# PROOF OF THE CONTINUED FRACTION CONJECTURE FOR $(a,b) = (z^2, z^5 + z^3 + z^2 + z)$

GUO-NIU HAN* AND YINING HU*

Abstract. The continued fraction conjecture claims that the continued fraction defined by the $(a,b)$-Thue-Morse sequence is algebraic over $\mathbb{F}_2(x)$ for all pairs of distinct elements $(a,b)$ in $\mathbb{F}_2[x] \setminus \mathbb{F}_2$. In this paper we prove the conjecture for $(a,b) = (z^2, z^5 + z^3 + z^2 + z)$.

## 1. Introduction

Let $\mathbb{F}_2$ be the finite field of cardinality 2. Given a sequence of polynomials $\mathbf{a} = (a_0(z), a_1(z), a_2(z), \ldots)$ of elements from $\mathbb{F}_2[z] \setminus \mathbb{F}_2$, we define the infinite continued fraction

$$\mathrm{CF}(\mathbf{a}(z)) = \cfrac{1}{a_0(z) + \cfrac{1}{a_1(z) + \cfrac{1}{a_2(z) + \cfrac{1}{\ddots}}}} \tag{1.1}$$

as the limit of the finite continued fractions

$$\mathrm{CF}_n(\mathbf{a}(z)) = \cfrac{1}{a_0(z) + \cfrac{1}{a_1(z) + \cfrac{1}{\ddots + \cfrac{1}{a_n(z)}}}} \in \mathbb{F}_2((1/z)). \tag{1.2}$$

Conversely, each power series in $\mathbb{F}_2[[1/z]]$ without constant term

$$c_{-1}z^{-1} + c_{-2}z^{-2} + c_{-3}z^{-3} + \cdots \tag{1.3}$$

admits a continued fraction expansion of form (1.1).

Let $a$ and $b$ be two distinct elements from $\mathbb{F}_2[z] \setminus \mathbb{F}_2$. We consider the continued fraction (1.1) associated with the $(a,b)$-Thue-Morse sequence

$$\mathbf{t} = (t_0(z), t_1(z), t_2(z), \ldots) = (a, b, b, a, b, a, a, b, \ldots)$$

that we shall denote

$$\mathrm{CF}(a,b) := \mathrm{CF}(\mathbf{t}). \tag{1.4}$$

*Date*: 9/04/2020 17:33:08 .

2010 *Mathematics Subject Classification.* 11B85, 11J70, 11B50, 11Y65, 05A15.

*Key words and phrases.* automatic sequence, continued fraction, Thue-Morse sequence.

* This paper was automatically generated from a computer program developed by the authors, with 1.6 hours CPU time used.

**Theorem 1.1.** *When* $(a,b) = (z^2, z^5+z^3+z^2+z)$*, the two power series* $\mathrm{CF}(a,b)$ *and* $\mathrm{CF}(b,a)$ *are algebraic over* $\mathbb{F}_2(z)$*, with minimal polynomials of the form*

$$p_4(z)y^4 + p_3(z)y^3 + p_2(z)y^2 + p_1(z)y + p_0(z) = 0$$

*where, for* $\mathrm{CF}(a,b)$*,*

$$\begin{aligned}
p_0(z) &= z^{17}+z^{16}+z^{15}+z^{14}+z^{13}+z^{11}+z^{10}+z^9+z^7+z^6+z^5+z^3+z+1,\\
p_1(z) &= z^{22}+z^{19}+z^{18}+z^{17}+z^{16}+z^{15}+z^{14}+z^{13}+z^{12}+z^{11}+z^{10}+z^9\\
&\quad +z^8+z^7+z^6+z^5+z^3+z^2,\\
p_2(z) &= z^{24}+z^{20}+z^{16}+z^{14}+z^{10}+z^8+z^6+z^4,\\
p_3(z) &= z^{22}+z^{19}+z^{18}+z^{17}+z^{16}+z^{15}+z^{14}+z^{13}+z^{12}+z^{11}+z^{10}+z^9\\
&\quad +z^8+z^7+z^6+z^5+z^3+z^2,\\
p_4(z) &= z^{20}+z^{17}+z^{15}+z^{13}+z^{12}+z^{11}+z^9+z^8+z^7+z^5+z^4+z^3+z,
\end{aligned}$$

*and for* $\mathrm{CF}(b,a)$*,*

$$\begin{aligned}
p_0(z) &= z^{17}+z^{15}+z^{14}+z^{13}+z^{11}+z^{10}+z^9+z^8+z^7+z^6+z^5+z^3+z,\\
p_1(z) &= z^{22}+z^{19}+z^{18}+z^{17}+z^{16}+z^{15}+z^{14}+z^{13}+z^{12}+z^{11}+z^{10}+z^9\\
&\quad +z^8+z^7+z^6+z^5+z^3+z^2,\\
p_2(z) &= z^{24}+z^{20}+z^{16}+z^{14}+z^{10}+z^8+z^6+z^4,\\
p_3(z) &= z^{22}+z^{19}+z^{18}+z^{17}+z^{16}+z^{15}+z^{14}+z^{13}+z^{12}+z^{11}+z^{10}+z^9\\
&\quad +z^8+z^7+z^6+z^5+z^3+z^2,\\
p_4(z) &= z^{20}+z^{17}+z^{16}+z^{15}+z^{13}+z^{12}+z^{11}+z^9+z^7+z^5+z^4+z^3+z+1.
\end{aligned}$$

## 2. Proof

Define the sequences of polynomials $(P_n(z))_{n\ge 0}$ and $(Q_n(z))_{n\ge 0}$ by

$$\begin{pmatrix} P_n(z) & Q_n(z) \\ P_{n-1}(z) & Q_{n-1}(z)\end{pmatrix} := \begin{pmatrix} t_n(z) & 1 \\ 1 & 0\end{pmatrix}\begin{pmatrix} t_{n-1}(z) & 1 \\ 1 & 0\end{pmatrix}\cdots\begin{pmatrix} t_0(z) & 1 \\ 1 & 0\end{pmatrix}\begin{pmatrix} 0 & 1 \\ 1 & 0\end{pmatrix}.$$

By the basic properties of continued fractions, we have

$$\mathrm{CF}_n(a,b) = \frac{P_n(z)}{Q_n(z)} \in \mathbb{F}_2((1/z)). \tag{2.1}$$

As formula (2.1) is not efficient for calculating $\mathrm{CF}_n(a,b)$, a fast method is to be derived and described as follows. Define

$$\begin{aligned}
M_n(x) &= x^{\deg(t_{2^n-1})}\begin{pmatrix} t_{2^n-1}(1/x) & 1 \\ 1 & 0\end{pmatrix} \times x^{\deg(t_{2^n-2})}\begin{pmatrix} t_{2^n-2}(1/x) & 1 \\ 1 & 0\end{pmatrix} \times\\
&\qquad \cdots \times x^{\deg(t_0)}\begin{pmatrix} t_0(1/x) & 1 \\ 1 & 0\end{pmatrix},\\
W_n(x) &= x^{\deg(\bar t_{2^n-1})}\begin{pmatrix} \bar t_{2^n-1}(1/x) & 1 \\ 1 & 0\end{pmatrix} \times x^{\deg(\bar t_{2^n-2})}\begin{pmatrix} \bar t_{2^n-2}(1/x) & 1 \\ 1 & 0\end{pmatrix} \times\\
&\qquad \cdots \times x^{\deg(\bar t_0)}\begin{pmatrix} \bar t_0(1/x) & 1 \\ 1 & 0\end{pmatrix},
\end{aligned}$$

where $\bar{\mathbf{t}}$ is the $(b,a)$-Thue-Morse sequence. By the properties of the Thue-Morse sequence, we have for $n \geq 0$

$$\begin{aligned} M_{n+1}(x) &= W_n(x) \cdot M_n(x), \\ W_{n+1}(x) &= M_n(x) \cdot W_n(x). \end{aligned}$$

Let $x := 1/z$. For each non-zero polynomial $P(z)$, define $\tilde{P}(x)$ to be $P(1/x)$. Then,

$$\mathrm{CF}_n(a,b) = \frac{P_n(z)}{Q_n(z)} = \frac{\tilde{P}_n(x)}{\tilde{Q}_n(x)} \in \mathbb{F}_2((x)) = \mathbb{F}_2((1/z)).$$

Comparing the definition of $M_n(x)$ with the definition of $P_n(x)$ and $Q_n(x)$, we see that

$$\begin{aligned} M_n(x)_{0,1} &= x^{d_n} \tilde{P}_{2^n-1}(x), \\ M_n(x)_{0,0} &= x^{d_n} \tilde{Q}_{2^n-1}(x), \end{aligned}$$

for some positive integer $d_n$. Hence,

$$\mathrm{CF}_{2^{2n}-1}(a,b) = \frac{\tilde{P}_{2^{2n}-1}(x)}{\tilde{Q}_{2^{2n}-1}(x)} = \frac{M_{2n}(x)_{0,1}}{M_{2n}(x)_{0,0}}. \tag{2.2}$$

Therefore, by the convergence theorem of continued fraction, the algebraicity of $\mathrm{CF}(a,b)$ will be established if it is shown that both $M_{2n}(x)_{0,1}$ and $M_{2n}(x)_{0,0}$ converge to algebraic series in $\mathbb{F}_2[[x]]$.

Actually, we will prove that for all $0 \leq i,j \leq 1$ the four sequences $(M_{2n}(x)_{i,j})_n$, $(M_{2n+1}(x)_{i,j})_n$, $(W_{2n}(x)_{i,j})_n$, and $(W_{2n+1}(x)_{i,j})_n$ converge to algebraic series in $\mathbb{F}_2[[x]]$. For this purpose, we define four $2 \times 2$ matrices $M^e, M^o, W^e, W^o$ as follows: For each $T \in \{M^e, M^o, W^e, W^o\}$ and $0 \leq i,j \leq 1$, $T_{i,j}$ is defined to be the unique solution in $\mathbb{F}_2[[x]]$ of the polynomial $\phi(T,i,j)$ under certain initial conditions; the polynomials $\phi(T,i,j)$ and initial conditions are given in Section 3. We will prove that these four matrices, whose components are algebraic by definition, are the limits of $(M_{2n}(x))_n$, $(M_{2n+1}(x))_n$, $(W_{2n}(x))_n$, and $(W_{2n+1}(x))_n$.

