290} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{204290} = \mathbf{Pl}(13, 15, 14, 6, 9, 1)_{347187}$$

$$\ell_{400} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{1050402} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{1050402} = \mathbf{Pl}(14, 6, 27, 31, 25, 1)_{883054}$$

$$\ell_{401} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{543170} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{543170} = \mathbf{Pl}(15, 13, 11, 16, 29, 1)_{999119}$$

$$\ell_{402} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{508546} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{508546} = \mathbf{Pl}(16, 11, 13, 15, 4, 1)_{182580}$$

$$\ell_{403} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{644066} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{644066} = \mathbf{Pl}(17, 24, 29, 19, 11, 1)_{426613}$$

$$\ell_{404} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{7} \end{bmatrix}_{745826} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{745826} = \mathbf{Pl}(18, 2, 8, 22, 20, 1)_{701708}$$

$$\ell_{405} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{576450} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{576450} = \mathbf{Pl}(19, 29, 24, 17, 12, 1)_{454701}$$

$$\ell_{406} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{407522} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{407522} = \mathbf{Pl}(20, 30, 7, 12, 18, 1)_{635308}$$

$$\ell_{407} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{171170} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{171170} = \mathbf{Pl}(21, 26, 23, 5, 31, 1)_{1075757}$$

$$\ell_{408} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{610722} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{610722} = \mathbf{Pl}(22, 8, 2, 18, 26, 1)_{892548}$$

$$\ell_{409} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{68930} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{68930} = \mathbf{Pl}(23, 5, 18, 2, 7, 1)_{285445}$$

$$\ell_{410} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{340162} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{340162} = \mathbf{Pl}(24, 17, 25, 10, 27, 1)_{946676}$$

$$\ell_{411} = \begin{bmatrix} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{136802} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{136802} = \mathbf{Pl}(25, 10, 9, 4, 14, 1)_{506229}$$

$$\ell_{412} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{103234} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{103234} = \mathbf{Pl}(26, 21, 28, 3, 22, 1)_{785788}$$

$$\ell_{413} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{238594} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{238594} = \mathbf{Pl}(27, 31, 12, 7, 24, 1)_{836381}$$

$$\ell_{414} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{982914} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{982914} = \mathbf{Pl}(28, 3, 19, 29, 30, 1)_{1039308}$$

$$\ell_{415} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{23} \end{array} \right]_{948610} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 15 \end{array} \right]_{948610} = \mathbf{Pl}(29, 19, 3, 28, 15, 1)_{533389}$$

$$\ell_{416} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{13} \end{array} \right]_{272546} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 28 \end{array} \right]_{272546} = \mathbf{Pl}(30, 20, 22, 8, 28, 1)_{976628}$$

$$\ell_{417} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{22} \end{array} \right]_{475266} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 21 \end{array} \right]_{475266} = \mathbf{Pl}(31, 27, 6, 14, 21, 1)_{732597}$$

$$\ell_{418} = \left[\begin{array}{cccc} 1 & \eta^{12} & \eta^{23} & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{523214} = \left[\begin{array}{cccc} 1 & 14 & 15 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{523214} = \mathbf{Pl}(0, 15, 0, 14, 1, 0)_{3970}$$

$$\ell_{419} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{8} \end{array} \right]_{407362} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 13 \end{array} \right]_{407362} = \mathbf{Pl}(1, 1, 7, 12, 13, 1)_{471299}$$

$$\ell_{420} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{7} \end{array} \right]_{204642} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 20 \end{array} \right]_{204642} = \mathbf{Pl}(2, 18, 14, 6, 20, 1)_{706962}$$

$$\ell_{421} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{21} \end{array} \right]_{137122} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 24 \end{array} \right]_{137122} = \mathbf{Pl}(3, 28, 9, 4, 24, 1)_{833257}$$

$$\ell_{422} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{6} \end{array} \right]_{102850} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 10 \end{array} \right]_{102850} = \mathbf{Pl}(4, 9, 28, 3, 10, 1)_{392624}$$

$$\ell_{423} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{3} \end{array} \right]_{1049858} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 8 \end{array} \right]_{1049858} = \mathbf{Pl}(5, 23, 27, 31, 8, 1)_{326223}$$

$$\ell_{424} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{20} \end{array} \right]_{69090} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 12 \end{array} \right]_{69090} = \mathbf{Pl}(6, 14, 18, 2, 12, 1)_{448798}$$

$$\ell_{425} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{28} \end{array} \right]_{881186} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 22 \end{array} \right]_{881186} = \mathbf{Pl}(7, 12, 21, 26, 22, 1)_{778949}$$

$$\ell_{426} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{5} \end{array} \right]_{643874} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 5 \end{array} \right]_{643874} = \mathbf{Pl}(8, 22, 29, 19, 5, 1)_{229878}$$

$$\ell_{427} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{10} \end{array} \right]_{711906} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 17 \end{array} \right]_{711906} = \mathbf{Pl}(9, 4, 26, 21, 17, 1)_{619921}$$

$$\ell_{428} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{2} \end{array} \right]_{982082} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 4 \end{array} \right]_{982082} = \mathbf{Pl}(10, 25, 19, 29, 4, 1)_{187844}$$

$$\ell_{429} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{12} \end{array} \right]_{1016226} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 14 \end{array} \right]_{1016226} = \mathbf{Pl}(11, 16, 20, 30, 14, 1)_{516135}$$

$$\ell_{430} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{19} \end{array} \right]_{35074} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 6 \end{array} \right]_{35074} = \mathbf{Pl}(12, 7, 1, 1, 6, 1)_{236578}$$

$$\ell_{431} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & 1 \end{array} \right]_{474626} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 1 \end{array} \right]_{474626} = \mathbf{Pl}(13, 15, 6, 14, 1, 1)_{77549}$$

$$\ell_{432} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{27} \end{array} \right]_{441122} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 11 \end{array} \right]_{441122} = \mathbf{Pl}(14, 6, 15, 13, 11, 1)_{413280}$$

$$\ell_{433} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{16} \end{array} \right]_{746050} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 27 \end{array} \right]_{746050} = \mathbf{Pl}(15, 13, 8, 22, 27, 1)_{930547}$$

$$\ell_{434} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{4} \end{array} \right]_{914818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 16 \end{array} \right]_{914818} = \mathbf{Pl}(16, 11, 31, 27, 16, 1)_{591842}$$

$$\ell_{435} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{29} \end{array} \right]_{576354} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 9 \end{array} \right]_{576354} = \mathbf{Pl}(17, 24, 24, 17, 9, 1)_{356181}$$

$$\ell_{436} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{813666} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{813666} = \mathbf{Pl}(18,2,17,24,26,1)_{906184}$$

$$\ell_{437} = \begin{bmatrix} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{272322} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{272322} = \mathbf{Pl}(19,29,22,8,21,1)_{747155}$$

$$\ell_{438} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{948194} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{948194} = \mathbf{Pl}(20,30,3,28,2,1)_{107502}$$

$$\ell_{439} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{306082} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{306082} = \mathbf{Pl}(21,26,4,9,19,1)_{664945}$$

$$\ell_{440} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{508642} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{508642} = \mathbf{Pl}(22,8,13,15,7,1)_{280484}$$

$$\ell_{441} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{847554} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{847554} = \mathbf{Pl}(23,5,10,25,28,1)_{965151}$$

$$\ell_{442} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{609986} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{609986} = \mathbf{Pl}(24,17,2,18,3,1)_{139312}$$

$$\ell_{443} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{779938} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{779938} = \mathbf{Pl}(25,10,5,23,29,1)_{993239}$$

$$\ell_{444} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{238402} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{238402} = \mathbf{Pl}(26,21,12,7,18,1)_{639654}$$

$$\ell_{445} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{542722} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{542722} = \mathbf{Pl}(27,31,11,16,15,1)_{540517}$$

$$\ell_{446} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{678274} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{678274} = \mathbf{Pl}(28,3,30,20,23,1)_{820076}$$

$$\ell_{447} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{340098} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{340098} = \mathbf{Pl}(29,19,25,10,25,1)_{880899}$$

$$\ell_{448} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{374114} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{374114} = \mathbf{Pl}(30,20,16,11,31,1)_{1068946}$$

$$\ell_{449} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{171138} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{171138} = \mathbf{Pl}(31,27,23,5,30,1)_{1042721}$$

$$\ell_{450} = \begin{bmatrix} 1 & \eta^{19} & \eta^{11} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{244166} = \begin{bmatrix} 1 & 6 & 7 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{244166} = \mathbf{Pl}(0,7,0,6,1,0)_{3458}$$

$$\ell_{451} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{441154} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{441154} = \mathbf{Pl}(1,1,15,13,12,1)_{445755}$$

$$\ell_{452} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{677730} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{677730} = \mathbf{Pl}(2,18,30,20,6,1)_{263290}$$

$$\ell_{453} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{812962} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{812962} = \mathbf{Pl}(3,28,17,24,4,1)_{185729}$$

$$\ell_{454} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{339394} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{339394} = \mathbf{Pl}(4,9,25,10,3,1)_{160434}$$

$$\ell_{455} = \begin{bmatrix} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{272642} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{272642} = \mathbf{Pl}(5,23,22,8,31,1)_{1074253}$$

$$\ell_{456} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{407010} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{407010} = \mathbf{Pl}(6,14,7,12,2,1)_{110960}$$

$$\ell_{457} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{746018} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{746018} = \mathbf{Pl}(7, 12, 8, 22, 26, 1)_{897555}$$

$$\ell_{458} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{170786} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{170786} = \mathbf{Pl}(8, 22, 23, 5, 19, 1)_{682354}$$

$$\ell_{459} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{576738} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{576738} = \mathbf{Pl}(9, 4, 24, 17, 21, 1)_{748757}$$

$$\ell_{460} = \begin{bmatrix} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{137282} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{137282} = \mathbf{Pl}(10, 25, 9, 4, 29, 1)_{996696}$$

$$\ell_{461} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{475554} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{475554} = \mathbf{Pl}(11, 16, 6, 14, 30, 1)_{1026643}$$

$$\ell_{462} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{204034} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{204034} = \mathbf{Pl}(12, 7, 14, 6, 1, 1)_{84740}$$

$$\ell_{463} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{35330} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{35330} = \mathbf{Pl}(13, 15, 1, 1, 14, 1)_{498219}$$

$$\ell_{464} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{373538} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{373538} = \mathbf{Pl}(14, 6, 16, 11, 13, 1)_{479434}$$

$$\ell_{465} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{915010} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{915010} = \mathbf{Pl}(15, 13, 31, 27, 22, 1)_{788009}$$

$$\ell_{466} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{543106} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{543106} = \mathbf{Pl}(16, 11, 11, 16, 27, 1)_{933090}$$

$$\ell_{467} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{306018} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{306018} = \mathbf{Pl}(17, 24, 4, 9, 17, 1)_{599221}$$

$$\ell_{468} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{881250} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{881250} = \mathbf{Pl}(18, 2, 21, 26, 24, 1)_{844184}$$

$$\ell_{469} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{711618} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{711618} = \mathbf{Pl}(19, 29, 26, 21, 8, 1)_{325059}$$

$$\ell_{470} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{69602} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{69602} = \mathbf{Pl}(20, 30, 18, 2, 28, 1)_{972340}$$

$$\ell_{471} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{644002} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{644002} = \mathbf{Pl}(21, 26, 29, 19, 9, 1)_{360587}$$

$$\ell_{472} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{238306} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{238306} = \mathbf{Pl}(22, 8, 12, 7, 15, 1)_{541194}$$

$$\ell_{473} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{948930} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{948930} = \mathbf{Pl}(23, 5, 3, 28, 25, 1)_{860185}$$

$$\ell_{474} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{103106} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{103106} = \mathbf{Pl}(24, 17, 28, 3, 18, 1)_{654284}$$

$$\ell_{475} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{982690} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{982690} = \mathbf{Pl}(25, 10, 19, 29, 23, 1)_{809595}$$

$$\ell_{476} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{610114} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{610114} = \mathbf{Pl}(26, 21, 2, 18, 7, 1)_{270010}$$

$$\ell_{477} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{508930} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{508930} = \mathbf{Pl}(27, 31, 13, 15, 16, 1)_{574865}$$

$$\ell_{478} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{7} \end{array} \right]_{779650} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 20 \end{array} \right]_{779650} = \mathbf{Pl}(28, 3, 5, 23, 20, 1)_{698370}$$

$$\ell_{479} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{6} \end{array} \right]_{846978} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 10 \end{array} \right]_{846978} = \mathbf{Pl}(29, 19, 10, 25, 10, 1)_{375661}$$

$$\ell_{480} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{27} \end{array} \right]_{1049954} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 11 \end{array} \right]_{1049954} = \mathbf{Pl}(30, 20, 27, 31, 11, 1)_{424208}$$

$$\ell_{481} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{5} \end{array} \right]_{1015938} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 5 \end{array} \right]_{1015938} = \mathbf{Pl}(31, 27, 20, 30, 5, 1)_{221283}$$

$$\ell_{482} = \left[\begin{array}{cccc} 1 & \eta^{20} & \eta^{8} & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{453452} = \left[\begin{array}{cccc} 1 & 12 & 13 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{453452} = \mathbf{Pl}(0, 13, 0, 12, 1, 0)_{3842}$$

$$\ell_{483} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{23} \end{array} \right]_{475074} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 15 \end{array} \right]_{475074} = \mathbf{Pl}(1, 1, 6, 14, 15, 1)_{535779}$$

$$\ell_{484} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{22} \end{array} \right]_{238498} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 21 \end{array} \right]_{238498} = \mathbf{Pl}(2, 18, 12, 7, 21, 1)_{737776}$$

$$\ell_{485} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{5} \end{array} \right]_{846818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 5 \end{array} \right]_{846818} = \mathbf{Pl}(3, 28, 10, 25, 5, 1)_{212141}$$

$$\ell_{486} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{21} \end{array} \right]_{576834} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 24 \end{array} \right]_{576834} = \mathbf{Pl}(4, 9, 24, 17, 24, 1)_{847146}$$

$$\ell_{487} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{18} \end{array} \right]_{677634} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 3 \end{array} \right]_{677634} = \mathbf{Pl}(5, 23, 30, 20, 3, 1)_{165271}$$

$$\ell_{488} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{4} \end{array} \right]_{1016290} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 16 \end{array} \right]_{1016290} = \mathbf{Pl}(6, 14, 20, 30, 16, 1)_{581540}$$

$$\ell_{489} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{12} \end{array} \right]_{69154} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 14 \end{array} \right]_{69154} = \mathbf{Pl}(7, 12, 18, 2, 14, 1)_{514209}$$

$$\ell_{490} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{20} \end{array} \right]_{880866} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 12 \end{array} \right]_{880866} = \mathbf{Pl}(8, 22, 21, 26, 12, 1)_{451528}$$

$$\ell_{491} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{25} \end{array} \right]_{982754} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 25 \end{array} \right]_{982754} = \mathbf{Pl}(9, 4, 19, 29, 25, 1)_{875237}$$