Let us explain how the polynomials $\phi(T,i,j)$ and initial conditions are found, and why the solutions exist and are unique. For $0 \leq i,j \leq 1$, the the coefficients of the polynomial $\phi(M^e,i,j)$ (resp. $\phi(M^o,i,j)$, $\phi(W^e,i,j)$, and $\phi(W^o,i,j)$) are the Padé-Hermite approximants of type

$$(175, 175, 175, 175, 175)$$

of the vector

$$(1, T^3, T^6, T^9, T^{12}),$$

where $T = M_{12,i,j}$ (resp. $M_{11,i,j}$, $W_{12,i,j}$, and $W_{11,i,j}$), found by the Derksen algorithm. We take the first 8 terms of $M_{12,i,j}$ (resp. $M_{11,i,j}$, $W_{12,i,j}$, and $W_{11,i,j}$) as initial conditions for $\phi(M^e,i,j)$ (resp. $\phi(M^o,i,j)$, $\phi(W^e,i,j)$, and $\phi(W^o,i,j)$). The following fact will be used to ensure that the solution exists and is unique: let $P(x,y) \in \mathbb{F}_2[x,y]$ and for each series $f(x) = \sum_{n=0}^{\infty} a_n x^n \in \mathbb{F}_2[[x]]$ denote the partial sum $\sum_{j=0}^{n-1} a_j x^j$ by $f_n(x)$ for $n \geq 0$. If for some $n \geq 0$ and $a_0, a_1, \ldots, a_{n-1} \in \mathbb{F}_2$ $P(x, \sum_{j=0}^{n-1} a_j x^j) = O(x^n)$ and $Q(x,y) := P(x, \sum_{j=0}^{n-1} a_j x^j + x^n y)$ can be written as $x^m \sum_{j=0}^{\infty} q_j(x) y^j$ where $q_j(x)$ are polynomials for $j \geq 0$, $q_1(0) = 1$, and $q_j(0) = 0$ for $j > 1$, then there exists a unique solution $f(x) \in \mathbb{F}_2[[x]]$ of $P(x, f(x)) = 0$ that satisfies the initial condition $f_n(x) = \sum_{j=0}^{n-1} a_j x^j$.

We state two lemmas concerning the four matrices $M^e, M^o, W^e, W^o$. The first one is about relations between them; the second, about the structure of the each matrix.

**Lemma 2.1.** *We have*

$$M^e = W^o \cdot M^o, \tag{2.3}$$

$$M^o = W^e \cdot M^e, \tag{2.4}$$

$$W^e = M^o \cdot W^o, \tag{2.5}$$

$$W^o = M^e \cdot W^e. \tag{2.6}$$

*Proof.* We give the proof of the identity

$$M^e_{0,0} = W^o_{0,0}M^o_{0,0} + W^o_{0,1}M^o_{1,0},$$

the proofs of the others being similar.

First, we compute the minimal polynomials of $W^o_{0,0}M^o_{0,0}$ and $W^o_{0,1}M^o_{1,0}$. We know that

$$P(x,y) = \mathrm{Res}_z\left(\phi(W^o,0,0)(x,z),\ z^{12}\cdot\phi(M^o,0,0)(x,y/z)\right)$$

is an annihilating polynomial of $W^o_{0,0}M^o_{0,0}$. We use Padé-Hermite approximation to find a candidate for the minimal polynomial of $W^o_{0,0}M^o_{0,0}$, that will be called $\phi_0(x,y)$. To prove that $\phi_0(x,y)$ is indeed the minimal polynomial, it suffices to prove that it is an irreducible factor of $P(x,y)$ of multiplicity $m$ and that $Q(x,y) := P(x,y)/\phi_0(x,y)^m$ is not an annihilating polynomial of $W^o_{0,0}M^o_{0,0}$. We verify the first point directly. For the second point, we truncate $W^o_{0,0}M^o_{0,0}$ to order 630 and substitute it for $y$ in $Q(x,y)$. We get a series of valuation less than 630, which proves that $Q(x,y)$ is not an annihilating polynomial of $W^o_{0,0}M^o_{0,0}$. We find the minimal polynomial $\phi_1(x,y)$ of $W^o_{0,1}M^o_{1,0}$ in a similar way.

Now we prove that $\phi(M^e,0,0)$ is the minimal polynomial of $W^o_{0,0}M^o_{0,0}+W^o_{0,1}M^o_{1,0}$. We know that

$$S(x,y) = \mathrm{Res}_z\left(\phi_0(x,z),\ \phi_1(x,y+z)\right)$$

is an annihilating of $W^o_{0,0}M^o_{0,0} + W^o_{0,1}M^o_{1,0}$. We verify that $\phi(M^e,0,0)$ is an irreducible factor of $S(x,y)$ of multiplicity $\mu$, and that $Q(x,y) := S(x,y)/\phi(M^e,0,0)^\mu$ is not an annihilating polynomial of $W^o_{0,0}M^o_{0,0}+W^o_{0,1}M^o_{1,0}$. To see the last point, we truncate $W^o_{0,0}M^o_{0,0} + W^o_{0,1}M^o_{1,0}$ to order 770 and substitute it for $y$ in $Q(x,y)$. We get a series of valuation less than 770, and therefore $Q(x,y)$ is not an annihilating polynomial of $W^o_{0,0}M^o_{0,0} + W^o_{0,1}M^o_{1,0}$.

Finally, the first 16 terms of $M^e_{0,0}$ and $W^o_{0,0}M^o_{0,0} + W^o_{0,1}M^o_{1,0}$ coincide. As these first terms determine a unique solution of $\phi(M^e,0,0)$, we know that the two series are one and the same. $\square$

Define

$$R^e = \begin{pmatrix}1 & 0\\ 0 & 1\end{pmatrix} \qquad \text{and} \qquad R^o = \begin{pmatrix}1 & 0\\ 0 & 1\end{pmatrix}.$$

**Lemma 2.2.** *For all integers $k \geq 2$ and $u = 2^{2k-1}$, the following identities hold.*

$$\begin{aligned}M^e[:14u] = {}& M^e[:7u] + x^{2u}M^e[:5u] + x^{3u}M^e[:4u] + x^{6u}M^e[:u] + x^{2u}M^e[:7u]\\ &+ x^{4u}M^e[:5u] + x^{5u}M^e[:4u] + x^{8u}M^e[:u] + x^{3u}M^e[:7u]\\ &+ x^{5u}M^e[:5u] + x^{6u}M^e[:4u] + x^{9u}M^e[:u] + x^{4u}M^e[:7u]\\ &+ x^{6u}M^e[:5u] + x^{7u}M^e[:4u] + x^{10u}M^e[:u] + x^{6u}M^e[:7u]\end{aligned}$$

$$
\begin{aligned}
&+ x^{8u}M^e[:5u] + x^{9u}M^e[:4u] + x^{12u}M^e[:u] + x^{9u}M^e[:5u]\\
&+ x^{13u}M^e[:u] + (x^{7u} + x^{9u} + x^{10u} + x^{11u} + x^{13u})R^e,\\
W^e[:14u] &= W^e[:7u] + x^{2u}W^e[:5u] + x^{3u}W^e[:4u] + x^{6u}W^e[:u] + x^{2u}W^e[:7u]\\
&+ x^{4u}W^e[:5u] + x^{5u}W^e[:4u] + x^{8u}W^e[:u] + x^{3u}W^e[:7u]\\
&+ x^{5u}W^e[:5u] + x^{6u}W^e[:4u] + x^{9u}W^e[:u] + x^{4u}W^e[:7u]\\
&+ x^{6u}W^e[:5u] + x^{7u}W^e[:4u] + x^{10u}W^e[:u] + x^{6u}W^e[:7u]\\
&+ x^{8u}W^e[:5u] + x^{9u}W^e[:4u] + x^{12u}W^e[:u] + x^{9u}W^e[:5u]\\
&+ x^{13u}W^e[:u] + (x^{7u} + x^{9u} + x^{10u} + x^{11u} + x^{13u})R^e.
\end{aligned}
$$

*For all integers $k \geq 2$ and $u = 2^{2k}$, the following identities hold.*

$$
\begin{aligned}
M^o[:14u] &= M^o[:7u] + x^{2u}M^o[:5u] + x^{3u}M^o[:4u] + x^{6u}M^o[:u] + x^{2u}M^o[:7u]\\
&+ x^{4u}M^o[:5u] + x^{5u}M^o[:4u] + x^{8u}M^o[:u] + x^{3u}M^o[:7u]\\
&+ x^{5u}M^o[:5u] + x^{6u}M^o[:4u] + x^{9u}M^o[:u] + x^{4u}M^o[:7u]\\
&+ x^{6u}M^o[:5u] + x^{7u}M^o[:4u] + x^{10u}M^o[:u] + x^{6u}M^o[:7u]\\
&+ x^{8u}M^o[:5u] + x^{9u}M^o[:4u] + x^{12u}M^o[:u] + x^{9u}M^o[:5u]\\
&+ x^{13u}M^o[:u] + (x^{7u} + x^{9u} + x^{10u} + x^{11u} + x^{13u})R^o,\\
W^o[:14u] &= W^o[:7u] + x^{2u}W^o[:5u] + x^{3u}W^o[:4u] + x^{6u}W^o[:u] + x^{2u}W^o[:7u]\\
&+ x^{4u}W^o[:5u] + x^{5u}W^o[:4u] + x^{8u}W^o[:u] + x^{3u}W^o[:7u]\\
&+ x^{5u}W^o[:5u] + x^{6u}W^o[:4u] + x^{9u}W^o[:u] + x^{4u}W^o[:7u]\\
&+ x^{6u}W^o[:5u] + x^{7u}W^o[:4u] + x^{10u}W^o[:u] + x^{6u}W^o[:7u]\\
&+ x^{8u}W^o[:5u] + x^{9u}W^o[:4u] + x^{12u}W^o[:u] + x^{9u}W^o[:5u]\\
&+ x^{13u}W^o[:u] + (x^{7u} + x^{9u} + x^{10u} + x^{11u} + x^{13u})R^o.
\end{aligned}
$$