$$\ell_{492} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{17} \end{array} \right]_{339906} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 19 \end{array} \right]_{339906} = \mathbf{Pl}(10, 25, 25, 10, 19, 1)_{684402}$$

$$\ell_{493} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{27} \end{array} \right]_{914658} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 11 \end{array} \right]_{914658} = \mathbf{Pl}(11, 16, 31, 27, 11, 1)_{428095}$$

$$\ell_{494} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{3} \end{array} \right]_{508674} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 8 \end{array} \right]_{508674} = \mathbf{Pl}(12, 7, 13, 15, 8, 1)_{313148}$$

$$\ell_{495} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{15} \end{array} \right]_{543234} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 31 \end{array} \right]_{543234} = \mathbf{Pl}(13, 15, 11, 16, 31, 1)_{1064217}$$

$$\ell_{496} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{11} \end{array} \right]_{35106} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 7 \end{array} \right]_{35106} = \mathbf{Pl}(14, 6, 1, 1, 7, 1)_{269254}$$

$$\ell_{497} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & 1 \end{array} \right]_{406978} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 1 \end{array} \right]_{406978} = \mathbf{Pl}(15, 13, 7, 12, 1, 1)_{78419}$$

$$\ell_{498} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{19} \end{array} \right]_{440962} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 6 \end{array} \right]_{440962} = \mathbf{Pl}(16, 11, 15, 13, 6, 1)_{249540}$$

$$\ell_{499} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{137250} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 28 \end{array}\right]_{137250} = \mathbf{Pl}(17, 24, 9, 4, 28, 1)_{964153}$$

$$\ell_{500} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{949090} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 30 \end{array}\right]_{949090} = \mathbf{Pl}(18, 2, 3, 28, 30, 1)_{1024046}$$

$$\ell_{501} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{779330} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 10 \end{array}\right]_{779330} = \mathbf{Pl}(19, 29, 5, 23, 10, 1)_{371187}$$

$$\ell_{502} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{171042} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 27 \end{array}\right]_{171042} = \mathbf{Pl}(20, 30, 23, 5, 27, 1)_{944440}$$

$$\ell_{503} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta \end{array}\right]_{812898} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 2 \end{array}\right]_{812898} = \mathbf{Pl}(21, 26, 17, 24, 2, 1)_{120461}$$

$$\ell_{504} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{1050338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 23 \end{array}\right]_{1050338} = \mathbf{Pl}(22, 8, 27, 31, 23, 1)_{817218}$$

$$\ell_{505} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{644418} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 22 \end{array}\right]_{644418} = \mathbf{Pl}(23, 5, 29, 19, 22, 1)_{786343}$$

$$\ell_{506} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{711490} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 4 \end{array}\right]_{711490} = \mathbf{Pl}(24, 17, 26, 21, 4, 1)_{194306}$$

$$\ell_{507} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{102818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 9 \end{array}\right]_{102818} = \mathbf{Pl}(25, 10, 28, 3, 9, 1)_{359847}$$

$$\ell_{508} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{272578} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 29 \end{array}\right]_{272578} = \mathbf{Pl}(26, 21, 22, 8, 29, 1)_{1008988}$$

$$\ell_{509} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{373762} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 20 \end{array}\right]_{373762} = \mathbf{Pl}(27, 31, 16, 11, 20, 1)_{708785}$$

$$\ell_{510} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{610434} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 17 \end{array}\right]_{610434} = \mathbf{Pl}(28, 3, 2, 18, 17, 1)_{597558}$$

$$\ell_{511} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{9} \end{array}\right]_{306306} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 26 \end{array}\right]_{306306} = \mathbf{Pl}(29, 19, 4, 9, 26, 1)_{894043}$$

$$\ell_{512} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{204578} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 18 \end{array}\right]_{204578} = \mathbf{Pl}(30, 20, 14, 6, 18, 1)_{641456}$$

$$\ell_{513} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{745602} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 13 \end{array}\right]_{745602} = \mathbf{Pl}(31, 27, 8, 22, 13, 1)_{472197}$$

$$\ell_{514} = \left[\begin{array}{cccc} 1 & \eta^{11} & \eta^{19} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{211399} = \left[\begin{array}{cccc} 1 & 7 & 6 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{211399} = \mathbf{Pl}(0, 6, 0, 7, 1, 0)_{3520}$$

$$\ell_{515} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{508866} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 14 \end{array}\right]_{508866} = \mathbf{Pl}(1, 1, 13, 15, 14, 1)_{509398}$$

$$\ell_{516} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{711586} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 7 \end{array}\right]_{711586} = \mathbf{Pl}(2, 18, 26, 21, 7, 1)_{292337}$$

$$\ell_{517} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{170978} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 25 \end{array}\right]_{170978} = \mathbf{Pl}(3, 28, 23, 5, 25, 1)_{878796}$$

$$\ell_{518} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{813378} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 17 \end{array}\right]_{813378} = \mathbf{Pl}(4, 9, 17, 24, 17, 1)_{611329}$$

$$\ell_{519} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{103170} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 20 \end{array}\right]_{103170} = \mathbf{Pl}(5, 23, 28, 3, 20, 1)_{719768}$$

$$\ell_{520} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{543202} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{543202} = \mathbf{Pl}(6,14,11,16,30,1)_{1031319}$$

$$\ell_{521} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{474658} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{474658} = \mathbf{Pl}(7,12,6,14,2,1)_{110062}$$

$$\ell_{522} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{407778} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{407778} = \mathbf{Pl}(8,22,7,12,26,1)_{896657}$$

$$\ell_{523} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{847586} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{847586} = \mathbf{Pl}(9,4,10,25,29,1)_{997656}$$

$$\ell_{524} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{644034} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{644034} = \mathbf{Pl}(10,25,29,19,10,1)_{393343}$$

$$\ell_{525} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{373986} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{373986} = \mathbf{Pl}(11,16,16,11,27,1)_{937766}$$

$$\ell_{526} = \begin{bmatrix} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{272130} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{272130} = \mathbf{Pl}(12,7,22,8,15,1)_{550515}$$

$$\ell_{527} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{1050114} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{1050114} = \mathbf{Pl}(13,15,27,31,16,1)_{587902}$$

$$\ell_{528} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{237858} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{237858} = \mathbf{Pl}(14,6,12,7,1,1)_{82913}$$

$$\ell_{529} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{35266} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{35266} = \mathbf{Pl}(15,13,1,1,12,1)_{432780}$$

$$\ell_{530} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{204418} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{204418} = \mathbf{Pl}(16,11,14,6,13,1)_{477607}$$

$$\ell_{531} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^2 \end{bmatrix}_{948258} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{948258} = \mathbf{Pl}(17,24,3,28,4,1)_{172754}$$

$$\ell_{532} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{1016674} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{1016674} = \mathbf{Pl}(18,2,20,30,28,1)_{974229}$$

$$\ell_{533} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{340034} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{340034} = \mathbf{Pl}(19,29,25,10,23,1)_{815200}$$

$$\ell_{534} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{914466} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{914466} = \mathbf{Pl}(20,30,31,27,5,1)_{231533}$$

$$\ell_{535} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{69474} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{69474} = \mathbf{Pl}(21,26,18,2,24,1)_{841428}$$

$$\ell_{536} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{780002} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{780002} = \mathbf{Pl}(22,8,5,23,31,1)_{1058491}$$

$$\ell_{537} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{745794} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{745794} = \mathbf{Pl}(23,5,8,22,19,1)_{668450}$$

$$\ell_{538} = \begin{bmatrix} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{137026} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{137026} = \mathbf{Pl}(24,17,9,4,21,1)_{734853}$$

$$\ell_{539} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{305570} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{305570} = \mathbf{Pl}(25,10,4,9,3,1)_{140956}$$

$$\ell_{540} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^3 \end{bmatrix}_{982210} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{982210} = \mathbf{Pl}(26,21,19,29,8,1)_{318587}$$

$$\ell_{541} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{677890} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{677890} = \mathbf{Pl}(27, 31, 30, 20, 11, 1)_{427026}$$

$$\ell_{542} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{576642} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{576642} = \mathbf{Pl}(28, 3, 24, 17, 18, 1)_{650599}$$

$$\ell_{543} = \begin{bmatrix} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{880770} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{880770} = \mathbf{Pl}(29, 19, 21, 26, 9, 1)_{353186}$$

$$\ell_{544} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{610082} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{610082} = \mathbf{Pl}(30, 20, 2, 18, 6, 1)_{237309}$$

$$\ell_{545} = \begin{bmatrix} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{441474} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{441474} = \mathbf{Pl}(31, 27, 15, 13, 22, 1)_{773176}$$

$$\ell_{546} = \begin{bmatrix} 1 & \eta^{25} & \eta^{21} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{839257} = \begin{bmatrix} 1 & 25 & 24 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{839257} = \mathbf{Pl}(0, 24, 0, 25, 1, 0)_{4672}$$

$$\ell_{547} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{542786} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{542786} = \mathbf{Pl}(1, 1, 11, 16, 17, 1)_{606304}$$

$$\ell_{548} = \begin{bmatrix} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{272482} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{272482} = \mathbf{Pl}(2, 18, 22, 8, 26, 1)_{911159}$$

$$\ell_{549} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{644194} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{644194} = \mathbf{Pl}(3, 28, 29, 19, 15, 1)_{557574}$$

$$\ell_{550} = \begin{bmatrix} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{136770} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{136770} = \mathbf{Pl}(4, 9, 9, 4, 13, 1)_{473503}$$

$$\ell_{551} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{610050} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{610050} = \mathbf{Pl}(5, 23, 2, 18, 5, 1)_{205106}$$

$$\ell_{552} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{914978} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{914978} = \mathbf{Pl}(6, 14, 31, 27, 21, 1)_{755853}$$

$$\ell_{553} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{1016354} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{1016354} = \mathbf{Pl}(7, 12, 20, 30, 18, 1)_{647416}$$

$$\ell_{554} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^7 \end{bmatrix}_{69346} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{69346} = \mathbf{Pl}(8, 22, 18, 2, 20, 1)_{711029}$$

$$\ell_{555} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{339746} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{339746} = \mathbf{Pl}(9, 4, 25, 10, 14, 1)_{521124}$$

$$\ell_{556} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{305986} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{305986} = \mathbf{Pl}(10, 25, 4, 9, 16, 1)_{567067}$$

$$\ell_{557} = \begin{bmatrix} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{441698} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{441698} = \mathbf{Pl}(11, 16, 15, 13, 29, 1)_{1002866}$$

$$\ell_{558} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{1050370} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{1050370} = \mathbf{Pl}(12, 7, 27, 31, 24, 1)_{850347}$$

$$\ell_{559} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^2 \end{bmatrix}_{373250} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{373250} = \mathbf{Pl}(13, 15, 16, 11, 4, 1)_{185398}$$

$$\ell_{560} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{508706} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{508706} = \mathbf{Pl}(14, 6, 13, 15, 9, 1)_{346289}$$

$$\ell_{561} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{474690} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{474690} = \mathbf{Pl}(15, 13, 6, 14, 3, 1)_{143364}$$

$$\ell_{562} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{35202} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{35202} = \mathbf{Pl}(16,11,1,1,10,1)_{367867}$$

$$\ell_{563} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{846690} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{846690} = \mathbf{Pl}(17,24,10,25,1,1)_{81614}$$

$$\ell_{564} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{170402} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{170402} = \mathbf{Pl}(18,2,23,5,7,1)_{290121}$$

$$\ell_{565} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{103490} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{103490} = \mathbf{Pl}(19,29,28,3,30,1)_{1047700}$$

$$\ell_{566} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{745442} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{745442} = \mathbf{Pl}(20,30,8,22,8,1)_{308909}$$

$$\ell_{567} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{948322} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{948322} = \mathbf{Pl}(21,26,3,28,6,1)_{238788}$$

$$\ell_{568} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{678434} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{678434} = \mathbf{Pl}(22,8,30,20,28,1)_{984091}$$

$$\ell_{569} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{881474} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{881474} = \mathbf{Pl}(23,5,21,26,31,1)_{1073930}$$

$$\ell_{570} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{982338} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{982338} = \mathbf{Pl}(24,17,19,29,12,1)_{450087}$$

$$\ell_{571} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{576930} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{576930} = \mathbf{Pl}(25,10,24,17,27,1)_{945778}$$

$$\ell_{572} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{779074} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{779074} = \mathbf{Pl}(26,21,5,23,2,1)_{109709}$$

$$\ell_{573} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{204802} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{204802} = \mathbf{Pl}(27,31,14,6,25,1)_{871008}$$

$$\ell_{574} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{712066} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{712066} = \mathbf{Pl}(28,3,26,21,22,1)_{783961}$$

$$\ell_{575} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{813186} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{813186} = \mathbf{Pl}(29,19,17,24,11,1)_{415496}$$

$$\ell_{576} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{238434} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{238434} = \mathbf{Pl}(30,20,12,7,19,1)_{672735}$$

$$\ell_{577} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{407682} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{407682} = \mathbf{Pl}(31,27,7,12,23,1)_{799030}$$

$$\ell_{578} = \begin{bmatrix} 1 & \eta^{6} & \eta^{27} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{383690} = \begin{bmatrix} 1 & 10 & 11 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{383690} = \mathbf{Pl}(0,11,0,10,1,0)_{3714}$$

$$\ell_{579} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{576578} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{576578} = \mathbf{Pl}(1,1,24,17,16,1)_{585193}$$

$$\ell_{580} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{880738} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{880738} = \mathbf{Pl}(2,18,21,26,8,1)_{320516}$$

$$\ell_{581} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{509026} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{509026} = \mathbf{Pl}(3,28,13,15,19,1)_{673173}$$

$$\ell_{582} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{440898} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{440898} = \mathbf{Pl}(4,9,15,13,4,1)_{183994}$$

$$\ell_{583} = \begin{bmatrix} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{170754} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{170754} = \mathbf{Pl}(5,23,23,5,18,1)_{649739}$$

$$\ell_{584} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{712226} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{712226} = \mathbf{Pl}(6,14,26,21,27,1)_{947154}$$

$$\ell_{585} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{610850} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{610850} = \mathbf{Pl}(7,12,2,18,30,1)_{1023043}$$

$$\ell_{586} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta \end{bmatrix}_{677602} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{677602} = \mathbf{Pl}(8,22,30,20,2,1)_{132476}$$

$$\ell_{587} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{474914} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{474914} = \mathbf{Pl}(9,4,6,14,10,1)_{372045}$$

$$\ell_{588} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{542530} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{542530} = \mathbf{Pl}(10,25,11,16,9,1)_{343960}$$

$$\ell_{589} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{982370} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{982370} = \mathbf{Pl}(11,16,19,29,13,1)_{482345}$$

$$\ell_{590} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{813826} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{813826} = \mathbf{Pl}(12,7,17,24,31,1)_{1069734}$$

$$\ell_{591} = \begin{bmatrix} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{136706} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{136706} = \mathbf{Pl}(13,15,9,4,11,1)_{407575}$$

$$\ell_{592} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{305954} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{305954} = \mathbf{Pl}(14,6,4,9,15,1)_{533870}$$

$$\ell_{593} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{102978} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{102978} = \mathbf{Pl}(15,13,28,3,14,1)_{523455}$$

$$\ell_{594} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{339330} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{339330} = \mathbf{Pl}(16,11,25,10,1,1)_{95098}$$

$$\ell_{595} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{35682} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{35682} = \mathbf{Pl}(17,24,1,1,25,1)_{858443}$$

$$\ell_{596} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{237986} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{237986} = \mathbf{Pl}(18,2,12,7,5,1)_{213954}$$

$$\ell_{597} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{1015874} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{1015874} = \mathbf{Pl}(19,29,20,30,3,1)_{155923}$$

$$\ell_{598} = \begin{bmatrix} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{272354} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{272354} = \mathbf{Pl}(20,30,22,8,22,1)_{779768}$$

$$\ell_{599} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{204898} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{204898} = \mathbf{Pl}(21,26,14,6,28,1)_{968745}$$

$$\ell_{600} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^7 \end{bmatrix}_{948770} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{948770} = \mathbf{Pl}(22,8,3,28,20,1)_{696628}$$

$$\ell_{601} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{1050434} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{1050434} = \mathbf{Pl}(23,5,27,31,26,1)_{915365}$$

$$\ell_{602} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{407874} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{407874} = \mathbf{Pl}(24,17,7,12,29,1)_{994974}$$

$$\ell_{603} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{914850} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{914850} = \mathbf{Pl}(25,10,31,27,17,1)_{624463}$$

$$\ell_{604} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{26} \end{array} \right]_{69442} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 23 \end{array} \right]_{69442} = \mathbf{Pl}(26, 21, 18, 2, 23, 1)_{808790}$$

$$\ell_{605} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{19} \end{array} \right]_{846850} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 6 \end{array} \right]_{846850} = \mathbf{Pl}(27, 31, 10, 25, 6, 1)_{244839}$$

$$\ell_{606} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{22} \end{array} \right]_{745858} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 21 \end{array} \right]_{745858} = \mathbf{Pl}(28, 3, 8, 22, 21, 1)_{734020}$$

$$\ell_{607} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{21} \end{array} \right]_{373890} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 24 \end{array} \right]_{373890} = \mathbf{Pl}(29, 19, 16, 11, 24, 1)_{839669}$$

$$\ell_{608} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{11} \end{array} \right]_{643938} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 7 \end{array} \right]_{643938} = \mathbf{Pl}(30, 20, 29, 19, 7, 1)_{295248}$$

$$\ell_{609} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{20} \end{array} \right]_{779394} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 12 \end{array} \right]_{779394} = \mathbf{Pl}(31, 27, 5, 23, 12, 1)_{436609}$$

$$\ell_{610} = \left[\begin{array}{cccc} 1 & \eta^{13} & \eta^{14} & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{1011548} = \left[\begin{array}{cccc} 1 & 28 & 29 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{1011548} = \mathbf{Pl}(0, 29, 0, 28, 1, 0)_{4866}$$

$$\ell_{611} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{17} \end{array} \right]_{610498} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 19 \end{array} \right]_{610498} = \mathbf{Pl}(1, 1, 2, 18, 19, 1)_{663499}$$

$$\ell_{612} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{16} \end{array} \right]_{306338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 27 \end{array} \right]_{306338} = \mathbf{Pl}(2, 18, 4, 9, 27, 1)_{927248}$$

$$\ell_{613} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{30} \end{array} \right]_{475170} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 18 \end{array} \right]_{475170} = \mathbf{Pl}(3, 28, 6, 14, 18, 1)_{634485}$$

$$\ell_{614} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{15} \end{array} \right]_{746178} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 31 \end{array} \right]_{746178} = \mathbf{Pl}(4, 9, 8, 22, 31, 1)_{1061914}$$

$$\ell_{615} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{12} \end{array} \right]_{847106} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 14 \end{array} \right]_{847106} = \mathbf{Pl}(5, 23, 10, 25, 14, 1)_{507263}$$

$$\ell_{616} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{29} \end{array} \right]_{238114} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 9 \end{array} \right]_{238114} = \mathbf{Pl}(6, 14, 12, 7, 9, 1)_{345444}$$

$$\ell_{617} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{6} \end{array} \right]_{204322} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 10 \end{array} \right]_{204322} = \mathbf{Pl}(7, 12, 14, 6, 10, 1)_{380041}$$

$$\ell_{618} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{14} \end{array} \right]_{374050} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 29 \end{array} \right]_{374050} = \mathbf{Pl}(8, 22, 16, 11, 29, 1)_{1003886}$$

$$\ell_{619} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{19} \end{array} \right]_{68898} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 6 \end{array} \right]_{68898} = \mathbf{Pl}(9, 4, 18, 2, 6, 1)_{252819}$$

$$\ell_{620} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{11} \end{array} \right]_{1016002} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 7 \end{array} \right]_{1016002} = \mathbf{Pl}(10, 25, 20, 30, 7, 1)_{287416}$$

$$\ell_{621} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{21} \end{array} \right]_{272418} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 24 \end{array} \right]_{272418} = \mathbf{Pl}(11, 16, 22, 8, 24, 1)_{845789}$$

$$\ell_{622} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{28} \end{array} \right]_{576770} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 22 \end{array} \right]_{576770} = \mathbf{Pl}(12, 7, 24, 17, 22, 1)_{782178}$$

$$\ell_{623} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{9} \end{array} \right]_{712194} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 26 \end{array} \right]_{712194} = \mathbf{Pl}(13, 15, 26, 21, 26, 1)_{914983}$$

$$\ell_{624} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{5} \end{array} \right]_{102690} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 5 \end{array} \right]_{102690} = \mathbf{Pl}(14, 6, 28, 3, 5, 1)_{229388}$$

$$\ell_{625} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{678338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 25 \end{array}\right]_{678338} = \mathbf{Pl}(15, 13, 30, 20, 25, 1)_{885969}$$

$$\ell_{626} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{779906} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 28 \end{array}\right]_{779906} = \mathbf{Pl}(16, 11, 5, 23, 28, 1)_{960928}$$

$$\ell_{627} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{407586} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 20 \end{array}\right]_{407586} = \mathbf{Pl}(17, 24, 7, 12, 20, 1)_{700901}$$

$$\ell_{628} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{34978} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 3 \end{array}\right]_{34978} = \mathbf{Pl}(18, 2, 1, 1, 3, 1)_{138810}$$

$$\ell_{629} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & 1 \end{array}\right]_{948162} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 1 \end{array}\right]_{948162} = \mathbf{Pl}(19, 29, 3, 28, 1, 1)_{75199}$$

$$\ell_{630} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{508962} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 17 \end{array}\right]_{508962} = \mathbf{Pl}(20, 30, 13, 15, 17, 1)_{608276}$$

$$\ell_{631} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{441506} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 23 \end{array}\right]_{441506} = \mathbf{Pl}(21, 26, 15, 13, 23, 1)_{806553}$$

$$\ell_{632} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{136738} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 12 \end{array}\right]_{136738} = \mathbf{Pl}(22, 8, 9, 4, 12, 1)_{440878}$$

$$\ell_{633} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{542914} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 21 \end{array}\right]_{542914} = \mathbf{Pl}(23, 5, 11, 16, 21, 1)_{737363}$$

$$\ell_{634} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{880834} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 11 \end{array}\right]_{880834} = \mathbf{Pl}(24, 17, 21, 26, 11, 1)_{419304}$$

$$\ell_{635} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{170658} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 15 \end{array}\right]_{170658} = \mathbf{Pl}(25, 10, 23, 5, 15, 1)_{552109}$$

$$\ell_{636} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{813250} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 13 \end{array}\right]_{813250} = \mathbf{Pl}(26, 21, 17, 24, 13, 1)_{481058}$$

$$\ell_{637} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta \end{array}\right]_{982018} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 2 \end{array}\right]_{982018} = \mathbf{Pl}(27, 31, 19, 29, 2, 1)_{122823}$$

$$\ell_{638} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{4} \end{array}\right]_{644226} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 16 \end{array}\right]_{644226} = \mathbf{Pl}(28, 3, 29, 19, 16, 1)_{590428}$$

$$\ell_{639} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{3} \end{array}\right]_{914562} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 8 \end{array}\right]_{914562} = \mathbf{Pl}(29, 19, 31, 27, 8, 1)_{330401}$$

$$\ell_{640} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{340258} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 30 \end{array}\right]_{340258} = \mathbf{Pl}(30, 20, 25, 10, 30, 1)_{1045014}$$

$$\ell_{641} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{1049730} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 4 \end{array}\right]_{1049730} = \mathbf{Pl}(31, 27, 27, 31, 4, 1)_{195739}$$

$$\ell_{642} = \left[\begin{array}{cccc} 1 & \eta^{18} & \eta & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{71875} = \left[\begin{array}{cccc} 1 & 3 & 2 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{71875} = \mathbf{Pl}(0, 2, 0, 3, 1, 0)_{3264}$$

$$\ell_{643} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{644290} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 18 \end{array}\right]_{644290} = \mathbf{Pl}(1, 1, 29, 19, 18, 1)_{655098}$$

$$\ell_{644} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{914594} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 9 \end{array}\right]_{914594} = \mathbf{Pl}(2, 18, 31, 27, 9, 1)_{362335}$$

$$\ell_{645} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{610338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 14 \end{array}\right]_{610338} = \mathbf{Pl}(3, 28, 2, 18, 14, 1)_{499046}$$

$$\ell_{646} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{1050306} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{1050306} = \mathbf{Pl}(4, 9, 27, 31, 22, 1)_{784185}$$

$$\ell_{647} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{475394} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{475394} = \mathbf{Pl}(5, 23, 6, 14, 25, 1)_{862864}$$

$$\ell_{648} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{305698} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{305698} = \mathbf{Pl}(6, 14, 4, 9, 7, 1)_{271757}$$

$$\ell_{649} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{339490} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{339490} = \mathbf{Pl}(7, 12, 25, 10, 6, 1)_{258552}$$

$$\ell_{650} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{982306} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{982306} = \mathbf{Pl}(8, 22, 19, 29, 11, 1)_{416653}$$

$$\ell_{651} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{204066} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{204066} = \mathbf{Pl}(9, 4, 14, 6, 2, 1)_{117380}$$

$$\ell_{652} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{238786} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{238786} = \mathbf{Pl}(10, 25, 12, 7, 30, 1)_{1032129}$$

$$\ell_{653} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{813090} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{813090} = \mathbf{Pl}(11, 16, 17, 24, 8, 1)_{316588}$$

$$\ell_{654} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{745730} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{745730} = \mathbf{Pl}(12, 7, 8, 22, 17, 1)_{602843}$$

$$\ell_{655} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{881154} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{881154} = \mathbf{Pl}(13, 15, 21, 26, 21, 1)_{745878}$$

$$\ell_{656} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{170274} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{170274} = \mathbf{Pl}(14, 6, 23, 5, 3, 1)_{158491}$$

$$\ell_{657} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{7} \end{bmatrix}_{847298} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{847298} = \mathbf{Pl}(15, 13, 10, 25, 20, 1)_{702914}$$

$$\ell_{658} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{948866} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{948866} = \mathbf{Pl}(16, 11, 3, 28, 23, 1)_{794613}$$

$$\ell_{659} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{677922} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{677922} = \mathbf{Pl}(17, 24, 30, 20, 12, 1)_{459628}$$

$$\ell_{660} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{102562} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{102562} = \mathbf{Pl}(18, 2, 28, 3, 1, 1)_{97673}$$

$$\ell_{661} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{35778} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{35778} = \mathbf{Pl}(19, 29, 1, 1, 28, 1)_{956436}$$

$$\ell_{662} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{576546} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{576546} = \mathbf{Pl}(20, 30, 24, 17, 15, 1)_{552259}$$

$$\ell_{663} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{779426} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{779426} = \mathbf{Pl}(21, 26, 5, 23, 13, 1)_{469118}$$

$$\ell_{664} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{407074} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{407074} = \mathbf{Pl}(22, 8, 7, 12, 4, 1)_{176355}$$

$$\ell_{665} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{711874} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{711874} = \mathbf{Pl}(23, 5, 26, 21, 16, 1)_{586858}$$

$$\ell_{666} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{373954} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{373954} = \mathbf{Pl}(24, 17, 16, 11, 26, 1)_{904919}$$

$$\ell_{667} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{5} \end{array}\right]_{508578} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 5 \end{array}\right]_{508578} = \mathbf{Pl}(25,10,13,15,5,1)_{214674}$$

$$\ell_{668} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{441538} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 24 \end{array}\right]_{441538} = \mathbf{Pl}(26,21,15,13,24,1)_{838519}$$

$$\ell_{669} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{69634} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 29 \end{array}\right]_{69634} = \mathbf{Pl}(27,31,18,2,29,1)_{1004990}$$

$$\ell_{670} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{542850} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 19 \end{array}\right]_{542850} = \mathbf{Pl}(28,3,11,16,19,1)_{671121}$$

$$\ell_{671} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{272514} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 27 \end{array}\right]_{272514} = \mathbf{Pl}(29,19,22,8,27,1)_{943240}$$

$$\ell_{672} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{1016098} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 10 \end{array}\right]_{1016098} = \mathbf{Pl}(30,20,20,30,10,1)_{384869}$$

$$\ell_{673} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{137346} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 31 \end{array}\right]_{137346} = \mathbf{Pl}(31,27,9,4,31,1)_{1062096}$$

$$\ell_{674} = \left[\begin{array}{cccc} 1 & \eta^{16} & \eta^{9} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{909019} = \left[\begin{array}{cccc} 1 & 27 & 26 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{909019} = \mathbf{Pl}(0,26,0,27,1,0)_{4800}$$

$$\ell_{675} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{678210} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 21 \end{array}\right]_{678210} = \mathbf{Pl}(1,1,30,20,21,1)_{754980}$$

$$\ell_{676} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{340066} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 24 \end{array}\right]_{340066} = \mathbf{Pl}(2,18,25,10,24,1)_{848539}$$

$$\ell_{677} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{4} \end{array}\right]_{407458} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 16 \end{array}\right]_{407458} = \mathbf{Pl}(3,28,7,12,16,1)_{569912}$$

$$\ell_{678} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{170562} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 12 \end{array}\right]_{170562} = \mathbf{Pl}(4,9,23,5,12,1)_{453849}$$

$$\ell_{679} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{136962} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 19 \end{array}\right]_{136962} = \mathbf{Pl}(5,23,9,4,19,1)_{669982}$$

$$\ell_{680} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{3} \end{array}\right]_{204258} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 8 \end{array}\right]_{204258} = \mathbf{Pl}(6,14,14,6,8,1)_{314537}$$

$$\ell_{681} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{373346} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 7 \end{array}\right]_{373346} = \mathbf{Pl}(7,12,16,11,7,1)_{283662}$$

$$\ell_{682} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{542434} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 6 \end{array}\right]_{542434} = \mathbf{Pl}(8,22,11,16,6,1)_{246277}$$

$$\ell_{683} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{881442} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 30 \end{array}\right]_{881442} = \mathbf{Pl}(9,4,21,26,30,1)_{1041242}$$

$$\ell_{684} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{69570} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 27 \end{array}\right]_{69570} = \mathbf{Pl}(10,25,18,2,27,1)_{940245}$$

$$\ell_{685} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{238562} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 23 \end{array}\right]_{238562} = \mathbf{Pl}(11,16,12,7,23,1)_{803722}$$

$$\ell_{686} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{102658} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 4 \end{array}\right]_{102658} = \mathbf{Pl}(12,7,28,3,4,1)_{196619}$$

$$\ell_{687} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{610818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 29 \end{array}\right]_{610818} = \mathbf{Pl}(13,15,2,18,29,1)_{990840}$$