*Proof.* To prove Lemma 2.2 we first construct an automaton for each sequence concerned, and then transform the conditions on infinitely many $k$'s into finitely many conditions on the states of the automaton. In the following, we will prove that for $T = M^o_{0,0}$, for all integer $k \geq 2$ and $u = 2^{2k}$,

$$
\begin{aligned}
T[:14u] &= T[:7u] + x^{2u}T[:5u] + x^{3u}T[:4u] + x^{6u}T[:u] + x^{2u}T[:7u] + x^{4u}T[:5u]\\
&+ x^{5u}T[:4u] + x^{8u}T[:u] + x^{3u}T[:7u] + x^{5u}T[:5u] + x^{6u}T[:4u]\\
&+ x^{9u}T[:u] + x^{4u}T[:7u] + x^{6u}T[:5u] + x^{7u}T[:4u] + x^{10u}T[:u]\\
&+ x^{6u}T[:7u] + x^{8u}T[:5u] + x^{9u}T[:4u] + x^{12u}T[:u] + x^{9u}T[:5u]\\
&+ x^{13u}T[:u].
\end{aligned}
$$

The proof of the other 15 cases are similar. We break down the above identity into 7 parts:

$$
\begin{aligned}
0 &= x^{7u}T[:u] + x^{6u}T[u:2u] + x^{3u}T[4u:5u] + x^{2u}T[5u:6u] + T[7u:8u],\\
0 &= x^{7u}T[u:2u] + x^{6u}T[2u:3u] + x^{3u}T[5u:6u] + x^{2u}T[6u:7u]\\
&\quad + T[8u:9u],\\
0 &= x^{9u}T[:u] + x^{8u}T[u:2u] + x^{7u}T[2u:3u] + x^{6u}T[3u:4u]
\end{aligned}
$$

$$
\begin{aligned}
&+ x^{5u}T[4u:5u] + x^{4u}T[5u:6u] + x^{3u}T[6u:7u] + T[9u:10u],\\
0 &= x^{10u}T[:u] + x^{8u}T[2u:3u] + x^{7u}T[3u:4u] + x^{4u}T[6u:7u]\\
&\quad + T[10u:11u],\\
0 &= x^{8u}T[3u:4u] + x^{6u}T[5u:6u] + T[11u:12u],\\
0 &= x^{12u}T[:u] + x^{8u}T[4u:5u] + x^{6u}T[6u:7u] + T[12u:13u],\\
0 &= x^{13u}T[:u] + x^{9u}T[4u:5u] + T[13u:14u],
\end{aligned}
$$

which can be rewritten as

$$0 = T[[w]_2] + T[[1w]_2] + T[[100w]_2] + T[[101w]_2] + T[[111w]_2], \tag{2.7}$$

$$0 = T[[1w]_2] + T[[10w]_2] + T[[101w]_2] + T[[110w]_2] + T[[1000w]_2], \tag{2.8}$$

$$\begin{aligned}0 &= T[[w]_2] + T[[1w]_2] + T[[10w]_2] + T[[11w]_2] + T[[100w]_2]\\ &\quad + T[[101w]_2] + T[[110w]_2] + T[[1001w]_2],\end{aligned} \tag{2.9}$$

$$0 = T[[w]_2] + T[[10w]_2] + T[[11w]_2] + T[[110w]_2] + T[[1010w]_2], \tag{2.10}$$

$$0 = T[[11w]_2] + T[[101w]_2] + T[[1011w]_2], \tag{2.11}$$

$$0 = T[[w]_2] + T[[100w]_2] + T[[110w]_2] + T[[1100w]_2], \tag{2.12}$$

$$0 = T[[w]_2] + T[[100w]_2] + T[[1101w]_2], \tag{2.13}$$

for all binary word $w$ of length $2k$ and $w \neq 0^{2k}$, and

$$0 = T[[w]_2] + T[[1w]_2] + T[[100w]_2] + T[[101w]_2] + T[[111w]_2], \tag{2.14}$$

$$0 = T[[1w]_2] + T[[10w]_2] + T[[101w]_2] + T[[110w]_2] + T[[1000w]_2], \tag{2.15}$$

$$\begin{aligned}0 &= T[[w]_2] + T[[1w]_2] + T[[10w]_2] + T[[11w]_2] + T[[100w]_2]\\ &\quad + T[[101w]_2] + T[[110w]_2] + T[[1001w]_2],\end{aligned} \tag{2.16}$$

$$0 = T[[w]_2] + T[[10w]_2] + T[[11w]_2] + T[[110w]_2] + T[[1010w]_2], \tag{2.17}$$

$$0 = T[[11w]_2] + T[[101w]_2] + T[[1011w]_2], \tag{2.18}$$

$$0 = T[[w]_2] + T[[100w]_2] + T[[110w]_2] + T[[1100w]_2], \tag{2.19}$$

$$0 = T[[w]_2] + T[[100w]_2] + T[[1101w]_2], \tag{2.20}$$

for $w = 0^{2k}$.

First we calculate an 2-automaton that generates $T$ from its minimal polynomial and its first terms. This automaton has 4442 states; its transition function and output function can be found in the annex. Let $A(s, w)$ denote the state reached after reading $w$ from right to left starting from the state $s$, and $\tau$ the output function. Define

$$E_{2k} = \{A(i, w) : |w| = 2k, w \neq 0^{2k}\}.$$

Identities (2.7) through (2.20) can be written as

$$\begin{aligned}0 &= \tau(A(s,\epsilon)) + \tau(A(s,1)) + \tau(A(s,100)) + \tau(A(s,101))\\ &\quad + \tau(A(s,111)),\end{aligned} \tag{2.21}$$

$$\begin{aligned}0 &= \tau(A(s,1)) + \tau(A(s,10)) + \tau(A(s,101)) + \tau(A(s,110))\\ &\quad + \tau(A(s,1000)),\end{aligned} \tag{2.22}$$

$$\begin{aligned}0 &= \tau(A(s,\epsilon)) + \tau(A(s,1)) + \tau(A(s,10)) + \tau(A(s,11)) + \tau(A(s,100))\\ &\quad + \tau(A(s,101)) + \tau(A(s,110)) + \tau(A(s,1001)),\end{aligned} \tag{2.23}$$

$$\begin{aligned}
0 &= \tau(A(s,\epsilon)) + \tau(A(s,10)) + \tau(A(s,11)) + \tau(A(s,110)) \\
&\quad + \tau(A(s,1010)), && (2.24)\\
0 &= \tau(A(s,11)) + \tau(A(s,101)) + \tau(A(s,1011)), && (2.25)\\
0 &= \tau(A(s,\epsilon)) + \tau(A(s,100)) + \tau(A(s,110)) + \tau(A(s,1100)), && (2.26)\\
0 &= \tau(A(s,\epsilon)) + \tau(A(s,100)) + \tau(A(s,1101)), && (2.27)
\end{aligned}$$

for all $s \in E_{2k}$, and

$$\begin{aligned}
0 &= \tau(A(s,\epsilon)) + \tau(A(s,1)) + \tau(A(s,100)) + \tau(A(s,101)) \\
&\quad + \tau(A(s,111)), && (2.28)\\
0 &= \tau(A(s,1)) + \tau(A(s,10)) + \tau(A(s,101)) + \tau(A(s,110)) \\
&\quad + \tau(A(s,1000)), && (2.29)\\
0 &= \tau(A(s,\epsilon)) + \tau(A(s,1)) + \tau(A(s,10)) + \tau(A(s,11)) + \tau(A(s,100)) \\
&\quad + \tau(A(s,101)) + \tau(A(s,110)) + \tau(A(s,1001)), && (2.30)\\
0 &= \tau(A(s,\epsilon)) + \tau(A(s,10)) + \tau(A(s,11)) + \tau(A(s,110)) \\
&\quad + \tau(A(s,1010)), && (2.31)\\
0 &= \tau(A(s,11)) + \tau(A(s,101)) + \tau(A(s,1011)), && (2.32)\\
0 &= \tau(A(s,\epsilon)) + \tau(A(s,100)) + \tau(A(s,110)) + \tau(A(s,1100)), && (2.33)\\
0 &= \tau(A(s,\epsilon)) + \tau(A(s,100)) + \tau(A(s,1101)), && (2.34)
\end{aligned}$$

for $s = A(i, 0^{2k})$. We find that $(A(i, 0^{24}), E_{24}) = (A(i, 0^{22}), E_{22})$, so that we only have to verify that identities (2.21) through (2.34) hold for $2 \le k \le 12$, which turns out to be true. □

In the following lemma, we express $M_{2k}$, $M_{2k+1}$, $W_{2k}$, and $W_{2k+1}$ in terms of $M^e$, $M^o$, $W^e$, and $W^o$.

**Lemma 2.3.** *For all integer $k \ge 2$, and $u = 2^{2k-1}$,*

$$M_{2k} = M^e[:7u] + x^{2u}M^e[:5u] + x^{3u}M^e[:4u] + x^{6u}M^e[:u] + x^{7u}R^e,$$
$$W_{2k} = W^e[:7u] + x^{2u}W^e[:5u] + x^{3u}W^e[:4u] + x^{6u}W^e[:u] + x^{7u}R^e.$$

*For all integer $k \ge 2$, and $u = 2^{2k}$,*

$$M_{2k+1} = M^o[:7u] + x^{2u}M^o[:5u] + x^{3u}M^o[:4u] + x^{6u}M^o[:u] + x^{7u}R^o,$$
$$W_{2k+1} = W^o[:7u] + x^{2u}W^o[:5u] + x^{3u}W^o[:4u] + x^{6u}W^o[:u] + x^{7u}R^o.$$

*Proof.* We call the four identities in Lemma 2.3 also by the name $M_{2k}$, $W_{2k}$, $M_{2k+1}$, and $W_{2k+1}$. For $n = 2$, the identities can be verified directly. For $n \ge 2$, we claim that

$$M_{2k} \wedge W_{2k} \Rightarrow M_{2k+1} \wedge W_{2k+1},$$
$$M_{2k+1} \wedge W_{2k+1} \Rightarrow M_{2k+2} \wedge W_{2k+2}.$$

We give the proof of

$$M_{2k} \wedge W_{2k} \Rightarrow M_{2k+1},$$

the other ones being similar. Set $u = 2^{2k}$ and $v = 2^{2k-1}$. By definition and induction hypothesis, the left side of identity $M_{2k+1}$ is equal to

$$W_{2k}M_{2k} = \big(W^e[:7v] + x^{2v}W^e[:5v] + x^{3v}W^e[:4v] + x^{6v}W^e[:v] + x^{7u}R^e\big) \times \big($$

$$M^e[:7v] + x^{2v}M^e[:5v] + x^{3v}M^e[:4v] + x^{6v}M^e[:v] + x^{7u}R^e\big); \tag{2.35}$$