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$$\ell_{688} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{10} \end{array} \right]_{779554} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 17 \end{array} \right]_{779554} = \mathbf{Pl}(14, 6, 5, 23, 17, 1)_{600799}$$

$$\ell_{689} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{30} \end{array} \right]_{1050178} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 18 \end{array} \right]_{1050178} = \mathbf{Pl}(15, 13, 27, 31, 18, 1)_{653996}$$

$$\ell_{690} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{18} \end{array} \right]_{271746} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 3 \end{array} \right]_{271746} = \mathbf{Pl}(16, 11, 22, 8, 3, 1)_{158307}$$

$$\ell_{691} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{12} \end{array} \right]_{745634} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 14 \end{array} \right]_{745634} = \mathbf{Pl}(17, 24, 8, 22, 14, 1)_{505384}$$

$$\ell_{692} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{23} \end{array} \right]_{441250} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 15 \end{array} \right]_{441250} = \mathbf{Pl}(18, 2, 15, 13, 15, 1)_{544631}$$

$$\ell_{693} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{5} \end{array} \right]_{812994} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 5 \end{array} \right]_{812994} = \mathbf{Pl}(19, 29, 17, 24, 5, 1)_{219132}$$

$$\ell_{694} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{15} \end{array} \right]_{35874} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 31 \end{array} \right]_{35874} = \mathbf{Pl}(20, 30, 1, 1, 31, 1)_{1055389}$$

$$\ell_{695} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & 1 \end{array} \right]_{914338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 1 \end{array} \right]_{914338} = \mathbf{Pl}(21, 26, 31, 27, 1, 1)_{101210}$$

$$\ell_{696} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{25} \end{array} \right]_{576866} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 25 \end{array} \right]_{576866} = \mathbf{Pl}(22, 8, 24, 17, 25, 1)_{880365}$$

$$\ell_{697} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{27} \end{array} \right]_{474946} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 11 \end{array} \right]_{474946} = \mathbf{Pl}(23, 5, 6, 14, 11, 1)_{405322}$$

$$\ell_{698} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta \end{array} \right]_{643778} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 2 \end{array} \right]_{643778} = \mathbf{Pl}(24, 17, 29, 19, 2, 1)_{132089}$$

$$\ell_{699} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{28} \end{array} \right]_{948834} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 22 \end{array} \right]_{948834} = \mathbf{Pl}(25, 10, 3, 28, 22, 1)_{762630}$$

$$\ell_{700} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{13} \end{array} \right]_{306370} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 28 \end{array} \right]_{306370} = \mathbf{Pl}(26, 21, 4, 9, 28, 1)_{959977}$$

$$\ell_{701} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{6} \end{array} \right]_{711682} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 10 \end{array} \right]_{711682} = \mathbf{Pl}(27, 31, 26, 21, 10, 1)_{391190}$$

$$\ell_{702} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{9} \end{array} \right]_{847490} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 26 \end{array} \right]_{847490} = \mathbf{Pl}(28, 3, 10, 25, 26, 1)_{900087}$$

$$\ell_{703} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{8} \end{array} \right]_{1016194} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 13 \end{array} \right]_{1016194} = \mathbf{Pl}(29, 19, 20, 30, 13, 1)_{483820}$$

$$\ell_{704} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{29} \end{array} \right]_{982242} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 9 \end{array} \right]_{982242} = \mathbf{Pl}(30, 20, 19, 29, 9, 1)_{351947}$$

$$\ell_{705} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{7} \end{array} \right]_{509058} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 20 \end{array} \right]_{509058} = \mathbf{Pl}(31, 27, 13, 15, 20, 1)_{706464}$$

$$\ell_{706} = \left[\begin{array}{cccc} 1 & \eta^{15} & \eta^{24} & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{1048543} = \left[\begin{array}{cccc} 1 & 31 & 30 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]_{1048543} = \mathbf{Pl}(0, 30, 0, 31, 1, 0)_{5056}$$

$$\ell_{707} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{7} \end{array} \right]_{712002} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 20 \end{array} \right]_{712002} = \mathbf{Pl}(1, 1, 26, 21, 20, 1)_{718648}$$

$$\ell_{708} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{6} \end{array} \right]_{813154} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 10 \end{array} \right]_{813154} = \mathbf{Pl}(2, 18, 17, 24, 10, 1)_{382919}$$

$$\ell_{709} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{542626} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{542626} = \mathbf{Pl}(3, 28, 11, 16, 12, 1)_{442812}$$

$$\ell_{710} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{407106} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{407106} = \mathbf{Pl}(4, 9, 7, 12, 5, 1)_{209941}$$

$$\ell_{711} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^2 \end{bmatrix}_{643842} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{643842} = \mathbf{Pl}(5, 23, 29, 19, 4, 1)_{197666}$$

$$\ell_{712} = \begin{bmatrix} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{271842} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{271842} = \mathbf{Pl}(6, 14, 22, 8, 6, 1)_{256629}$$

$$\ell_{713} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{238178} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{238178} = \mathbf{Pl}(7, 12, 12, 7, 11, 1)_{411010}$$

$$\ell_{714} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{204514} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{204514} = \mathbf{Pl}(8, 22, 14, 6, 16, 1)_{576551}$$

$$\ell_{715} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^9 \end{bmatrix}_{1016610} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{1016610} = \mathbf{Pl}(9, 4, 20, 30, 26, 1)_{909492}$$

$$\ell_{716} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{914370} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{914370} = \mathbf{Pl}(10, 25, 31, 27, 2, 1)_{134059}$$

$$\ell_{717} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{779234} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{779234} = \mathbf{Pl}(11, 16, 5, 23, 7, 1)_{273560}$$

$$\ell_{718} = \begin{bmatrix} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{136450} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{136450} = \mathbf{Pl}(12, 7, 9, 4, 3, 1)_{146337}$$

$$\ell_{719} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{982530} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{982530} = \mathbf{Pl}(13, 15, 19, 29, 18, 1)_{646678}$$

$$\ell_{720} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{576802} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{576802} = \mathbf{Pl}(14, 6, 24, 17, 23, 1)_{815009}$$

$$\ell_{721} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{610882} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{610882} = \mathbf{Pl}(15, 13, 2, 18, 31, 1)_{1056438}$$

$$\ell_{722} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^3 \end{bmatrix}_{102786} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{102786} = \mathbf{Pl}(16, 11, 28, 3, 8, 1)_{327691}$$

$$\ell_{723} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{475298} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{475298} = \mathbf{Pl}(17, 24, 6, 14, 22, 1)_{765536}$$

$$\ell_{724} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{508834} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{508834} = \mathbf{Pl}(18, 2, 13, 15, 13, 1)_{477423}$$

$$\ell_{725} = \begin{bmatrix} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{170946} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{170946} = \mathbf{Pl}(19, 29, 23, 5, 24, 1)_{846820}$$

$$\ell_{726} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{1049634} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{1049634} = \mathbf{Pl}(20, 30, 27, 31, 1, 1)_{97613}$$

$$\ell_{727} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{35746} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{35746} = \mathbf{Pl}(21, 26, 1, 1, 27, 1)_{924570}$$

$$\ell_{728} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{847202} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{847202} = \mathbf{Pl}(22, 8, 10, 25, 17, 1)_{605581}$$

$$\ell_{729} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{373570} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{373570} = \mathbf{Pl}(23, 5, 16, 11, 14, 1)_{512954}$$

$$\ell_{730} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{69314} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 19 \end{array}\right]_{69314} = \mathbf{Pl}(24, 17, 18, 2, 19, 1)_{678495}$$

$$\ell_{731} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{746082} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 28 \end{array}\right]_{746082} = \mathbf{Pl}(25, 10, 8, 22, 28, 1)_{963820}$$

$$\ell_{732} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{948418} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 9 \end{array}\right]_{948418} = \mathbf{Pl}(26, 21, 3, 28, 9, 1)_{337187}$$

$$\ell_{733} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{339970} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 21 \end{array}\right]_{339970} = \mathbf{Pl}(27, 31, 25, 10, 21, 1)_{750480}$$

$$\ell_{734} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{881282} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 25 \end{array}\right]_{881282} = \mathbf{Pl}(28, 3, 21, 26, 25, 1)_{877705}$$

$$\ell_{735} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{441730} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 30 \end{array}\right]_{441730} = \mathbf{Pl}(29, 19, 15, 13, 30, 1)_{1035806}$$

$$\ell_{736} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{306402} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 29 \end{array}\right]_{306402} = \mathbf{Pl}(30, 20, 4, 9, 29, 1)_{992841}$$

$$\ell_{737} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{678018} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 15 \end{array}\right]_{678018} = \mathbf{Pl}(31, 27, 30, 20, 15, 1)_{558718}$$

$$\ell_{738} = \left[\begin{array}{cccc} 1 & \eta^{2} & \eta^{5} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{174404} = \left[\begin{array}{cccc} 1 & 4 & 5 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{174404} = \mathbf{Pl}(0, 5, 0, 4, 1, 0)_{3330}$$

$$\ell_{739} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{745922} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 23 \end{array}\right]_{745922} = \mathbf{Pl}(1, 1, 8, 22, 23, 1)_{799279}$$

$$\ell_{740} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{373922} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 25 \end{array}\right]_{373922} = \mathbf{Pl}(2, 18, 16, 11, 25, 1)_{872192}$$

$$\ell_{741} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{576482} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 13 \end{array}\right]_{576482} = \mathbf{Pl}(3, 28, 24, 17, 13, 1)_{486801}$$

$$\ell_{742} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{779970} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 30 \end{array}\right]_{779970} = \mathbf{Pl}(4, 9, 5, 23, 30, 1)_{1025644}$$

$$\ell_{743} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{509186} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 24 \end{array}\right]_{509186} = \mathbf{Pl}(5, 23, 13, 15, 24, 1)_{836669}$$

$$\ell_{744} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{881122} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 20 \end{array}\right]_{881122} = \mathbf{Pl}(6, 14, 21, 26, 20, 1)_{713166}$$

$$\ell_{745} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{644706} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 31 \end{array}\right]_{644706} = \mathbf{Pl}(7, 12, 29, 19, 31, 1)_{1080703}$$

$$\ell_{746} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{847138} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 15 \end{array}\right]_{847138} = \mathbf{Pl}(8, 22, 10, 25, 15, 1)_{539258}$$

$$\ell_{747} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{610594} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 22 \end{array}\right]_{610594} = \mathbf{Pl}(9, 4, 2, 18, 22, 1)_{760971}$$

$$\ell_{748} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{711746} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 12 \end{array}\right]_{711746} = \mathbf{Pl}(10, 25, 26, 21, 12, 1)_{455932}$$

$$\ell_{749} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{69282} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 18 \end{array}\right]_{69282} = \mathbf{Pl}(11, 16, 18, 2, 18, 1)_{644909}$$

$$\ell_{750} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{441090} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 10 \end{array}\right]_{441090} = \mathbf{Pl}(12, 7, 15, 13, 10, 1)_{380232}$$

$$\ell_{751} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{407042} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 3 \end{array}\right]_{407042} = \mathbf{Pl}(13,15,7,12,3,1)_{143641}$$

$$\ell_{752} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{915234} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 29 \end{array}\right]_{915234} = \mathbf{Pl}(14,6,31,27,29,1)_{1017098}$$

$$\ell_{753} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{3} \end{array}\right]_{170434} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 8 \end{array}\right]_{170434} = \mathbf{Pl}(15,13,23,5,8,1)_{322203}$$

$$\ell_{754} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{1016450} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 21 \end{array}\right]_{1016450} = \mathbf{Pl}(16,11,20,30,21,1)_{744982}$$

$$\ell_{755} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{103394} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 27 \end{array}\right]_{103394} = \mathbf{Pl}(17,24,28,3,27,1)_{948839}$$

$$\ell_{756} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{305826} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 11 \end{array}\right]_{305826} = \mathbf{Pl}(18,2,4,9,11,1)_{402744}$$

$$\ell_{757} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{9} \end{array}\right]_{238658} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 26 \end{array}\right]_{238658} = \mathbf{Pl}(19,29,12,7,26,1)_{901225}$$

$$\ell_{758} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{813026} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 6 \end{array}\right]_{813026} = \mathbf{Pl}(20,30,17,24,6,1)_{251156}$$

$$\ell_{759} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{4} \end{array}\right]_{339810} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 16 \end{array}\right]_{339810} = \mathbf{Pl}(21,26,25,10,16,1)_{585957}$$

$$\ell_{760} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{35170} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 9 \end{array}\right]_{35170} = \mathbf{Pl}(22,8,1,1,9,1)_{334486}$$

$$\ell_{761} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & 1 \end{array}\right]_{136386} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 1 \end{array}\right]_{136386} = \mathbf{Pl}(23,5,9,4,1,1)_{80039}$$

$$\ell_{762} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{5} \end{array}\right]_{677698} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 5 \end{array}\right]_{677698} = \mathbf{Pl}(24,17,30,20,5,1)_{230514}$$

$$\ell_{763} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta \end{array}\right]_{271714} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 2 \end{array}\right]_{271714} = \mathbf{Pl}(25,10,22,8,2,1)_{124867}$$

$$\ell_{764} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{204610} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 19 \end{array}\right]_{204610} = \mathbf{Pl}(26,21,14,6,19,1)_{673940}$$

$$\ell_{765} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{475138} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 17 \end{array}\right]_{475138} = \mathbf{Pl}(27,31,6,14,17,1)_{601029}$$

$$\ell_{766} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{1050498} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 28 \end{array}\right]_{1050498} = \mathbf{Pl}(28,3,27,31,28,1)_{980656}$$

$$\ell_{767} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{982402} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 14 \end{array}\right]_{982402} = \mathbf{Pl}(29,19,19,29,14,1)_{514913}$$