Call this expression $lhs$. Note that both sides of identity $M_{2k+1}$ have the same term of highest degree $x^{14v}R^o$. Therefore we only need to prove that their difference is $O(x^{14v})$. Using Lemma 2.1 it can be seen that the right side of identity $M_{2k+1}$ is congruent, modulo $x^{14v}$, to

$$W^e[:14v]M^e[:14v] + x^{4v}W^e[:10v]M^e[:10v] + x^{6v}W^e[:8v]M^e[:8v] \\ + x^{12v}W^e[:2v]M^e[:2v].$$

For all $n \le 14$, replace the occurrences of $W^e[:n\cdot v]$ and $M^e[:n\cdot v]$ in the above expression by the reduction modulo $x^{n\cdot v}$ of the right side of the corresponding identity in Lemma 2.2 and get a new expression, which we call $rhs$. Define

$$\begin{aligned} X &:= x^v, \\ a_n &:= W^e[n\cdot v : (n+1)\cdot v]/X^n, \\ b_n &:= M^e[n\cdot v : (n+1)\cdot v]/X^n, \\ c &:= R^e. \end{aligned}$$

Using the notation introduced above, we can represent the expressions $lhs$ (2.35) and $rhs$ as polynomials in $\mathbb{F}_2[a_1, ..., a_{14}, b_1, ..., b_{14}, c][X]$. Note that it is not a problem that $a_j$ commutes with $b_k$ while $W^e$ does not commute with $M^e$, because in the expressions concerned, the products of $W^e$-terms and $M^e$-terms are always in the same order. We let the computer do the simplification and check that the difference between these two polynomials is indeed $O(X^{14})$, which completes the proof. □

*Proof of Theorem 1.1.* We prove the theorem for $\mathrm{CF}(a, b)$; for $\mathrm{CF}(b, a)$, the proof is similar. By Lemma 2.3, we have For all $0 \le j, k \le 1$,

$$\begin{aligned} \lim_{n\to\infty} M_{2n,j,k} &= M^e_{j,k}, \\ \lim_{n\to\infty} M_{2n+1,j,k} &= M^o_{j,k}, \\ \lim_{n\to\infty} W_{2n,j,k} &= W^e_{j,k}, \\ \lim_{n\to\infty} W_{2n+1,j,k} &= W^o_{j,k}. \end{aligned}$$

Let $z = 1/x$. By the convergence theorem and identity (2.2),

$$\mathrm{CF}(a, b) = \frac{M^e_{0,1}(x)}{M^e_{0,0}(x)}.$$

By definition, $\phi(M^e, 0, 1)$ and $\phi(M^e, 0, 0)$ are minimal polynomials of $M^e_{0,1}$ and $M^e_{0,0}$. Therefore

$$P(x, y) = \mathrm{Res}_t\left(\phi(M^e, 0, 1)(x, t), y^{12}\phi(M^e, 0, 1)(x, t/y)\right)$$

is an annihilating polynomial of $f(x) = M^e_{0,1}/M^e_{0,0}$.

Define

$$Q(x, y) = q_4(x)y^4 + q_3(x)y^3 + q_2(x)y^2 + q_1(x)y + q_0(x),$$

where

$$q_0(x) = x^{24} + x^{23} + x^{21} + x^{19} + x^{18} + x^{17} + x^{15} + x^{14} + x^{13} + x^{11} + x^{10} + x^9 \\ + x^8 + x^7,$$

$$\begin{aligned}
q_1(x) &= x^{22}+x^{21}+x^{19}+x^{18}+x^{17}+x^{16}+x^{15}+x^{14}+x^{13}+x^{12}+x^{11}+x^{10}\\
&\quad +x^9+x^8+x^7+x^6+x^5+x^2,\\
q_2(x) &= x^{20}+x^{18}+x^{16}+x^{14}+x^{10}+x^8+x^4+1,\\
q_3(x) &= x^{22}+x^{21}+x^{19}+x^{18}+x^{17}+x^{16}+x^{15}+x^{14}+x^{13}+x^{12}+x^{11}+x^{10}\\
&\quad +x^9+x^8+x^7+x^6+x^5+x^2,\\
q_4(x) &= x^{23}+x^{21}+x^{20}+x^{19}+x^{17}+x^{16}+x^{15}+x^{13}+x^{12}+x^{11}+x^9+x^7\\
&\quad +x^4.
\end{aligned}$$

The polynomial $Q(x,y)$ is the candidate for the minimal polynomial of $f(x)$ found by Padé-Hermite approximation. To prove that it is indeed the minimal polynomial of $f(x)$, we only need to prove that it is an irreducible factor of $P(x,y)$ of multiplicity $m$ and $R(x,y) := P(x,y)/Q(x,y)^m$ is not an annihilating polynomial of $f(x)$. We verify the first point directly. For the second point, we find that when we truncate $f(x)$ to order 216, and substitute it for $y$ in $R(z,y)$, we get a series with valuation smaller than 216, which proves that $R(z,y)$ is not an annihilating polynomial of $f(x)$. Finally, $z^{12}Q(1/z,y)$ is the minimal polynomial of $\mathrm{CF}(a,b)=f(1/z)$. □

## 3. Annexe

All 16 polynomials are of the form

$$p_0(x)+p_3(x)y^3+p_6(x)y^6+p_9(x)y^9+p_{12}(x)y^{12}.$$

The coefficients $p_j(x)$ and the 16 initial terms to determine the solutions uniquely are given below.

For $\phi(M^e,0,0)$:

$$\begin{aligned}
p_0(x) &= x^{138}+x^{134}+x^{132}+x^{126}+x^{120}+x^{116}+x^{114}+x^{112}+x^{108}+x^{106}\\
&\quad +x^{98}+x^{96}+x^{94}+x^{90}+x^{88}+x^{82}+x^{80}+x^{70}+x^{66}+x^{62}+x^{60}\\
&\quad +x^{54}+x^{50}+x^{48}+x^{44}+x^{40}+x^{38}+x^{36}+x^{34}+x^{30}+x^{24},\\
p_3(x) &= x^{130}+x^{124}+x^{114}+x^{110}+x^{108}+x^{106}+x^{102}+x^{100}+x^{98}+x^{96}\\
&\quad +x^{92}+x^{90}+x^{84}+x^{82}+x^{80}+x^{76}+x^{72}+x^{70}+x^{68}+x^{64}+x^{60}\\
&\quad +x^{56}+x^{48}+x^{46}+x^{44}+x^{42}+x^{40}+x^{38}+x^{32}+x^{30}+x^{26}+x^{22}\\
&\quad +x^{18}+x^{16},\\
p_6(x) &= x^{130}+x^{126}+x^{124}+x^{122}+x^{120}+x^{116}+x^{104}+x^{102}+x^{100}+x^{98}\\
&\quad +x^{94}+x^{92}+x^{90}+x^{88}+x^{86}+x^{84}+x^{80}+x^{78}+x^{74}+x^{72}+x^{70}\\
&\quad +x^{68}+x^{66}+x^{64}+x^{62}+x^{60}+x^{48}+x^{46}+x^{42}+x^{40}+x^{38}+x^{36}\\
&\quad +x^{34}+x^{32}+x^{10}+x^8+x^4+1,\\
p_9(x) &= x^{128}+x^{124}+x^{122}+x^{118}+x^{116}+x^{108}+x^{106}+x^{102}+x^{100}+x^{96}\\
&\quad +x^{92}+x^{86}+x^{84}+x^{80}+x^{78}+x^{76}+x^{70}+x^{66}+x^{58}+x^{56}+x^{54}\\
&\quad +x^{52}+x^{50}+x^{44}+x^{42}+x^{36}+x^{28}+x^{24}+x^{22}+x^{20}+x^{18}+x^{14}\\
&\quad +x^{12}+x^{10}+x^8+x^4,\\
p_{12}(x) &= x^{128}+x^{120}+x^{112}+x^{96}+x^{80}+x^{72}+x^{64}+x^{48}+x^{32}+x^{24}+x^{16}
\end{aligned}$$

$$+1,$$

and the initial terms are [1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 0, 0, 0].
For $\phi(M^e, 0, 1)$:

$$\begin{aligned}
p_0(x) &= x^{129} + x^{126} + x^{122} + x^{119} + x^{117} + x^{115} + x^{114} + x^{113} + x^{112} + x^{109} \\
&+ x^{105} + x^{104} + x^{103} + x^{100} + x^{99} + x^{95} + x^{91} + x^{89} + x^{86} + x^{85} \\
&+ x^{84} + x^{82} + x^{81} + x^{78} + x^{77} + x^{75} + x^{73} + x^{72} + x^{70} + x^{69} + x^{67} \\
&+ x^{66} + x^{63} + x^{62} + x^{61} + x^{60} + x^{57} + x^{56} + x^{54} + x^{51} + x^{50} + x^{47} \\
&+ x^{46} + x^{45} + x^{44} + x^{42} + x^{41} + x^{39} + x^{38} + x^{36} + x^{35} + x^{34} + x^{33}, \\
p_3(x) &= x^{122} + x^{118} + x^{116} + x^{106} + x^{104} + x^{102} + x^{94} + x^{92} + x^{90} + x^{88} \\
&+ x^{86} + x^{80} + x^{78} + x^{72} + x^{70} + x^{64} + x^{62} + x^{56} + x^{54} + x^{50} + x^{48} \\
&+ x^{44} + x^{40} + x^{38} + x^{34} + x^{24} + x^{20} + x^{18}, \\
p_6(x) &= x^{120} + x^{119} + x^{117} + x^{113} + x^{112} + x^{110} + x^{108} + x^{107} + x^{106} + x^{103} \\
&+ x^{101} + x^{97} + x^{96} + x^{94} + x^{92} + x^{91} + x^{90} + x^{87} + x^{85} + x^{84} + x^{83} \\
&+ x^{80} + x^{78} + x^{77} + x^{75} + x^{72} + x^{70} + x^{69} + x^{67} + x^{64} + x^{62} + x^{61} \\
&+ x^{59} + x^{56} + x^{54} + x^{53} + x^{51} + x^{47} + x^{46} + x^{43} + x^{41} + x^{37} + x^{36} \\
&+ x^{34} + x^{32} + x^{31} + x^{30} + x^{27} + x^{25} + x^{21} + x^{20} + x^{18} + x^{16} + x^{15} \\
&+ x^{14} + x^{12}, \\
p_9(x) &= x^{118} + x^{116} + x^{114} + x^{112} + x^{106} + x^{104} + x^{102} + x^{94} + x^{88} + x^{76} \\
&+ x^{68} + x^{66} + x^{64} + x^{56} + x^{54} + x^{52} + x^{46} + x^{34} + x^{28} + x^{22} + x^{20} \\
&+ x^{18} + x^{8} + x^{6}, \\
p_{12}(x) &= x^{116} + x^{115} + x^{114} + x^{111} + x^{110} + x^{107} + x^{106} + x^{104} + x^{100} + x^{99} \\
&+ x^{98} + x^{96} + x^{68} + x^{67} + x^{66} + x^{63} + x^{62} + x^{59} + x^{58} + x^{56} + x^{52} \\
&+ x^{51} + x^{50} + x^{48} + x^{20} + x^{19} + x^{18} + x^{15} + x^{14} + x^{11} + x^{10} + x^{8} \\
&+ x^{4} + x^{3} + x^{2} + 1,
\end{aligned}$$

and the initial terms are [0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0].
For $\phi(M^e, 1, 0)$:

$$\begin{aligned}
p_0(x) &= x^{129} + x^{126} + x^{122} + x^{119} + x^{117} + x^{115} + x^{114} + x^{113} + x^{112} + x^{109} \\
&+ x^{105} + x^{104} + x^{103} + x^{100} + x^{99} + x^{95} + x^{91} + x^{89} + x^{86} + x^{85} \\
&+ x^{84} + x^{82} + x^{81} + x^{78} + x^{77} + x^{75} + x^{73} + x^{72} + x^{70} + x^{69} + x^{67} \\
&+ x^{66} + x^{63} + x^{62} + x^{61} + x^{60} + x^{57} + x^{56} + x^{54} + x^{51} + x^{50} + x^{47} \\
&+ x^{46} + x^{45} + x^{44} + x^{42} + x^{41} + x^{39} + x^{38} + x^{36} + x^{35} + x^{34} + x^{33}, \\
p_3(x) &= x^{122} + x^{118} + x^{116} + x^{106} + x^{104} + x^{102} + x^{94} + x^{92} + x^{90} + x^{88} \\
&+ x^{86} + x^{80} + x^{78} + x^{72} + x^{70} + x^{64} + x^{62} + x^{56} + x^{54} + x^{50} + x^{48} \\
&+ x^{44} + x^{40} + x^{38} + x^{34} + x^{24} + x^{20} + x^{18}, \\
p_6(x) &= x^{120} + x^{119} + x^{117} + x^{113} + x^{112} + x^{110} + x^{108} + x^{107} + x^{106} + x^{103}
\end{aligned}$$

$$
\begin{aligned}
&+ x^{101} + x^{97} + x^{96} + x^{94} + x^{92} + x^{91} + x^{90} + x^{87} + x^{85} + x^{84} + x^{83}\\
&+ x^{80} + x^{78} + x^{77} + x^{75} + x^{72} + x^{70} + x^{69} + x^{67} + x^{64} + x^{62} + x^{61}\\
&+ x^{59} + x^{56} + x^{54} + x^{53} + x^{51} + x^{47} + x^{46} + x^{43} + x^{41} + x^{37} + x^{36}\\
&+ x^{34} + x^{32} + x^{31} + x^{30} + x^{27} + x^{25} + x^{21} + x^{20} + x^{18} + x^{16} + x^{15}\\
&+ x^{14} + x^{12},\\
p_9(x) =\ & x^{118} + x^{116} + x^{114} + x^{112} + x^{106} + x^{104} + x^{102} + x^{94} + x^{88} + x^{76}\\
&+ x^{68} + x^{66} + x^{64} + x^{56} + x^{54} + x^{52} + x^{46} + x^{34} + x^{28} + x^{22} + x^{20}\\
&+ x^{18} + x^{8} + x^{6},\\
p_{12}(x) =\ & x^{116} + x^{115} + x^{114} + x^{111} + x^{110} + x^{107} + x^{106} + x^{104} + x^{100} + x^{99}\\
&+ x^{98} + x^{96} + x^{68} + x^{67} + x^{66} + x^{63} + x^{62} + x^{59} + x^{58} + x^{56} + x^{52}\\
&+ x^{51} + x^{50} + x^{48} + x^{20} + x^{19} + x^{18} + x^{15} + x^{14} + x^{11} + x^{10} + x^{8}\\
&+ x^{4} + x^{3} + x^{2} + 1,
\end{aligned}
$$

and the initial terms are [0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0].

For $\phi(M^e, 1, 1)$:

$$
\begin{aligned}
p_0(x) =\ & x^{120} + x^{116} + x^{112} + x^{110} + x^{106} + x^{100} + x^{98} + x^{96} + x^{92} + x^{90}\\
&+ x^{88} + x^{86} + x^{82} + x^{76} + x^{74} + x^{70} + x^{66} + x^{60} + x^{58} + x^{54} + x^{52}\\
&+ x^{50} + x^{46} + x^{44} + x^{42},\\
p_3(x) =\ & x^{108} + x^{106} + x^{102} + x^{100} + x^{98} + x^{94} + x^{92} + x^{90} + x^{88} + x^{84} + x^{76}\\
&+ x^{64} + x^{52} + x^{40} + x^{36} + x^{34} + x^{30} + x^{26} + x^{22} + x^{20} + x^{18} + x^{12},\\
p_6(x) =\ & x^{108} + x^{106} + x^{104} + x^{102} + x^{100} + x^{98} + x^{90} + x^{88} + x^{84} + x^{76} + x^{64}\\
&+ x^{62} + x^{60} + x^{54} + x^{52} + x^{48} + x^{40} + x^{38} + x^{34} + x^{32} + x^{26} + x^{24}\\
&+ x^{18} + x^{14} + x^{6} + 1,\\
p_9(x) =\ & x^{104} + x^{102} + x^{94} + x^{92} + x^{90} + x^{86} + x^{84} + x^{82} + x^{76} + x^{74} + x^{72}\\
&+ x^{68} + x^{66} + x^{64} + x^{58} + x^{50} + x^{48} + x^{44} + x^{42} + x^{40} + x^{34} + x^{32}\\
&+ x^{30} + x^{26} + x^{24} + x^{22} + x^{16} + x^{14} + x^{12} + x^{4},\\
p_{12}(x) =\ & x^{104} + x^{102} + x^{100} + x^{96} + x^{56} + x^{54} + x^{52} + x^{48} + x^{8} + x^{6} + x^{4} + 1,
\end{aligned}
$$

and the initial terms are [0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0].

For $\phi(W^e, 0, 0)$:

$$
\begin{aligned}
p_0(x) =\ & x^{120} + x^{116} + x^{108} + x^{106} + x^{100} + x^{98} + x^{90} + x^{88} + x^{78} + x^{76} + x^{64}\\
&+ x^{58} + x^{52} + x^{50} + x^{44} + x^{42} + x^{36} + x^{28} + x^{24},\\
p_3(x) =\ & x^{108} + x^{106} + x^{102} + x^{98} + x^{94} + x^{92} + x^{90} + x^{88} + x^{84} + x^{80} + x^{72}\\
&+ x^{68} + x^{60} + x^{56} + x^{48} + x^{44} + x^{34} + x^{32} + x^{30} + x^{26} + x^{24} + x^{22}\\
&+ x^{18} + x^{16},\\
p_6(x) =\ & x^{108} + x^{106} + x^{104} + x^{102} + x^{98} + x^{96} + x^{94} + x^{88} + x^{84} + x^{82} + x^{80}\\
&+ x^{78} + x^{76} + x^{74} + x^{70} + x^{66} + x^{64} + x^{60} + x^{58} + x^{52} + x^{50} + x^{48}
\end{aligned}
$$

$$+ x^{46} + x^{42} + x^{40} + x^{32} + x^{30} + x^{28} + x^{18} + x^{8} + x^{6} + 1,$$
$$p_9(x) = x^{104} + x^{102} + x^{94} + x^{92} + x^{90} + x^{86} + x^{84} + x^{82} + x^{76} + x^{74} + x^{72} + x^{68} + x^{66} + x^{64} + x^{58} + x^{50} + x^{48} + x^{44} + x^{42} + x^{40} + x^{34} + x^{32} + x^{30} + x^{26} + x^{24} + x^{22} + x^{16} + x^{14} + x^{12} + x^{4},$$
$$p_{12}(x) = x^{104} + x^{102} + x^{100} + x^{96} + x^{56} + x^{54} + x^{52} + x^{48} + x^{8} + x^{6} + x^{4} + 1,$$

and the initial terms are [1, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 1, 0, 1, 0].