$$\ell_{768} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{542370} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 4 \end{array}\right]_{542370} = \mathbf{Pl}(30,20,11,16,4,1)_{180114}$$

$$\ell_{769} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{948354} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 7 \end{array}\right]_{948354} = \mathbf{Pl}(31,27,3,28,7,1)_{270883}$$

$$\ell_{770} = \left[\begin{array}{cccc} 1 & \eta^{29} & \eta^{3} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{281161} = \left[\begin{array}{cccc} 1 & 9 & 8 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{281161} = \mathbf{Pl}(0,8,0,9,1,0)_{3648}$$

$$\ell_{771} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{779714} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 22 \end{array}\right]_{779714} = \mathbf{Pl}(1,1,5,23,22,1)_{763908}$$

$$\ell_{772} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{847010} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{847010} = \mathbf{Pl}(2, 18, 10, 25, 11, 1)_{408463}$$

$$\ell_{773} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{441314} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{441314} = \mathbf{Pl}(3, 28, 15, 13, 17, 1)_{609530}$$

$$\ell_{774} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{1016514} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{1016514} = \mathbf{Pl}(4, 9, 20, 30, 23, 1)_{810597}$$

$$\ell_{775} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{813314} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{813314} = \mathbf{Pl}(5, 23, 17, 24, 15, 1)_{545920}$$

$$\ell_{776} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{678370} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{678370} = \mathbf{Pl}(6, 14, 30, 20, 26, 1)_{918107}$$

$$\ell_{777} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{1050210} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{1050210} = \mathbf{Pl}(7, 12, 27, 31, 19, 1)_{686166}$$

$$\ell_{778} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{509218} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{509218} = \mathbf{Pl}(8, 22, 13, 15, 25, 1)_{869563}$$

$$\ell_{779} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{745762} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{745762} = \mathbf{Pl}(9, 4, 8, 22, 18, 1)_{635762}$$

$$\ell_{780} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{407618} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{407618} = \mathbf{Pl}(10, 25, 7, 12, 21, 1)_{733041}$$

$$\ell_{781} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{609954} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{609954} = \mathbf{Pl}(11, 16, 2, 18, 2, 1)_{106408}$$

$$\ell_{782} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{339714} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{339714} = \mathbf{Pl}(12, 7, 25, 10, 13, 1)_{487895}$$

$$\ell_{783} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{102914} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{102914} = \mathbf{Pl}(13, 15, 28, 3, 12, 1)_{457950}$$

$$\ell_{784} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{982818} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{982818} = \mathbf{Pl}(14, 6, 19, 29, 27, 1)_{940621}$$

$$\ell_{785} = \begin{bmatrix} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{5} \end{bmatrix}_{271810} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{271810} = \mathbf{Pl}(15, 13, 22, 8, 5, 1)_{223220}$$

$$\ell_{786} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{712322} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{712322} = \mathbf{Pl}(16, 11, 26, 21, 30, 1)_{1045341}$$

$$\ell_{787} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{914402} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{914402} = \mathbf{Pl}(17, 24, 31, 27, 3, 1)_{166120}$$

$$\ell_{788} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{373410} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{373410} = \mathbf{Pl}(18, 2, 16, 11, 9, 1)_{348587}$$

$$\ell_{789} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{880706} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{880706} = \mathbf{Pl}(19, 29, 21, 26, 7, 1)_{287766}$$

$$\ell_{790} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{204770} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{204770} = \mathbf{Pl}(20, 30, 14, 6, 24, 1)_{837769}$$

$$\ell_{791} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{6} \end{bmatrix}_{542562} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{542562} = \mathbf{Pl}(21, 26, 11, 16, 10, 1)_{376676}$$

$$\ell_{792} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{305506} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{305506} = \mathbf{Pl}(22, 8, 4, 9, 1, 1)_{75543}$$

$$\ell_{793} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^2 \end{array}\right]_{35010} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 4 \end{array}\right]_{35010} = \mathbf{Pl}(23,5,1,1,4,1)_{170962}$$

$$\ell_{794} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^7 \end{array}\right]_{170818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 20 \end{array}\right]_{170818} = \mathbf{Pl}(24,17,23,5,20,1)_{715199}$$

$$\ell_{795} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^3 \end{array}\right]_{68962} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 8 \end{array}\right]_{68962} = \mathbf{Pl}(25,10,18,2,8,1)_{317718}$$

$$\ell_{796} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{643906} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 6 \end{array}\right]_{643906} = \mathbf{Pl}(26,21,29,19,6,1)_{262477}$$

$$\ell_{797} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{576514} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 14 \end{array}\right]_{576514} = \mathbf{Pl}(27,31,24,17,14,1)_{519716}$$

$$\ell_{798} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{949122} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 31 \end{array}\right]_{949122} = \mathbf{Pl}(28,3,3,28,31,1)_{1056699}$$

$$\ell_{799} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{475522} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 29 \end{array}\right]_{475522} = \mathbf{Pl}(29,19,6,14,29,1)_{994018}$$

$$\ell_{800} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^4 \end{array}\right]_{136866} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 16 \end{array}\right]_{136866} = \mathbf{Pl}(30,20,9,4,16,1)_{571241}$$

$$\ell_{801} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{238722} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 28 \end{array}\right]_{238722} = \mathbf{Pl}(31,27,12,7,28,1)_{966864}$$

$$\ell_{802} = \left[\begin{array}{cccc} 1 & \eta^{27} & \eta^6 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{350923} = \left[\begin{array}{cccc} 1 & 11 & 10 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{350923} = \mathbf{Pl}(0,10,0,11,1,0)_{3776}$$

$$\ell_{803} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{813634} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 25 \end{array}\right]_{813634} = \mathbf{Pl}(1,1,17,24,25,1)_{873338}$$

$$\ell_{804} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{407906} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 30 \end{array}\right]_{407906} = \mathbf{Pl}(2,18,7,12,30,1)_{1027719}$$

$$\ell_{805} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^7 \end{array}\right]_{272290} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 20 \end{array}\right]_{272290} = \mathbf{Pl}(3,28,22,8,20,1)_{714310}$$

$$\ell_{806} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{204482} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 15 \end{array}\right]_{204482} = \mathbf{Pl}(4,9,14,6,15,1)_{543191}$$

$$\ell_{807} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{914690} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 12 \end{array}\right]_{914690} = \mathbf{Pl}(5,23,31,27,12,1)_{460794}$$

$$\ell_{808} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^2 \\ 0 & 1 & 1 & \eta^6 \end{array}\right]_{136674} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 10 \end{array}\right]_{136674} = \mathbf{Pl}(6,14,9,4,10,1)_{374863}$$

$$\ell_{809} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{576994} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 29 \end{array}\right]_{576994} = \mathbf{Pl}(7,12,24,17,29,1)_{1010798}$$

$$\ell_{810} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{103202} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 21 \end{array}\right]_{103202} = \mathbf{Pl}(8,22,28,3,21,1)_{752631}$$

$$\ell_{811} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{508770} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 11 \end{array}\right]_{508770} = \mathbf{Pl}(9,4,13,15,11,1)_{411322}$$

$$\ell_{812} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{1049794} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 6 \end{array}\right]_{1049794} = \mathbf{Pl}(10,25,27,31,6,1)_{260663}$$

$$\ell_{813} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{846946} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 9 \end{array}\right]_{846946} = \mathbf{Pl}(11,16,10,25,9,1)_{343062}$$

$$\ell_{814} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^5 \end{array}\right]_{68866} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 5 \end{array}\right]_{68866} = \mathbf{Pl}(12,7,18,2,5,1)_{219559}$$

$$\ell_{815} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{948738} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 19 \end{array}\right]_{948738} = \mathbf{Pl}(13,15,3,28,19,1)_{663914}$$

$$\ell_{816} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{881378} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 28 \end{array}\right]_{881378} = \mathbf{Pl}(14,6,21,26,28,1)_{975279}$$

$$\ell_{817} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^2 \end{array}\right]_{305602} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 4 \end{array}\right]_{305602} = \mathbf{Pl}(15,13,4,9,4,1)_{173806}$$

$$\ell_{818} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{644482} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 24 \end{array}\right]_{644482} = \mathbf{Pl}(16,11,29,19,24,1)_{851777}$$

$$\ell_{819} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{238818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 31 \end{array}\right]_{238818} = \mathbf{Pl}(17,24,12,7,31,1)_{1065120}$$

$$\ell_{820} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{712098} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 23 \end{array}\right]_{712098} = \mathbf{Pl}(18,2,26,21,23,1)_{816253}$$

$$\ell_{821} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^8 \end{array}\right]_{542658} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 13 \end{array}\right]_{542658} = \mathbf{Pl}(19,29,11,16,13,1)_{474944}$$

$$\ell_{822} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{982050} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 3 \end{array}\right]_{982050} = \mathbf{Pl}(20,30,19,29,3,1)_{155025}$$

$$\ell_{823} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^3 \end{array}\right]_{610146} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 8 \end{array}\right]_{610146} = \mathbf{Pl}(21,26,2,18,8,1)_{302896}$$

$$\ell_{824} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{1016482} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 22 \end{array}\right]_{1016482} = \mathbf{Pl}(22,8,20,30,22,1)_{777941}$$

$$\ell_{825} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{779586} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 18 \end{array}\right]_{779586} = \mathbf{Pl}(23,5,5,23,18,1)_{633048}$$

$$\ell_{826} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^4 \end{array}\right]_{35394} = \left[\begin{array}{cccc} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 16 \end{array}\right]_{35394} = \mathbf{Pl}(24,17,1,1,16,1)_{563857}$$

$$\ell_{827} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & 1 \end{array}\right]_{373154} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 1 \end{array}\right]_{373154} = \mathbf{Pl}(25,10,16,11,1,1)_{86768}$$

$$\ell_{828} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{475458} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 27 \end{array}\right]_{475458} = \mathbf{Pl}(26,21,6,14,27,1)_{928605}$$

$$\ell_{829} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^9 \end{array}\right]_{171010} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 26 \end{array}\right]_{171010} = \mathbf{Pl}(27,31,23,5,26,1)_{911680}$$

$$\ell_{830} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{441218} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 14 \end{array}\right]_{441218} = \mathbf{Pl}(28,3,15,13,14,1)_{511409}$$

$$\ell_{831} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{677762} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 7 \end{array}\right]_{677762} = \mathbf{Pl}(29,19,30,20,7,1)_{296208}$$

$$\ell_{832} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta \end{array}\right]_{745250} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 2 \end{array}\right]_{745250} = \mathbf{Pl}(30,20,8,22,2,1)_{112069}$$

$$\ell_{833} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{339842} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 17 \end{array}\right]_{339842} = \mathbf{Pl}(31,27,25,10,17,1)_{618920}$$

$$\ell_{834} = \left[\begin{array}{cccc} 1 & \eta^4 & \eta^{10} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{592976} = \left[\begin{array}{cccc} 1 & 16 & 17 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{592976} = \mathbf{Pl}(0,17,0,16,1,0)_{4098}$$

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$$\ell_{835} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{847426} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 24 \end{array}\right]_{847426} = \mathbf{Pl}(1,1,10,25,24,1)_{834247}$$

$$\ell_{836} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{1016162} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 12 \end{array}\right]_{1016162} = \mathbf{Pl}(2,18,20,30,12,1)_{450716}$$

$$\ell_{837} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{3} \end{array}\right]_{677794} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 8 \end{array}\right]_{677794} = \mathbf{Pl}(3,28,30,20,8,1)_{329073}$$

$$\ell_{838} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{508610} = \left[\begin{array}{cccc} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 6 \end{array}\right]_{508610} = \mathbf{Pl}(4,9,13,15,6,1)_{247792}$$

$$\ell_{839} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{407810} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 27 \end{array}\right]_{407810} = \mathbf{Pl}(5,23,7,12,27,1)_{929669}$$

$$\ell_{840} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{339426} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 4 \end{array}\right]_{339426} = \mathbf{Pl}(6,14,25,10,4,1)_{193482}$$

$$\ell_{841} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{982498} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 17 \end{array}\right]_{982498} = \mathbf{Pl}(7,12,19,29,17,1)_{613471}$$

$$\ell_{842} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{711458} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 3 \end{array}\right]_{711458} = \mathbf{Pl}(8,22,26,21,3,1)_{161678}$$

$$\ell_{843} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{373602} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 15 \end{array}\right]_{373602} = \mathbf{Pl}(9,4,16,11,15,1)_{545211}$$

$$\ell_{844} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{204994} = \left[\begin{array}{cccc} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 31 \end{array}\right]_{204994} = \mathbf{Pl}(10,25,14,6,31,1)_{1067128}$$

$$\ell_{845} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{306274} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 25 \end{array}\right]_{306274} = \mathbf{Pl}(11,16,4,9,25,1)_{861413}$$

$$\ell_{846} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta \end{array}\right]_{170242} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 2 \end{array}\right]_{170242} = \mathbf{Pl}(12,7,23,5,2,1)_{126156}$$

$$\ell_{847} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{644610} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 28 \end{array}\right]_{644610} = \mathbf{Pl}(13,15,29,19,28,1)_{982873}$$

$$\ell_{848} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{9} \end{array}\right]_{948962} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 26 \end{array}\right]_{948962} = \mathbf{Pl}(14,6,3,28,26,1)_{893222}$$

$$\ell_{849} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{136642} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 9 \end{array}\right]_{136642} = \mathbf{Pl}(15,13,9,4,9,1)_{342291}$$

$$\ell_{850} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{813442} = \left[\begin{array}{cccc} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 19 \end{array}\right]_{813442} = \mathbf{Pl}(16,11,17,24,19,1)_{677092}$$

$$\ell_{851} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{1049826} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 7 \end{array}\right]_{1049826} = \mathbf{Pl}(17,24,27,31,7,1)_{293561}$$

$$\ell_{852} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{779682} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 21 \end{array}\right]_{779682} = \mathbf{Pl}(18,2,5,23,21,1)_{731406}$$

$$\ell_{853} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{4} \end{array}\right]_{441282} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 16 \end{array}\right]_{441282} = \mathbf{Pl}(19,29,15,13,16,1)_{577027}$$

$$\ell_{854} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{103458} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 29 \end{array}\right]_{103458} = \mathbf{Pl}(20,30,28,3,29,1)_{1014686}$$

$$\ell_{855} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{272226} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 18 \end{array}\right]_{272226} = \mathbf{Pl}(21,26,22,8,18,1)_{649011}$$

$$\ell_{856} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{746146} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{746146} = \mathbf{Pl}(22,8,8,22,30,1)_{1028824}$$

$$\ell_{857} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{610626} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{610626} = \mathbf{Pl}(23,5,2,18,23,1)_{794093}$$

$$\ell_{858} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{542274} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{542274} = \mathbf{Pl}(24,17,11,16,1,1)_{82272}$$

$$\ell_{859} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{35234} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{35234} = \mathbf{Pl}(25,10,1,1,11,1)_{400333}$$

$$\ell_{860} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{914754} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{914754} = \mathbf{Pl}(26,21,31,27,14,1)_{526442}$$

$$\ell_{861} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{5} \end{bmatrix}_{880642} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{880642} = \mathbf{Pl}(27,31,21,26,5,1)_{222519}$$

$$\ell_{862} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{475010} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{475010} = \mathbf{Pl}(28,3,6,14,13,1)_{470458}$$

$$\ell_{863} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{7} \end{bmatrix}_{238466} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{238466} = \mathbf{Pl}(29,19,12,7,20,1)_{705191}$$

$$\ell_{864} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{69410} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{69410} = \mathbf{Pl}(30,20,18,2,22,1)_{776244}$$

$$\ell_{865} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{6} \end{bmatrix}_{576386} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{576386} = \mathbf{Pl}(31,27,24,17,10,1)_{388993}$$

$$\ell_{866} = \begin{bmatrix} 1 & \eta^{24} & \eta^{15} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1081310} = \begin{bmatrix} 1 & 30 & 31 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{1081310} = \mathbf{Pl}(0,31,0,30,1,0)_{4994}$$

$$\ell_{867} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{881346} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{881346} = \mathbf{Pl}(1,1,21,26,27,1)_{943119}$$

$$\ell_{868} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{441762} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{441762} = \mathbf{Pl}(2,18,15,13,31,1)_{1068484}$$

$$\ell_{869} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{711650} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{711650} = \mathbf{Pl}(3,28,26,21,9,1)_{358523}$$

$$\ell_{870} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{678466} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{678466} = \mathbf{Pl}(4,9,30,20,29,1)_{1016964}$$

$$\ell_{871} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{542466} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{542466} = \mathbf{Pl}(5,23,11,16,7,1)_{279103}$$

$$\ell_{872} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{813538} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{813538} = \mathbf{Pl}(6,14,17,24,22,1)_{775724}$$

$$\ell_{873} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{5} \end{bmatrix}_{305634} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{305634} = \mathbf{Pl}(7,12,4,9,5,1)_{207123}$$

$$\ell_{874} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{340194} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{340194} = \mathbf{Pl}(8,22,25,10,28,1)_{979582}$$

$$\ell_{875} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{237922} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{237922} = \mathbf{Pl}(9,4,12,7,3,1)_{149093}$$

$$\ell_{876} = \begin{bmatrix} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{272194} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{272194} = \mathbf{Pl}(10,25,22,8,17,1)_{616698}$$

$$\ell_{877} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{948514} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{948514} = \mathbf{Pl}(11, 16, 3, 28, 12, 1)_{435349}$$

$$\ell_{878} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{407298} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{407298} = \mathbf{Pl}(12, 7, 7, 12, 11, 1)_{406334}$$

$$\ell_{879} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{69122} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{69122} = \mathbf{Pl}(13, 15, 18, 2, 13, 1)_{482037}$$

$$\ell_{880} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{745698} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{745698} = \mathbf{Pl}(14, 6, 8, 22, 16, 1)_{570946}$$

$$\ell_{881} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{644674} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{644674} = \mathbf{Pl}(15, 13, 29, 19, 30, 1)_{1048781}$$

$$\ell_{882} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{170626} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{170626} = \mathbf{Pl}(16, 11, 23, 5, 14, 1)_{519426}$$

$$\ell_{883} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{6} \end{bmatrix}_{610210} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{610210} = \mathbf{Pl}(17, 24, 2, 18, 10, 1)_{368953}$$

$$\ell_{884} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{576674} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{576674} = \mathbf{Pl}(18, 2, 24, 17, 19, 1)_{684038}$$

$$\ell_{885} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{508994} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{508994} = \mathbf{Pl}(19, 29, 13, 15, 18, 1)_{641073}$$

$$\ell_{886} = \begin{bmatrix} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{137186} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{137186} = \mathbf{Pl}(20, 30, 9, 4, 26, 1)_{899242}$$

$$\ell_{887} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{103330} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{103330} = \mathbf{Pl}(21, 26, 28, 3, 25, 1)_{884177}$$

$$\ell_{888} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{474786} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{474786} = \mathbf{Pl}(22, 8, 6, 14, 6, 1)_{241734}$$

$$\ell_{889} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{982722} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{982722} = \mathbf{Pl}(23, 5, 19, 29, 24, 1)_{843073}$$

$$\ell_{890} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{204738} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{204738} = \mathbf{Pl}(24, 17, 14, 6, 23, 1)_{805688}$$

$$\ell_{891} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{1050274} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{1050274} = \mathbf{Pl}(25, 10, 27, 31, 21, 1)_{752307}$$

$$\ell_{892} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{7} \end{bmatrix}_{35522} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{35522} = \mathbf{Pl}(26, 21, 1, 1, 20, 1)_{695392}$$

$$\ell_{893} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{1015810} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{1015810} = \mathbf{Pl}(27, 31, 20, 30, 1, 1)_{91079}$$

$$\ell_{894} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{373378} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{373378} = \mathbf{Pl}(28, 3, 16, 11, 8, 1)_{316512}$$

$$\ell_{895} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{779138} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{779138} = \mathbf{Pl}(29, 19, 5, 23, 4, 1)_{175339}$$

$$\ell_{896} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{914786} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{914786} = \mathbf{Pl}(30, 20, 31, 27, 15, 1)_{559616}$$

$$\ell_{897} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{846722} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{846722} = \mathbf{Pl}(31, 27, 10, 25, 2, 1)_{114519}$$

$$\ell_{898} = \left[\begin{array}{cccc} 1 & \eta^7 & \eta^{22} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{732500} = \left[\begin{array}{cccc} 1 & 20 & 21 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{732500} = \mathbf{Pl}(0,21,0,20,1,0)_{4354}$$

$$\ell_{899} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^9 \end{array}\right]_{915138} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 26 \end{array}\right]_{915138} = \mathbf{Pl}(1,1,31,27,26,1)_{919373}$$

$$\ell_{900} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^8 \end{array}\right]_{1050018} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 13 \end{array}\right]_{1050018} = \mathbf{Pl}(2,18,27,31,13,1)_{490086}$$

$$\ell_{901} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{22} \end{array}\right]_{306146} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 21 \end{array}\right]_{306146} = \mathbf{Pl}(3,28,4,9,21,1)_{730585}$$

$$\ell_{902} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^7 \end{array}\right]_{982594} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 20 \end{array}\right]_{982594} = \mathbf{Pl}(4,9,19,29,20,1)_{711800}$$

$$\ell_{903} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^4 \end{array}\right]_{238338} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 16 \end{array}\right]_{238338} = \mathbf{Pl}(5,23,12,7,16,1)_{574347}$$

$$\ell_{904} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{745954} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 24 \end{array}\right]_{745954} = \mathbf{Pl}(6,14,8,22,24,1)_{832516}$$

$$\ell_{905} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{170466} = \left[\begin{array}{cccc} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 9 \end{array}\right]_{170466} = \mathbf{Pl}(7,12,23,5,9,1)_{355427}$$

$$\ell_{906} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^6 \end{array}\right]_{948450} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 10 \end{array}\right]_{948450} = \mathbf{Pl}(8,22,3,28,10,1)_{369564}$$

$$\ell_{907} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{102754} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 7 \end{array}\right]_{102754} = \mathbf{Pl}(9,4,28,3,7,1)_{294607}$$

$$\ell_{908} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^3 \end{array}\right]_{576322} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 8 \end{array}\right]_{576322} = \mathbf{Pl}(10,25,24,17,8,1)_{323624}$$

$$\ell_{909} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{407842} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 28 \end{array}\right]_{407842} = \mathbf{Pl}(11,16,7,12,28,1)_{962535}$$

$$\ell_{910} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{373506} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 12 \end{array}\right]_{373506} = \mathbf{Pl}(12,7,16,11,12,1)_{447130}$$

$$\ell_{911} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^8 \\ 0 & 1 & 1 & \eta \end{array}\right]_{440834} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 2 \end{array}\right]_{440834} = \mathbf{Pl}(13,15,15,13,2,1)_{118841}$$

$$\ell_{912} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^{28} \end{array}\right]_{542946} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 22 \end{array}\right]_{542946} = \mathbf{Pl}(14,6,11,16,22,1)_{769842}$$

$$\ell_{913} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{1016386} = \left[\begin{array}{cccc} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 19 \end{array}\right]_{1016386} = \mathbf{Pl}(15,13,20,30,19,1)_{680005}$$

$$\ell_{914} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^5 \end{array}\right]_{474754} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 5 \end{array}\right]_{474754} = \mathbf{Pl}(16,11,6,14,5,1)_{208682}$$

$$\ell_{915} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{339874} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 18 \end{array}\right]_{339874} = \mathbf{Pl}(17,24,25,10,18,1)_{651921}$$

$$\ell_{916} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{644258} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 17 \end{array}\right]_{644258} = \mathbf{Pl}(18,2,29,19,17,1)_{622906}$$

$$\ell_{917} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{610370} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 15 \end{array}\right]_{610370} = \mathbf{Pl}(19,29,2,18,15,1)_{532325}$$

$$\ell_{918} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^2 \end{array}\right]_{880610} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 4 \end{array}\right]_{880610} = \mathbf{Pl}(20,30,21,26,4,1)_{189900}$$

$$\ell_{919} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{846754} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{846754} = \mathbf{Pl}(21, 26, 10, 25, 3, 1)_{146935}$$

$$\ell_{920} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{204450} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{204450} = \mathbf{Pl}(22, 8, 14, 6, 14, 1)_{510752}$$

$$\ell_{921} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{813762} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{813762} = \mathbf{Pl}(23, 5, 17, 24, 29, 1)_{1004583}$$

$$\ell_{922} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{779202} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{779202} = \mathbf{Pl}(24, 17, 5, 23, 6, 1)_{240496}$$

$$\ell_{923} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{712354} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{712354} = \mathbf{Pl}(25, 10, 26, 21, 31, 1)_{1078427}$$

$$\ell_{924} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{677570} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{677570} = \mathbf{Pl}(26, 21, 30, 20, 1, 1)_{100068}$$

$$\ell_{925} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{35842} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{35842} = \mathbf{Pl}(27, 31, 1, 1, 30, 1)_{1022443}$$

$$\ell_{926} = \begin{bmatrix} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{272002} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{272002} = \mathbf{Pl}(28, 3, 22, 8, 11, 1)_{419990}$$

$$\ell_{927} = \begin{bmatrix} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{137090} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{137090} = \mathbf{Pl}(29, 19, 9, 4, 23, 1)_{800733}$$

$$\ell_{928} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{509282} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{509282} = \mathbf{Pl}(30, 20, 13, 15, 27, 1)_{935398}$$

$$\ell_{929} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{69506} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{69506} = \mathbf{Pl}(31, 27, 18, 2, 25, 1)_{874577}$$

$$\ell_{930} = \begin{bmatrix} 1 & \eta^{30} & \eta^{17} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{662738} = \begin{bmatrix} 1 & 18 & 19 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{662738} = \mathbf{Pl}(0, 19, 0, 18, 1, 0)_{4226}$$

$$\ell_{931} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{949058} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{949058} = \mathbf{Pl}(1, 1, 3, 28, 29, 1)_{991479}$$

$$\ell_{932} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{475490} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{475490} = \mathbf{Pl}(2, 18, 6, 14, 28, 1)_{961534}$$

$$\ell_{933} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{779362} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{779362} = \mathbf{Pl}(3, 28, 5, 23, 11, 1)_{404093}$$

$$\ell_{934} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{238274} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{238274} = \mathbf{Pl}(4, 9, 12, 7, 14, 1)_{508812}$$

$$\ell_{935} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{441602} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{441602} = \mathbf{Pl}(5, 23, 15, 13, 26, 1)_{904435}$$

$$\ell_{936} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{847394} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{847394} = \mathbf{Pl}(6, 14, 10, 25, 23, 1)_{801578}$$

$$\ell_{937} = \begin{bmatrix} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{136610} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{136610} = \mathbf{Pl}(7, 12, 9, 4, 8, 1)_{309609}$$

$$\ell_{938} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{576290} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{576290} = \mathbf{Pl}(8, 22, 24, 17, 7, 1)_{290824}$$

$$\ell_{939} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{1050466} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{1050466} = \mathbf{Pl}(9, 4, 27, 31, 27, 1)_{948335}$$

$$\ell_{940} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^8 \end{bmatrix}_{677954} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{677954} = \mathbf{Pl}(10, 25, 30, 20, 13, 1)_{492822}$$

$$\ell_{941} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{643810} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{643810} = \mathbf{Pl}(11, 16, 29, 19, 3, 1)_{164533}$$

$$\ell_{942} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{1016578} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{1016578} = \mathbf{Pl}(12, 7, 20, 30, 25, 1)_{876356}$$

$$\ell_{943} = \begin{bmatrix} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{170498} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{170498} = \mathbf{Pl}(13, 15, 23, 5, 10, 1)_{388107}$$

$$\ell_{944} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^2 \end{bmatrix}_{68834} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{68834} = \mathbf{Pl}(14, 6, 18, 2, 4, 1)_{187042}$$

$$\ell_{945} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{813506} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{813506} = \mathbf{Pl}(15, 13, 17, 24, 21, 1)_{742625}$$

$$\ell_{946} = \begin{bmatrix} 1 & 0 & 1 & \eta^9 \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{881026} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{881026} = \mathbf{Pl}(16, 11, 21, 26, 17, 1)_{615402}$$

$$\ell_{947} = \begin{bmatrix} 1 & 0 & 1 & \eta^3 \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{272162} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{272162} = \mathbf{Pl}(17, 24, 22, 8, 16, 1)_{583597}$$

$$\ell_{948} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{982946} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{982946} = \mathbf{Pl}(18, 2, 19, 29, 31, 1)_{1071848}$$

$$\ell_{949} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{373826} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{373826} = \mathbf{Pl}(19, 29, 16, 11, 22, 1)_{774435}$$

$$\ell_{950} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^7 \end{bmatrix}_{339938} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{339938} = \mathbf{Pl}(20, 30, 25, 10, 20, 1)_{717334}$$

$$\ell_{951} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{711842} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{711842} = \mathbf{Pl}(21, 26, 26, 21, 15, 1)_{554585}$$

$$\ell_{952} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{914914} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{914914} = \mathbf{Pl}(22, 8, 31, 27, 19, 1)_{690180}$$

$$\ell_{953} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{102722} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{102722} = \mathbf{Pl}(23, 5, 28, 3, 6, 1)_{261823}$$

$$\ell_{954} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{509378} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{509378} = \mathbf{Pl}(24, 17, 13, 15, 30, 1)_{1033538}$$

$$\ell_{955} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{204386} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{204386} = \mathbf{Pl}(25, 10, 14, 6, 12, 1)_{445221}$$

$$\ell_{956} = \begin{bmatrix} 1 & 0 & 1 & \eta^4 \\ 0 & 1 & 1 & \eta^5 \end{bmatrix}_{542402} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{542402} = \mathbf{Pl}(26, 21, 11, 16, 5, 1)_{213280}$$