For $\phi(W^e, 0, 1)$:

$$p_0(x) = x^{129} + x^{125} + x^{124} + x^{123} + x^{122} + x^{118} + x^{117} + x^{115} + x^{113} + x^{112} + x^{111} + x^{109} + x^{105} + x^{102} + x^{97} + x^{95} + x^{94} + x^{92} + x^{89} + x^{87} + x^{84} + x^{82} + x^{81} + x^{80} + x^{79} + x^{77} + x^{76} + x^{73} + x^{71} + x^{70} + x^{68} + x^{64} + x^{63} + x^{61} + x^{55} + x^{53} + x^{51} + x^{46} + x^{43} + x^{38} + x^{37} + x^{36} + x^{33},$$
$$p_3(x) = x^{122} + x^{118} + x^{116} + x^{106} + x^{104} + x^{102} + x^{94} + x^{92} + x^{90} + x^{88} + x^{86} + x^{80} + x^{78} + x^{72} + x^{70} + x^{64} + x^{62} + x^{56} + x^{54} + x^{50} + x^{48} + x^{44} + x^{40} + x^{38} + x^{34} + x^{24} + x^{20} + x^{18},$$
$$p_6(x) = x^{120} + x^{119} + x^{117} + x^{113} + x^{112} + x^{110} + x^{108} + x^{107} + x^{106} + x^{103} + x^{101} + x^{97} + x^{96} + x^{94} + x^{92} + x^{91} + x^{90} + x^{87} + x^{85} + x^{84} + x^{83} + x^{80} + x^{78} + x^{77} + x^{75} + x^{72} + x^{70} + x^{69} + x^{67} + x^{64} + x^{62} + x^{61} + x^{59} + x^{56} + x^{54} + x^{53} + x^{51} + x^{47} + x^{46} + x^{43} + x^{41} + x^{37} + x^{36} + x^{34} + x^{32} + x^{31} + x^{30} + x^{27} + x^{25} + x^{21} + x^{20} + x^{18} + x^{16} + x^{15} + x^{14} + x^{12},$$
$$p_9(x) = x^{118} + x^{116} + x^{114} + x^{112} + x^{106} + x^{104} + x^{102} + x^{94} + x^{88} + x^{76} + x^{68} + x^{66} + x^{64} + x^{56} + x^{54} + x^{52} + x^{46} + x^{34} + x^{28} + x^{22} + x^{20} + x^{18} + x^{8} + x^{6},$$
$$p_{12}(x) = x^{116} + x^{115} + x^{114} + x^{111} + x^{110} + x^{107} + x^{106} + x^{104} + x^{100} + x^{99} + x^{98} + x^{96} + x^{68} + x^{67} + x^{66} + x^{63} + x^{62} + x^{59} + x^{58} + x^{56} + x^{52} + x^{51} + x^{50} + x^{48} + x^{20} + x^{19} + x^{18} + x^{15} + x^{14} + x^{11} + x^{10} + x^{8} + x^{4} + x^{3} + x^{2} + 1,$$

and the initial terms are [0, 0, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0].

For $\phi(W^e, 1, 0)$:

$$p_0(x) = x^{129} + x^{125} + x^{124} + x^{123} + x^{122} + x^{118} + x^{117} + x^{115} + x^{113} + x^{112} + x^{111} + x^{109} + x^{105} + x^{102} + x^{97} + x^{95} + x^{94} + x^{92} + x^{89} + x^{87} + x^{84} + x^{82} + x^{81} + x^{80} + x^{79} + x^{77} + x^{76} + x^{73} + x^{71} + x^{70} + x^{68} + x^{64} + x^{63} + x^{61} + x^{55} + x^{53} + x^{51} + x^{46} + x^{43} + x^{38} + x^{37} + x^{36} + x^{33},$$

$$\begin{aligned}
p_3(x) &= x^{122} + x^{118} + x^{116} + x^{106} + x^{104} + x^{102} + x^{94} + x^{92} + x^{90} + x^{88} \\
&\quad + x^{86} + x^{80} + x^{78} + x^{72} + x^{70} + x^{64} + x^{62} + x^{56} + x^{54} + x^{50} + x^{48} \\
&\quad + x^{44} + x^{40} + x^{38} + x^{34} + x^{24} + x^{20} + x^{18}, \\
p_6(x) &= x^{120} + x^{119} + x^{117} + x^{113} + x^{112} + x^{110} + x^{108} + x^{107} + x^{106} + x^{103} \\
&\quad + x^{101} + x^{97} + x^{96} + x^{94} + x^{92} + x^{91} + x^{90} + x^{87} + x^{85} + x^{84} + x^{83} \\
&\quad + x^{80} + x^{78} + x^{77} + x^{75} + x^{72} + x^{70} + x^{69} + x^{67} + x^{64} + x^{62} + x^{61} \\
&\quad + x^{59} + x^{56} + x^{54} + x^{53} + x^{51} + x^{47} + x^{46} + x^{43} + x^{41} + x^{37} + x^{36} \\
&\quad + x^{34} + x^{32} + x^{31} + x^{30} + x^{27} + x^{25} + x^{21} + x^{20} + x^{18} + x^{16} + x^{15} \\
&\quad + x^{14} + x^{12}, \\
p_9(x) &= x^{118} + x^{116} + x^{114} + x^{112} + x^{106} + x^{104} + x^{102} + x^{94} + x^{88} + x^{76} \\
&\quad + x^{68} + x^{66} + x^{64} + x^{56} + x^{54} + x^{52} + x^{46} + x^{34} + x^{28} + x^{22} + x^{20} \\
&\quad + x^{18} + x^{8} + x^{6}, \\
p_{12}(x) &= x^{116} + x^{115} + x^{114} + x^{111} + x^{110} + x^{107} + x^{106} + x^{104} + x^{100} + x^{99} \\
&\quad + x^{98} + x^{96} + x^{68} + x^{67} + x^{66} + x^{63} + x^{62} + x^{59} + x^{58} + x^{56} + x^{52} \\
&\quad + x^{51} + x^{50} + x^{48} + x^{20} + x^{19} + x^{18} + x^{15} + x^{14} + x^{11} + x^{10} + x^{8} \\
&\quad + x^{4} + x^{3} + x^{2} + 1,
\end{aligned}$$

and the initial terms are [0, 0, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0].

For $\phi(W^e, 1, 1)$:

$$\begin{aligned}
p_0(x) &= x^{138} + x^{134} + x^{128} + x^{124} + x^{122} + x^{116} + x^{114} + x^{112} + x^{106} + x^{102} \\
&\quad + x^{100} + x^{94} + x^{84} + x^{80} + x^{78} + x^{76} + x^{74} + x^{66} + x^{64} + x^{54} + x^{48} \\
&\quad + x^{46} + x^{42}, \\
p_3(x) &= x^{130} + x^{122} + x^{118} + x^{116} + x^{110} + x^{108} + x^{100} + x^{98} + x^{96} + x^{94} \\
&\quad + x^{92} + x^{82} + x^{80} + x^{76} + x^{72} + x^{70} + x^{68} + x^{64} + x^{60} + x^{56} + x^{52} \\
&\quad + x^{50} + x^{48} + x^{40} + x^{38} + x^{34} + x^{32} + x^{26} + x^{16} + x^{12}, \\
p_6(x) &= x^{130} + x^{126} + x^{118} + x^{116} + x^{114} + x^{112} + x^{106} + x^{104} + x^{98} + x^{88} \\
&\quad + x^{86} + x^{78} + x^{74} + x^{72} + x^{70} + x^{68} + x^{66} + x^{64} + x^{62} + x^{60} + x^{52} \\
&\quad + x^{50} + x^{38} + x^{36} + x^{32} + x^{30} + x^{28} + x^{22} + x^{20} + x^{18} + x^{12} + x^{10} \\
&\quad + x^{4} + 1, \\
p_9(x) &= x^{128} + x^{124} + x^{122} + x^{118} + x^{116} + x^{108} + x^{106} + x^{102} + x^{100} + x^{96} \\
&\quad + x^{92} + x^{86} + x^{84} + x^{80} + x^{78} + x^{76} + x^{70} + x^{66} + x^{58} + x^{56} + x^{54} \\
&\quad + x^{52} + x^{50} + x^{44} + x^{42} + x^{36} + x^{28} + x^{24} + x^{22} + x^{20} + x^{18} + x^{14} \\
&\quad + x^{12} + x^{10} + x^{8} + x^{4}, \\
p_{12}(x) &= x^{128} + x^{120} + x^{112} + x^{96} + x^{80} + x^{72} + x^{64} + x^{48} + x^{32} + x^{24} + x^{16} \\
&\quad + 1,
\end{aligned}$$

and the initial terms are [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0].

For $\phi(M^o, 0, 0)$:

$$
\begin{aligned}
p_0(x) = {} & x^{129} + x^{126} + x^{125} + x^{124} + x^{122} + x^{120} + x^{118} + x^{117} + x^{116} + x^{111} \\
& + x^{109} + x^{108} + x^{106} + x^{103} + x^{102} + x^{101} + x^{100} + x^{97} + x^{94} + x^{91} \\
& + x^{89} + x^{87} + x^{86} + x^{84} + x^{83} + x^{80} + x^{77} + x^{75} + x^{74} + x^{73} + x^{72} \\
& + x^{71} + x^{65} + x^{64} + x^{61} + x^{60} + x^{58} + x^{57} + x^{56} + x^{54} + x^{52} + x^{43} \\
& + x^{41} + x^{35} + x^{34} + x^{33} + x^{27} + x^{26} + x^{24}, \\
p_3(x) = {} & x^{124} + x^{122} + x^{121} + x^{114} + x^{113} + x^{112} + x^{109} + x^{106} + x^{105} + x^{102} \\
& + x^{98} + x^{97} + x^{92} + x^{90} + x^{88} + x^{84} + x^{83} + x^{76} + x^{75} + x^{68} + x^{67} \\
& + x^{60} + x^{59} + x^{51} + x^{50} + x^{49} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{37} \\
& + x^{36} + x^{35} + x^{34} + x^{33} + x^{30} + x^{28} + x^{27} + x^{26} + x^{25} + x^{19} + x^{18} \\
& + x^{16}, \\
p_6(x) = {} & x^{124} + x^{122} + x^{121} + x^{115} + x^{114} + x^{111} + x^{107} + x^{106} + x^{104} + x^{102} \\
& + x^{101} + x^{99} + x^{98} + x^{97} + x^{96} + x^{94} + x^{90} + x^{86} + x^{85} + x^{83} + x^{80} \\
& + x^{77} + x^{73} + x^{71} + x^{70} + x^{68} + x^{67} + x^{65} + x^{64} + x^{63} + x^{61} + x^{59} \\
& + x^{56} + x^{53} + x^{51} + x^{48} + x^{47} + x^{46} + x^{44} + x^{42} + x^{41} + x^{40} + x^{37} \\
& + x^{34} + x^{30} + x^{28} + x^{23} + x^{20} + x^{19} + x^{18} + x^{17} + x^{16} + x^{15} + x^{14} \\
& + x^{4} + x^{3} + x^{2} + 1, \\
p_9(x) = {} & x^{124} + x^{123} + x^{122} + x^{120} + x^{116} + x^{115} + x^{114} + x^{112} + x^{108} + x^{107} \\
& + x^{106} + x^{104} + x^{76} + x^{75} + x^{74} + x^{72} + x^{68} + x^{67} + x^{66} + x^{64} + x^{60} \\
& + x^{59} + x^{58} + x^{56} + x^{28} + x^{27} + x^{26} + x^{24} + x^{20} + x^{19} + x^{18} + x^{16} \\
& + x^{12} + x^{11} + x^{10} + x^{8}, \\
p_{12}(x) = {} & x^{124} + x^{123} + x^{122} + x^{120} + x^{112} + x^{111} + x^{110} + x^{108} + x^{100} + x^{99} \\
& + x^{98} + x^{96} + x^{76} + x^{75} + x^{74} + x^{72} + x^{64} + x^{63} + x^{62} + x^{60} + x^{52} \\
& + x^{51} + x^{50} + x^{48} + x^{28} + x^{27} + x^{26} + x^{24} + x^{16} + x^{15} + x^{14} + x^{12} \\
& + x^{4} + x^{3} + x^{2} + 1,
\end{aligned}
$$

and the initial terms are [1, 0, 0, 0, 1, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 0].