$$\ell_{957} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{745474} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{745474} = \mathbf{Pl}(27, 31, 8, 22, 9, 1)_{341435}$$

$$\ell_{958} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta \end{bmatrix}_{34946} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{34946} = \mathbf{Pl}(28, 3, 1, 1, 2, 1)_{105774}$$

$$\ell_{959} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{609922} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{609922} = \mathbf{Pl}(29, 19, 2, 18, 1, 1)_{73969}$$

$$\ell_{960} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{407714} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{407714} = \mathbf{Pl}(30, 20, 7, 12, 24, 1)_{831548}$$

$$\ell_{961} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{306050} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 18 \end{array}\right]_{306050} = \mathbf{Pl}(31, 27, 4, 9, 18, 1)_{632343}$$

$$\ell_{962} = \left[\begin{array}{cccc} 1 & \eta & \eta^{18} & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{104642} = \left[\begin{array}{cccc} 1 & 2 & 3 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right]_{104642} = \mathbf{Pl}(0, 3, 0, 2, 1, 0)_{3202}$$

$$\ell_{963} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{13} \end{array}\right]_{982850} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 28 \end{array}\right]_{982850} = \mathbf{Pl}(1, 1, 19, 29, 28, 1)_{973127}$$

$$\ell_{964} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{12} \end{array}\right]_{948578} = \left[\begin{array}{cccc} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 14 \end{array}\right]_{948578} = \mathbf{Pl}(2, 18, 3, 28, 14, 1)_{499944}$$

$$\ell_{965} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{373858} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 23 \end{array}\right]_{373858} = \mathbf{Pl}(3, 28, 16, 11, 23, 1)_{806659}$$

$$\ell_{966} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{474818} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 7 \end{array}\right]_{474818} = \mathbf{Pl}(4, 9, 6, 14, 7, 1)_{273584}$$

$$\ell_{967} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{880898} = \left[\begin{array}{cccc} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 13 \end{array}\right]_{880898} = \mathbf{Pl}(5, 23, 21, 26, 13, 1)_{483951}$$

$$\ell_{968} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{779810} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 25 \end{array}\right]_{779810} = \mathbf{Pl}(6, 14, 5, 23, 25, 1)_{861904}$$

$$\ell_{969} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{271778} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 4 \end{array}\right]_{271778} = \mathbf{Pl}(7, 12, 22, 8, 4, 1)_{190259}$$

$$\ell_{970} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{10} \end{array}\right]_{238370} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 17 \end{array}\right]_{238370} = \mathbf{Pl}(8, 22, 12, 7, 17, 1)_{606528}$$

$$\ell_{971} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{15} \end{array}\right]_{915298} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 31 \end{array}\right]_{915298} = \mathbf{Pl}(9, 4, 31, 27, 31, 1)_{1082503}$$

$$\ell_{972} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{441410} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 20 \end{array}\right]_{441410} = \mathbf{Pl}(10, 25, 15, 13, 20, 1)_{707528}$$

$$\ell_{973} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{103138} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 19 \end{array}\right]_{103138} = \mathbf{Pl}(11, 16, 28, 3, 19, 1)_{686883}$$

$$\ell_{974} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{847618} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 30 \end{array}\right]_{847618} = \mathbf{Pl}(12, 7, 10, 25, 30, 1)_{1030240}$$

$$\ell_{975} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{5} \end{array}\right]_{339458} = \left[\begin{array}{cccc} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 5 \end{array}\right]_{339458} = \mathbf{Pl}(13, 15, 25, 10, 5, 1)_{225791}$$

$$\ell_{976} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta \end{array}\right]_{136418} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 2 \end{array}\right]_{136418} = \mathbf{Pl}(14, 6, 9, 4, 2, 1)_{112704}$$

$$\ell_{977} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{712130} = \left[\begin{array}{cccc} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 24 \end{array}\right]_{712130} = \mathbf{Pl}(15, 13, 26, 21, 24, 1)_{848707}$$

$$\ell_{978} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{9} \end{array}\right]_{576898} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 26 \end{array}\right]_{576898} = \mathbf{Pl}(16, 11, 24, 17, 26, 1)_{912320}$$

$$\ell_{979} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{3} \end{array}\right]_{542498} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 8 \end{array}\right]_{542498} = \mathbf{Pl}(17, 24, 11, 16, 8, 1)_{310983}$$

$$\ell_{980} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{14} \end{array}\right]_{1050530} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 29 \end{array}\right]_{1050530} = \mathbf{Pl}(18, 2, 27, 31, 29, 1)_{1013320}$$

$$\ell_{981} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{27} \end{array}\right]_{745538} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 11 \end{array}\right]_{745538} = \mathbf{Pl}(19, 29, 8, 22, 11, 1)_{406403}$$

$$\ell_{982} = \begin{bmatrix} 1 & 0 & 1 & \eta^7 \\ 0 & 1 & 1 & \eta^6 \end{bmatrix}_{677858} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{677858} = \mathbf{Pl}(20,30,30,20,10,1)_{394128}$$

$$\ell_{983} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{509090} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{509090} = \mathbf{Pl}(21,26,13,15,21,1)_{738415}$$

$$\ell_{984} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{644578} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{644578} = \mathbf{Pl}(22,8,29,19,27,1)_{949712}$$

$$\ell_{985} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{204098} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{204098} = \mathbf{Pl}(23,5,14,6,3,1)_{150099}$$

$$\ell_{986} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{1016258} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{1016258} = \mathbf{Pl}(24,17,20,30,15,1)_{548512}$$

$$\ell_{987} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{407138} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{407138} = \mathbf{Pl}(25,10,7,12,6,1)_{241799}$$

$$\ell_{988} = \begin{bmatrix} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{170690} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{170690} = \mathbf{Pl}(26,21,23,5,16,1)_{584040}$$

$$\ell_{989} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{306178} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{306178} = \mathbf{Pl}(27,31,4,9,22,1)_{762787}$$

$$\ell_{990} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & 1 \end{bmatrix}_{68738} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{68738} = \mathbf{Pl}(28,3,18,2,1,1)_{88352}$$

$$\ell_{991} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{35458} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{35458} = \mathbf{Pl}(29,19,1,1,18,1)_{629055}$$

$$\ell_{992} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{813218} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{813218} = \mathbf{Pl}(30,20,17,24,12,1)_{447520}$$

$$\ell_{993} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{610178} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{610178} = \mathbf{Pl}(31,27,2,18,9,1)_{335363}$$

$$\ell_{994} = \begin{bmatrix} 1 & \eta^9 & \eta^{16} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{941786} = \begin{bmatrix} 1 & 26 & 27 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{941786} = \mathbf{Pl}(0,27,0,26,1,0)_{4738}$$

$$\ell_{995} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{1016770} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{1016770} = \mathbf{Pl}(1,1,20,30,31,1)_{1073009}$$

$$\ell_{996} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{509346} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{509346} = \mathbf{Pl}(2,18,13,15,29,1)_{1001028}$$

$$\ell_{997} = \begin{bmatrix} 1 & 0 & 1 & \eta^6 \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{340002} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{340002} = \mathbf{Pl}(3,28,25,10,22,1)_{783037}$$

$$\ell_{998} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{712258} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{712258} = \mathbf{Pl}(4,9,26,21,28,1)_{980384}$$

$$\ell_{999} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{204546} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{204546} = \mathbf{Pl}(5,23,14,6,17,1)_{609129}$$

$$\ell_{1000} = \begin{bmatrix} 1 & 0 & 1 & \eta^5 \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{170530} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{170530} = \mathbf{Pl}(6,14,23,5,11,1)_{421084}$$

$$\ell_{1001} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^4 \end{bmatrix}_{948642} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{948642} = \mathbf{Pl}(7,12,3,28,16,1)_{566165}$$

$$\ell_{1002} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{813282} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{813282} = \mathbf{Pl}(8,22,17,24,14,1)_{513714}$$

$$\ell_{1003} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{17} \end{array}\right]_{779618} = \left[\begin{array}{cccc} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 19 \end{array}\right]_{779618} = \mathbf{Pl}(9,4,5,23,19,1)_{666235}$$

$$\ell_{1004} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{9} \end{array}\right]_{103362} = \left[\begin{array}{cccc} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 26 \end{array}\right]_{103362} = \mathbf{Pl}(10,25,28,3,26,1)_{916778}$$

$$\ell_{1005} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{19} \end{array}\right]_{745378} = \left[\begin{array}{cccc} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 6 \end{array}\right]_{745378} = \mathbf{Pl}(11,16,8,22,6,1)_{243459}$$

$$\ell_{1006} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{26} \end{array}\right]_{542978} = \left[\begin{array}{cccc} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 23 \end{array}\right]_{542978} = \mathbf{Pl}(12,7,11,16,23,1)_{802762}$$

$$\ell_{1007} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{7} \end{array}\right]_{914946} = \left[\begin{array}{cccc} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 20 \end{array}\right]_{914946} = \mathbf{Pl}(13,15,31,27,20,1)_{723155}$$

$$\ell_{1008} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{3} \end{array}\right]_{474850} = \left[\begin{array}{cccc} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 8 \end{array}\right]_{474850} = \mathbf{Pl}(14,6,6,14,8,1)_{307074}$$

$$\ell_{1009} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{23} \end{array}\right]_{69186} = \left[\begin{array}{cccc} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 15 \end{array}\right]_{69186} = \mathbf{Pl}(15,13,18,2,15,1)_{547387}$$

$$\ell_{1010} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{11} \end{array}\right]_{407170} = \left[\begin{array}{cccc} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 7 \end{array}\right]_{407170} = \mathbf{Pl}(16,11,7,12,7,1)_{275270}$$

$$\ell_{1011} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{5} \end{array}\right]_{982114} = \left[\begin{array}{cccc} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 5 \end{array}\right]_{982114} = \mathbf{Pl}(17,24,19,29,5,1)_{220959}$$

$$\ell_{1012} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{16} \end{array}\right]_{847522} = \left[\begin{array}{cccc} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 27 \end{array}\right]_{847522} = \mathbf{Pl}(18,2,10,25,27,1)_{932782}$$

$$\ell_{1013} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{29} \end{array}\right]_{677826} = \left[\begin{array}{cccc} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 9 \end{array}\right]_{677826} = \mathbf{Pl}(19,29,30,20,9,1)_{362135}$$

$$\ell_{1014} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{8} \end{array}\right]_{644130} = \left[\begin{array}{cccc} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 13 \end{array}\right]_{644130} = \mathbf{Pl}(20,30,29,19,13,1)_{492150}$$

$$\ell_{1015} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{24} \end{array}\right]_{137314} = \left[\begin{array}{cccc} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 30 \end{array}\right]_{137314} = \mathbf{Pl}(21,26,9,4,30,1)_{1030063}$$

$$\ell_{1016} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{18} \end{array}\right]_{373218} = \left[\begin{array}{cccc} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 3 \end{array}\right]_{373218} = \mathbf{Pl}(22,8,16,11,3,1)_{152702}$$

$$\ell_{1017} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{20} \end{array}\right]_{305858} = \left[\begin{array}{cccc} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 12 \end{array}\right]_{305858} = \mathbf{Pl}(23,5,4,9,12,1)_{436167}$$

$$\ell_{1018} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{25} \end{array}\right]_{272450} = \left[\begin{array}{cccc} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 25 \end{array}\right]_{272450} = \mathbf{Pl}(24,17,22,8,25,1)_{878476}$$

$$\ell_{1019} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{21} \end{array}\right]_{610658} = \left[\begin{array}{cccc} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 24 \end{array}\right]_{610658} = \mathbf{Pl}(25,10,2,18,24,1)_{827141}$$

$$\ell_{1020} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{6} \end{array}\right]_{1049922} = \left[\begin{array}{cccc} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 10 \end{array}\right]_{1049922} = \mathbf{Pl}(26,21,27,31,10,1)_{392088}$$

$$\ell_{1021} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{30} \end{array}\right]_{441346} = \left[\begin{array}{cccc} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 18 \end{array}\right]_{441346} = \mathbf{Pl}(27,31,15,13,18,1)_{642817}$$

$$\ell_{1022} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{2} \end{array}\right]_{237954} = \left[\begin{array}{cccc} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 4 \end{array}\right]_{237954} = \mathbf{Pl}(28,3,12,7,4,1)_{181724}$$

$$\ell_{1023} = \left[\begin{array}{cccc} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta \end{array}\right]_{576130} = \left[\begin{array}{cccc} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 2 \end{array}\right]_{576130} = \mathbf{Pl}(29,19,24,17,2,1)_{127413}$$

$$\ell_{1024} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{35554} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{35554} = \mathbf{Pl}(30, 20, 1, 1, 21, 1)_{728008}$$

$$\ell_{1025} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{880514} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{880514} = \mathbf{Pl}(31, 27, 21, 26, 1, 1)_{91889}$$

$$\ell_{1026} = \begin{bmatrix} 1 & \eta^{22} & \eta^{7} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{699733} = \begin{bmatrix} 1 & 21 & 20 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}_{699733} = \mathbf{Pl}(0, 20, 0, 21, 1, 0)_{4416}$$

$$\ell_{1027} = \begin{bmatrix} 1 & 0 & 1 & \eta^{15} \\ 0 & 1 & 1 & \eta^{24} \end{bmatrix}_{1050562} = \begin{bmatrix} 1 & 0 & 1 & 31 \\ 0 & 1 & 1 & 30 \end{bmatrix}_{1050562} = \mathbf{Pl}(1, 1, 27, 31, 30, 1)_{1046628}$$

$$\ell_{1028} = \begin{bmatrix} 1 & 0 & 1 & \eta^{14} \\ 0 & 1 & 1 & \eta^{23} \end{bmatrix}_{982434} = \begin{bmatrix} 1 & 0 & 1 & 29 \\ 0 & 1 & 1 & 15 \end{bmatrix}_{982434} = \mathbf{Pl}(2, 18, 19, 29, 15, 1)_{548149}$$

$$\ell_{1029} = \begin{bmatrix} 1 & 0 & 1 & \eta^{28} \\ 0 & 1 & 1 & \eta^{6} \end{bmatrix}_{745506} = \begin{bmatrix} 1 & 0 & 1 & 22 \\ 0 & 1 & 1 & 10 \end{bmatrix}_{745506} = \mathbf{Pl}(3, 28, 8, 22, 10, 1)_{374240}$$

$$\ell_{1030} = \begin{bmatrix} 1 & 0 & 1 & \eta^{13} \\ 0 & 1 & 1 & \eta^{22} \end{bmatrix}_{948802} = \begin{bmatrix} 1 & 0 & 1 & 28 \\ 0 & 1 & 1 & 21 \end{bmatrix}_{948802} = \mathbf{Pl}(4, 9, 3, 28, 21, 1)_{729687}$$

$$\ell_{1031} = \begin{bmatrix} 1 & 0 & 1 & \eta^{10} \\ 0 & 1 & 1 & \eta^{19} \end{bmatrix}_{576258} = \begin{bmatrix} 1 & 0 & 1 & 17 \\ 0 & 1 & 1 & 6 \end{bmatrix}_{576258} = \mathbf{Pl}(5, 23, 24, 17, 6, 1)_{258178}$$

$$\ell_{1032} = \begin{bmatrix} 1 & 0 & 1 & \eta^{27} \\ 0 & 1 & 1 & \eta^{5} \end{bmatrix}_{373282} = \begin{bmatrix} 1 & 0 & 1 & 11 \\ 0 & 1 & 1 & 5 \end{bmatrix}_{373282} = \mathbf{Pl}(6, 14, 16, 11, 5, 1)_{218003}$$

$$\ell_{1033} = \begin{bmatrix} 1 & 0 & 1 & \eta^{4} \\ 0 & 1 & 1 & \eta^{13} \end{bmatrix}_{543138} = \begin{bmatrix} 1 & 0 & 1 & 16 \\ 0 & 1 & 1 & 28 \end{bmatrix}_{543138} = \mathbf{Pl}(7, 12, 11, 16, 28, 1)_{966282}$$

$$\ell_{1034} = \begin{bmatrix} 1 & 0 & 1 & \eta^{12} \\ 0 & 1 & 1 & \eta^{21} \end{bmatrix}_{475362} = \begin{bmatrix} 1 & 0 & 1 & 14 \\ 0 & 1 & 1 & 24 \end{bmatrix}_{475362} = \mathbf{Pl}(8, 22, 6, 14, 24, 1)_{830689}$$

$$\ell_{1035} = \begin{bmatrix} 1 & 0 & 1 & \eta^{17} \\ 0 & 1 & 1 & \eta^{26} \end{bmatrix}_{644450} = \begin{bmatrix} 1 & 0 & 1 & 19 \\ 0 & 1 & 1 & 23 \end{bmatrix}_{644450} = \mathbf{Pl}(9, 4, 29, 19, 23, 1)_{819344}$$

$$\ell_{1036} = \begin{bmatrix} 1 & 0 & 1 & \eta^{9} \\ 0 & 1 & 1 & \eta^{18} \end{bmatrix}_{880578} = \begin{bmatrix} 1 & 0 & 1 & 26 \\ 0 & 1 & 1 & 3 \end{bmatrix}_{880578} = \mathbf{Pl}(10, 25, 21, 26, 3, 1)_{157185}$$

$$\ell_{1037} = \begin{bmatrix} 1 & 0 & 1 & \eta^{19} \\ 0 & 1 & 1 & \eta^{28} \end{bmatrix}_{204706} = \begin{bmatrix} 1 & 0 & 1 & 6 \\ 0 & 1 & 1 & 22 \end{bmatrix}_{204706} = \mathbf{Pl}(11, 16, 14, 6, 22, 1)_{772660}$$

$$\ell_{1038} = \begin{bmatrix} 1 & 0 & 1 & \eta^{26} \\ 0 & 1 & 1 & \eta^{4} \end{bmatrix}_{779522} = \begin{bmatrix} 1 & 0 & 1 & 23 \\ 0 & 1 & 1 & 16 \end{bmatrix}_{779522} = \mathbf{Pl}(12, 7, 5, 23, 16, 1)_{567875}$$

$$\ell_{1039} = \begin{bmatrix} 1 & 0 & 1 & \eta^{7} \\ 0 & 1 & 1 & \eta^{16} \end{bmatrix}_{678402} = \begin{bmatrix} 1 & 0 & 1 & 20 \\ 0 & 1 & 1 & 27 \end{bmatrix}_{678402} = \mathbf{Pl}(13, 15, 30, 20, 27, 1)_{951222}$$

$$\ell_{1040} = \begin{bmatrix} 1 & 0 & 1 & \eta^{3} \\ 0 & 1 & 1 & \eta^{12} \end{bmatrix}_{272098} = \begin{bmatrix} 1 & 0 & 1 & 8 \\ 0 & 1 & 1 & 14 \end{bmatrix}_{272098} = \mathbf{Pl}(14, 6, 22, 8, 14, 1)_{518215}$$

$$\ell_{1041} = \begin{bmatrix} 1 & 0 & 1 & \eta^{23} \\ 0 & 1 & 1 & \eta \end{bmatrix}_{508482} = \begin{bmatrix} 1 & 0 & 1 & 15 \\ 0 & 1 & 1 & 2 \end{bmatrix}_{508482} = \mathbf{Pl}(15, 13, 13, 15, 2, 1)_{117014}$$

$$\ell_{1042} = \begin{bmatrix} 1 & 0 & 1 & \eta^{11} \\ 0 & 1 & 1 & \eta^{20} \end{bmatrix}_{238210} = \begin{bmatrix} 1 & 0 & 1 & 7 \\ 0 & 1 & 1 & 12 \end{bmatrix}_{238210} = \mathbf{Pl}(16, 11, 12, 7, 12, 1)_{443445}$$

$$\ell_{1043} = \begin{bmatrix} 1 & 0 & 1 & \eta^{5} \\ 0 & 1 & 1 & \eta^{14} \end{bmatrix}_{171106} = \begin{bmatrix} 1 & 0 & 1 & 5 \\ 0 & 1 & 1 & 29 \end{bmatrix}_{171106} = \mathbf{Pl}(17, 24, 23, 5, 29, 1)_{1010188}$$

$$\ell_{1044} = \begin{bmatrix} 1 & 0 & 1 & \eta^{16} \\ 0 & 1 & 1 & \eta^{25} \end{bmatrix}_{915106} = \begin{bmatrix} 1 & 0 & 1 & 27 \\ 0 & 1 & 1 & 25 \end{bmatrix}_{915106} = \mathbf{Pl}(18, 2, 31, 27, 25, 1)_{886685}$$

$$\ell_{1045} = \begin{bmatrix} 1 & 0 & 1 & \eta^{29} \\ 0 & 1 & 1 & \eta^{7} \end{bmatrix}_{306114} = \begin{bmatrix} 1 & 0 & 1 & 9 \\ 0 & 1 & 1 & 20 \end{bmatrix}_{306114} = \mathbf{Pl}(19, 29, 4, 9, 20, 1)_{697896}$$

$$\ell_{1046} = \begin{bmatrix} 1 & 0 & 1 & \eta^{8} \\ 0 & 1 & 1 & \eta^{17} \end{bmatrix}_{441378} = \begin{bmatrix} 1 & 0 & 1 & 13 \\ 0 & 1 & 1 & 19 \end{bmatrix}_{441378} = \mathbf{Pl}(20, 30, 15, 13, 19, 1)_{675391}$$

$$\ell_{1047} = \begin{bmatrix} 1 & 0 & 1 & \eta^{24} \\ 0 & 1 & 1 & \eta^{2} \end{bmatrix}_{1015906} = \begin{bmatrix} 1 & 0 & 1 & 30 \\ 0 & 1 & 1 & 4 \end{bmatrix}_{1015906} = \mathbf{Pl}(21, 26, 20, 30, 4, 1)_{189002}$$

$$\ell_{1048} = \begin{bmatrix} 1 & 0 & 1 & \eta^{18} \\ 0 & 1 & 1 & \eta^{27} \end{bmatrix}_{102882} = \begin{bmatrix} 1 & 0 & 1 & 3 \\ 0 & 1 & 1 & 11 \end{bmatrix}_{102882} = \mathbf{Pl}(22, 8, 28, 3, 11, 1)_{425595}$$

$$\ell_{1049} = \begin{bmatrix} 1 & 0 & 1 & \eta^{20} \\ 0 & 1 & 1 & \eta^{29} \end{bmatrix}_{407234} = \begin{bmatrix} 1 & 0 & 1 & 12 \\ 0 & 1 & 1 & 9 \end{bmatrix}_{407234} = \mathbf{Pl}(23, 5, 7, 12, 9, 1)_{340594}$$

$$\ell_{1050} = \begin{bmatrix} 1 & 0 & 1 & \eta^{25} \\ 0 & 1 & 1 & \eta^{3} \end{bmatrix}_{846914} = \begin{bmatrix} 1 & 0 & 1 & 25 \\ 0 & 1 & 1 & 8 \end{bmatrix}_{846914} = \mathbf{Pl}(24, 17, 10, 25, 8, 1)_{310649}$$

$$\ell_{1051} = \begin{bmatrix} 1 & 0 & 1 & \eta^{21} \\ 0 & 1 & 1 & \eta^{30} \end{bmatrix}_{813410} = \begin{bmatrix} 1 & 0 & 1 & 24 \\ 0 & 1 & 1 & 18 \end{bmatrix}_{813410} = \mathbf{Pl}(25, 10, 17, 24, 18, 1)_{644520}$$

$$\ell_{1052} = \begin{bmatrix} 1 & 0 & 1 & \eta^{6} \\ 0 & 1 & 1 & \eta^{15} \end{bmatrix}_{340290} = \begin{bmatrix} 1 & 0 & 1 & 10 \\ 0 & 1 & 1 & 31 \end{bmatrix}_{340290} = \mathbf{Pl}(26, 21, 25, 10, 31, 1)_{1077529}$$

$$\ell_{1053} = \begin{bmatrix} 1 & 0 & 1 & \eta^{30} \\ 0 & 1 & 1 & \eta^{8} \end{bmatrix}_{610306} = \begin{bmatrix} 1 & 0 & 1 & 18 \\ 0 & 1 & 1 & 13 \end{bmatrix}_{610306} = \mathbf{Pl}(27, 31, 2, 18, 13, 1)_{466892}$$

$$\ell_{1054} = \begin{bmatrix} 1 & 0 & 1 & \eta^{2} \\ 0 & 1 & 1 & \eta^{11} \end{bmatrix}_{136578} = \begin{bmatrix} 1 & 0 & 1 & 4 \\ 0 & 1 & 1 & 7 \end{bmatrix}_{136578} = \mathbf{Pl}(28, 3, 9, 4, 7, 1)_{276987}$$

$$\ell_{1055} = \begin{bmatrix} 1 & 0 & 1 & \eta \\ 0 & 1 & 1 & \eta^{10} \end{bmatrix}_{69250} = \begin{bmatrix} 1 & 0 & 1 & 2 \\ 0 & 1 & 1 & 17 \end{bmatrix}_{69250} = \mathbf{Pl}(29, 19, 18, 2, 17, 1)_{612718}$$

$$\ell_{1056} = \begin{bmatrix} 1 & 0 & 1 & \eta^{22} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{711394} = \begin{bmatrix} 1 & 0 & 1 & 21 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{711394} = \mathbf{Pl}(30, 20, 26, 21, 1, 1)_{96383}$$

$$\ell_{1057} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & \eta^{9} \end{bmatrix}_{35714} = \begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 26 \end{bmatrix}_{35714} = \mathbf{Pl}(31, 27, 1, 1, 26, 1)_{891534}$$

Rank of lines: (1058, 2113, 34914, 610466, 949026, 305762, 779746, 475042, 407330, 745890, 136482, 847458, 542754, 238050, 508898, 204194, 441186, 373474, 813602, 68770, 982882, 1016738, 881314, 271906, 170338, 576610, 339618, 712034, 1050594, 102626, 644322, 678178, 915170, 34880, 1090, 1634, 1954, 1346, 1794, 1506, 1442, 1762, 1186, 1858, 1570, 1282, 1538, 1250, 1474, 1410, ...69250, 711394, 35714)

Rank of points on Klein quadric: (34913, 3105, 70563, 627139, 954563, 332643, 791011, 496451, 431043, 758467, 169283, 856803, 562243, 267683, 529635, 235075, 464291, 398883, 824515, 104387, 988323, 1021123, 890243, 301059, 202915, 595811, 366723, 726883, 1054307, 137763, 661603, 694403, 923619, 1121, 68640, 625184, 952576, 330624, 788960, 494368, 428928, 756320, 167104, 854592, 560000, 265408, 527328, 232736, 461920, 396480, ...612718, 96383, 891534)

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 32 single points:
The single points on the surface are:

$0: P_4 = (1,1,1,1)$ lies on line ℓ_{97}
$1: P_{68} = (1,1,1,0)$ lies on line ℓ_{97}
$2: P_{3171} = (2,2,2,1)$ lies on line ℓ_{97}
$3: P_{4228} = (3,3,3,1)$ lies on line ℓ_{97}
$4: P_{5285} = (4,4,4,1)$ lies on line ℓ_{97}
$5: P_{6342} = (5,5,5,1)$ lies on line ℓ_{97}
$6: P_{7399} = (6,6,6,1)$ lies on line ℓ_{97}
$7: P_{8456} = (7,7,7,1)$ lies on line ℓ_{97}
$8: P_{9513} = (8,8,8,1)$ lies on line ℓ_{97}
$9: P_{10570} = (9,9,9,1)$ lies on line ℓ_{97}
$10: P_{11627} = (10,10,10,1)$ lies on line ℓ_{97}
$11: P_{12684} = (11,11,11,1)$ lies on line ℓ_{97}
$12: P_{13741} = (12,12,12,1)$ lies on line ℓ_{97}
$13: P_{14798} = (13,13,13,1)$ lies on line ℓ_{97}
$14: P_{15855} = (14,14,14,1)$ lies on line ℓ_{97}
$15: P_{16912} = (15,15,15,1)$ lies on line ℓ_{97}
$16: P_{17969} = (16,16,16,1)$ lies on line ℓ_{97}

$17: P_{19026} = (17,17,17,1)$ lies on line ℓ_{97}
$18: P_{20083} = (18,18,18,1)$ lies on line ℓ_{97}
$19: P_{21140} = (19,19,19,1)$ lies on line ℓ_{97}
$20: P_{22197} = (20,20,20,1)$ lies on line ℓ_{97}
$21: P_{23254} = (21,21,21,1)$ lies on line ℓ_{97}
$22: P_{24311} = (22,22,22,1)$ lies on line ℓ_{97}
$23: P_{25368} = (23,23,23,1)$ lies on line ℓ_{97}
$24: P_{26425} = (24,24,24,1)$ lies on line ℓ_{97}
$25: P_{27482} = (25,25,25,1)$ lies on line ℓ_{97}
$26: P_{28539} = (26,26,26,1)$ lies on line ℓ_{97}
$27: P_{29596} = (27,27,27,1)$ lies on line ℓ_{97}
$28: P_{30653} = (28,28,28,1)$ lies on line ℓ_{97}
$29: P_{31710} = (29,29,29,1)$ lies on line ℓ_{97}
$30: P_{32767} = (30,30,30,1)$ lies on line ℓ_{97}
$31: P_{33824} = (31,31,31,1)$ lies on line ℓ_{97}

The single points on the surface are:

Points on surface but on no line

The surface has 0 points not on any line:
The points on the surface but not on lines are:

Line Intersection Graph

Too many lines to print.
Neighbor sets in the line intersection graph:
Too many lines to print.
The surface has 1089 points:
Too many to print.