For $\phi(M^o, 0, 1)$:

$$
\begin{aligned}
p_0(x) = {} & x^{128} + x^{126} + x^{124} + x^{123} + x^{117} + x^{114} + x^{111} + x^{110} + x^{105} + x^{102} \\
& + x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{94} + x^{93} + x^{91} + x^{88} + x^{85} + x^{81} \\
& + x^{80} + x^{78} + x^{76} + x^{75} + x^{74} + x^{72} + x^{67} + x^{65} + x^{62} + x^{59} + x^{58} \\
& + x^{57} + x^{56} + x^{54} + x^{51} + x^{48} + x^{47} + x^{46} + x^{45} + x^{43} + x^{42} + x^{37} \\
& + x^{36} + x^{34} + x^{33}, \\
p_3(x) = {} & x^{114} + x^{113} + x^{112} + x^{109} + x^{108} + x^{106} + x^{104} + x^{103} + x^{101} + x^{97} \\
& + x^{96} + x^{93} + x^{92} + x^{89} + x^{87} + x^{84} + x^{82} + x^{81} + x^{79} + x^{76} + x^{74} \\
& + x^{73} + x^{71} + x^{68} + x^{66} + x^{65} + x^{63} + x^{60} + x^{58} + x^{57} + x^{55} + x^{52}
\end{aligned}
$$

$$
\begin{aligned}
&+ x^{50} + x^{49} + x^{47} + x^{44} + x^{40} + x^{39} + x^{37} + x^{33} + x^{32} + x^{29} + x^{28}\\
&+ x^{26} + x^{24} + x^{23} + x^{21} + x^{18},\\
p_6(x) &= x^{116} + x^{114} + x^{110} + x^{104} + x^{100} + x^{98} + x^{94} + x^{88} + x^{84} + x^{82} + x^{80}\\
&+ x^{74} + x^{72} + x^{66} + x^{64} + x^{58} + x^{56} + x^{50} + x^{48} + x^{44} + x^{40} + x^{38}\\
&+ x^{34} + x^{28} + x^{24} + x^{22} + x^{18} + x^{12},\\
p_9(x) &= x^{118} + x^{117} + x^{115} + x^{111} + x^{110} + x^{107} + x^{105} + x^{102} + x^{70} + x^{69}\\
&+ x^{67} + x^{63} + x^{62} + x^{59} + x^{57} + x^{54} + x^{22} + x^{21} + x^{19} + x^{15} + x^{14}\\
&+ x^{11} + x^{9} + x^{6},\\
p_{12}(x) &= x^{120} + x^{108} + x^{96} + x^{72} + x^{60} + x^{48} + x^{24} + x^{12} + 1,
\end{aligned}
$$

and the initial terms are [0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 0].

For $\phi(M^o, 1, 0)$:

$$
\begin{aligned}
p_0(x) &= x^{138} + x^{135} + x^{134} + x^{132} + x^{130} + x^{127} + x^{125} + x^{124} + x^{122} + x^{119}\\
&+ x^{115} + x^{113} + x^{109} + x^{108} + x^{107} + x^{106} + x^{104} + x^{103} + x^{101}\\
&+ x^{99} + x^{96} + x^{94} + x^{89} + x^{88} + x^{86} + x^{85} + x^{84} + x^{83} + x^{78} + x^{77}\\
&+ x^{76} + x^{74} + x^{73} + x^{72} + x^{71} + x^{70} + x^{69} + x^{68} + x^{62} + x^{60} + x^{59}\\
&+ x^{57} + x^{55} + x^{53} + x^{47} + x^{46} + x^{44} + x^{43} + x^{42} + x^{41} + x^{39} + x^{35}\\
&+ x^{33},\\
p_3(x) &= x^{130} + x^{129} + x^{128} + x^{126} + x^{120} + x^{119} + x^{118} + x^{115} + x^{113} + x^{112}\\
&+ x^{111} + x^{108} + x^{106} + x^{105} + x^{104} + x^{101} + x^{99} + x^{98} + x^{97} + x^{94}\\
&+ x^{92} + x^{91} + x^{89} + x^{88} + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{81}\\
&+ x^{80} + x^{79} + x^{78} + x^{77} + x^{76} + x^{75} + x^{74} + x^{73} + x^{72} + x^{71} + x^{70}\\
&+ x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{64} + x^{63} + x^{62} + x^{61} + x^{60} + x^{59}\\
&+ x^{55} + x^{53} + x^{52} + x^{51} + x^{50} + x^{49} + x^{45} + x^{44} + x^{42} + x^{38} + x^{37}\\
&+ x^{35} + x^{31} + x^{30} + x^{28} + x^{24} + x^{23} + x^{21} + x^{18},\\
p_6(x) &= x^{132} + x^{130} + x^{128} + x^{124} + x^{120} + x^{118} + x^{116} + x^{110} + x^{108} + x^{102}\\
&+ x^{100} + x^{96} + x^{88} + x^{86} + x^{82} + x^{80} + x^{78} + x^{76} + x^{74} + x^{72} + x^{70}\\
&+ x^{68} + x^{66} + x^{64} + x^{62} + x^{54} + x^{50} + x^{42} + x^{40} + x^{34} + x^{32} + x^{26}\\
&+ x^{22} + x^{20} + x^{18} + x^{12},\\
p_9(x) &= x^{134} + x^{133} + x^{131} + x^{130} + x^{129} + x^{125} + x^{123} + x^{122} + x^{121} + x^{118}\\
&+ x^{114} + x^{113} + x^{111} + x^{107} + x^{105} + x^{102} + x^{86} + x^{85} + x^{83} + x^{82}\\
&+ x^{81} + x^{77} + x^{75} + x^{74} + x^{73} + x^{70} + x^{66} + x^{65} + x^{63} + x^{59} + x^{57}\\
&+ x^{54} + x^{38} + x^{37} + x^{35} + x^{34} + x^{33} + x^{29} + x^{27} + x^{26} + x^{25} + x^{22}\\
&+ x^{18} + x^{17} + x^{15} + x^{11} + x^{9} + x^{6},\\
p_{12}(x) &= x^{136} + x^{132} + x^{128} + x^{124} + x^{116} + x^{112} + x^{104} + x^{96} + x^{88} + x^{84}\\
&+ x^{80} + x^{76} + x^{68} + x^{64} + x^{56} + x^{48} + x^{40} + x^{36} + x^{32} + x^{28} + x^{20}
\end{aligned}
$$

$$+ x^{16} + x^8 + 1,$$

and the initial terms are [0, 0, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 0, 0, 1, 0].

For $\phi(M^o, 1, 1)$:

$$\begin{aligned}
p_0(x) = {} & x^{129} + x^{123} + x^{121} + x^{120} + x^{119} + x^{118} + x^{114} + x^{111} + x^{110} + x^{109} \\
& + x^{106} + x^{100} + x^{95} + x^{94} + x^{90} + x^{86} + x^{83} + x^{79} + x^{78} + x^{76} + x^{73} \\
& + x^{72} + x^{71} + x^{64} + x^{63} + x^{58} + x^{57} + x^{54} + x^{49} + x^{48} + x^{46} + x^{43} \\
& + x^{42}, \\
p_3(x) = {} & x^{124} + x^{122} + x^{121} + x^{120} + x^{119} + x^{117} + x^{116} + x^{115} + x^{112} + x^{107} \\
& + x^{106} + x^{105} + x^{104} + x^{101} + x^{100} + x^{98} + x^{95} + x^{89} + x^{86} + x^{81} \\
& + x^{78} + x^{73} + x^{70} + x^{65} + x^{62} + x^{57} + x^{54} + x^{52} + x^{50} + x^{48} + x^{47} \\
& + x^{46} + x^{45} + x^{44} + x^{43} + x^{41} + x^{40} + x^{38} + x^{35} + x^{34} + x^{32} + x^{30} \\
& + x^{29} + x^{28} + x^{26} + x^{25} + x^{23} + x^{22}, \\
p_6(x) = {} & x^{124} + x^{122} + x^{121} + x^{120} + x^{119} + x^{117} + x^{116} + x^{113} + x^{112} + x^{104} \\
& + x^{103} + x^{102} + x^{99} + x^{98} + x^{96} + x^{95} + x^{94} + x^{92} + x^{90} + x^{80} + x^{79} \\
& + x^{74} + x^{73} + x^{72} + x^{70} + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{59} + x^{58} \\
& + x^{55} + x^{51} + x^{50} + x^{48} + x^{47} + x^{46} + x^{43} + x^{42} + x^{40} + x^{35} + x^{34} \\
& + x^{32} + x^{30} + x^{28} + x^{26} + x^{25} + x^{24} + x^{23} + x^{21} + x^{19} + x^{17} + x^{11} \\
& + x^{10} + x^8 + x^4 + x^3 + x^2 + 1, \\
p_9(x) = {} & x^{124} + x^{123} + x^{122} + x^{120} + x^{116} + x^{115} + x^{114} + x^{112} + x^{108} + x^{107} \\
& + x^{106} + x^{104} + x^{76} + x^{75} + x^{74} + x^{72} + x^{68} + x^{67} + x^{66} + x^{64} + x^{60} \\
& + x^{59} + x^{58} + x^{56} + x^{28} + x^{27} + x^{26} + x^{24} + x^{20} + x^{19} + x^{18} + x^{16} \\
& + x^{12} + x^{11} + x^{10} + x^8, \\
p_{12}(x) = {} & x^{124} + x^{123} + x^{122} + x^{120} + x^{112} + x^{111} + x^{110} + x^{108} + x^{100} + x^{99} \\
& + x^{98} + x^{96} + x^{76} + x^{75} + x^{74} + x^{72} + x^{64} + x^{63} + x^{62} + x^{60} + x^{52} \\
& + x^{51} + x^{50} + x^{48} + x^{28} + x^{27} + x^{26} + x^{24} + x^{16} + x^{15} + x^{14} + x^{12} \\
& + x^4 + x^3 + x^2 + 1,
\end{aligned}$$

and the initial terms are [0, 0, 0, 0, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 0].

For $\phi(W^o, 0, 0)$:

$$\begin{aligned}
p_0(x) = {} & x^{129} + x^{126} + x^{125} + x^{124} + x^{122} + x^{120} + x^{118} + x^{117} + x^{116} + x^{111} \\
& + x^{109} + x^{108} + x^{106} + x^{103} + x^{102} + x^{101} + x^{100} + x^{97} + x^{94} + x^{91} \\
& + x^{89} + x^{87} + x^{86} + x^{84} + x^{83} + x^{80} + x^{77} + x^{75} + x^{74} + x^{73} + x^{72} \\
& + x^{71} + x^{65} + x^{64} + x^{61} + x^{60} + x^{58} + x^{57} + x^{56} + x^{54} + x^{52} + x^{43} \\
& + x^{41} + x^{35} + x^{34} + x^{33} + x^{27} + x^{26} + x^{24}, \\
p_3(x) = {} & x^{124} + x^{122} + x^{121} + x^{114} + x^{113} + x^{112} + x^{109} + x^{106} + x^{105} + x^{102} \\
& + x^{98} + x^{97} + x^{92} + x^{90} + x^{88} + x^{84} + x^{83} + x^{76} + x^{75} + x^{68} + x^{67}
\end{aligned}$$

$$
\begin{aligned}
&+ x^{60} + x^{59} + x^{51} + x^{50} + x^{49} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{37}\\
&+ x^{36} + x^{35} + x^{34} + x^{33} + x^{30} + x^{28} + x^{27} + x^{26} + x^{25} + x^{19} + x^{18}\\
&+ x^{16},\\
p_6(x) &= x^{124} + x^{122} + x^{121} + x^{115} + x^{114} + x^{111} + x^{107} + x^{106} + x^{104} + x^{102}\\
&+ x^{101} + x^{99} + x^{98} + x^{97} + x^{96} + x^{94} + x^{90} + x^{86} + x^{85} + x^{83} + x^{80}\\
&+ x^{77} + x^{73} + x^{71} + x^{70} + x^{68} + x^{67} + x^{65} + x^{64} + x^{63} + x^{61} + x^{59}\\
&+ x^{56} + x^{53} + x^{51} + x^{48} + x^{47} + x^{46} + x^{44} + x^{42} + x^{41} + x^{40} + x^{37}\\
&+ x^{34} + x^{30} + x^{28} + x^{23} + x^{20} + x^{19} + x^{18} + x^{17} + x^{16} + x^{15} + x^{14}\\
&+ x^{4} + x^{3} + x^{2} + 1,\\
p_9(x) &= x^{124} + x^{123} + x^{122} + x^{120} + x^{116} + x^{115} + x^{114} + x^{112} + x^{108} + x^{107}\\
&+ x^{106} + x^{104} + x^{76} + x^{75} + x^{74} + x^{72} + x^{68} + x^{67} + x^{66} + x^{64} + x^{60}\\
&+ x^{59} + x^{58} + x^{56} + x^{28} + x^{27} + x^{26} + x^{24} + x^{20} + x^{19} + x^{18} + x^{16}\\
&+ x^{12} + x^{11} + x^{10} + x^{8},\\
p_{12}(x) &= x^{124} + x^{123} + x^{122} + x^{120} + x^{112} + x^{111} + x^{110} + x^{108} + x^{100} + x^{99}\\
&+ x^{98} + x^{96} + x^{76} + x^{75} + x^{74} + x^{72} + x^{64} + x^{63} + x^{62} + x^{60} + x^{52}\\
&+ x^{51} + x^{50} + x^{48} + x^{28} + x^{27} + x^{26} + x^{24} + x^{16} + x^{15} + x^{14} + x^{12}\\
&+ x^{4} + x^{3} + x^{2} + 1,
\end{aligned}
$$

and the initial terms are [1, 0, 0, 0, 1, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 0].

For $\phi(W^o, 0, 1)$:

$$
\begin{aligned}
p_0(x) &= x^{138} + x^{135} + x^{134} + x^{132} + x^{130} + x^{127} + x^{125} + x^{124} + x^{122} + x^{119}\\
&+ x^{115} + x^{113} + x^{109} + x^{108} + x^{107} + x^{106} + x^{104} + x^{103} + x^{101}\\
&+ x^{99} + x^{96} + x^{94} + x^{89} + x^{88} + x^{86} + x^{85} + x^{84} + x^{83} + x^{78} + x^{77}\\
&+ x^{76} + x^{74} + x^{73} + x^{72} + x^{71} + x^{70} + x^{69} + x^{68} + x^{62} + x^{60} + x^{59}\\
&+ x^{57} + x^{55} + x^{53} + x^{47} + x^{46} + x^{44} + x^{43} + x^{42} + x^{41} + x^{39} + x^{35}\\
&+ x^{33},\\
p_3(x) &= x^{130} + x^{129} + x^{128} + x^{126} + x^{120} + x^{119} + x^{118} + x^{115} + x^{113} + x^{112}\\
&+ x^{111} + x^{108} + x^{106} + x^{105} + x^{104} + x^{101} + x^{99} + x^{98} + x^{97} + x^{94}\\
&+ x^{92} + x^{91} + x^{89} + x^{88} + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{81}\\
&+ x^{80} + x^{79} + x^{78} + x^{77} + x^{76} + x^{75} + x^{74} + x^{73} + x^{72} + x^{71} + x^{70}\\
&+ x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{64} + x^{63} + x^{62} + x^{61} + x^{60} + x^{59}\\
&+ x^{55} + x^{53} + x^{52} + x^{51} + x^{50} + x^{49} + x^{45} + x^{44} + x^{42} + x^{38} + x^{37}\\
&+ x^{35} + x^{31} + x^{30} + x^{28} + x^{24} + x^{23} + x^{21} + x^{18},\\
p_6(x) &= x^{132} + x^{130} + x^{128} + x^{124} + x^{120} + x^{118} + x^{116} + x^{110} + x^{108} + x^{102}\\
&+ x^{100} + x^{96} + x^{88} + x^{86} + x^{82} + x^{80} + x^{78} + x^{76} + x^{74} + x^{72} + x^{70}\\
&+ x^{68} + x^{66} + x^{64} + x^{62} + x^{54} + x^{50} + x^{42} + x^{40} + x^{34} + x^{32} + x^{26}
\end{aligned}
$$

$$
\begin{aligned}
&+ x^{22} + x^{20} + x^{18} + x^{12},\\
p_9(x) &= x^{134} + x^{133} + x^{131} + x^{130} + x^{129} + x^{125} + x^{123} + x^{122} + x^{121} + x^{118}\\
&+ x^{114} + x^{113} + x^{111} + x^{107} + x^{105} + x^{102} + x^{86} + x^{85} + x^{83} + x^{82}\\
&+ x^{81} + x^{77} + x^{75} + x^{74} + x^{73} + x^{70} + x^{66} + x^{65} + x^{63} + x^{59} + x^{57}\\
&+ x^{54} + x^{38} + x^{37} + x^{35} + x^{34} + x^{33} + x^{29} + x^{27} + x^{26} + x^{25} + x^{22}\\
&+ x^{18} + x^{17} + x^{15} + x^{11} + x^{9} + x^{6},\\
p_{12}(x) &= x^{136} + x^{132} + x^{128} + x^{124} + x^{116} + x^{112} + x^{104} + x^{96} + x^{88} + x^{84}\\
&+ x^{80} + x^{76} + x^{68} + x^{64} + x^{56} + x^{48} + x^{40} + x^{36} + x^{32} + x^{28} + x^{20}\\
&+ x^{16} + x^{8} + 1,
\end{aligned}
$$

and the initial terms are [0, 0, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 0, 0, 1, 0].

For $\phi(W^o, 1, 0)$:

$$
\begin{aligned}
p_0(x) &= x^{128} + x^{126} + x^{124} + x^{123} + x^{117} + x^{114} + x^{111} + x^{110} + x^{105} + x^{102}\\
&+ x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{94} + x^{93} + x^{91} + x^{88} + x^{85} + x^{81}\\
&+ x^{80} + x^{78} + x^{76} + x^{75} + x^{74} + x^{72} + x^{67} + x^{65} + x^{62} + x^{59} + x^{58}\\
&+ x^{57} + x^{56} + x^{54} + x^{51} + x^{48} + x^{47} + x^{46} + x^{45} + x^{43} + x^{42} + x^{37}\\
&+ x^{36} + x^{34} + x^{33},\\
p_3(x) &= x^{114} + x^{113} + x^{112} + x^{109} + x^{108} + x^{106} + x^{104} + x^{103} + x^{101} + x^{97}\\
&+ x^{96} + x^{93} + x^{92} + x^{89} + x^{87} + x^{84} + x^{82} + x^{81} + x^{79} + x^{76} + x^{74}\\
&+ x^{73} + x^{71} + x^{68} + x^{66} + x^{65} + x^{63} + x^{60} + x^{58} + x^{57} + x^{55} + x^{52}\\
&+ x^{50} + x^{49} + x^{47} + x^{44} + x^{40} + x^{39} + x^{37} + x^{33} + x^{32} + x^{29} + x^{28}\\
&+ x^{26} + x^{24} + x^{23} + x^{21} + x^{18},\\
p_6(x) &= x^{116} + x^{114} + x^{110} + x^{104} + x^{100} + x^{98} + x^{94} + x^{88} + x^{84} + x^{82} + x^{80}\\
&+ x^{74} + x^{72} + x^{66} + x^{64} + x^{58} + x^{56} + x^{50} + x^{48} + x^{44} + x^{40} + x^{38}\\
&+ x^{34} + x^{28} + x^{24} + x^{22} + x^{18} + x^{12},\\
p_9(x) &= x^{118} + x^{117} + x^{115} + x^{111} + x^{110} + x^{107} + x^{105} + x^{102} + x^{70} + x^{69}\\
&+ x^{67} + x^{63} + x^{62} + x^{59} + x^{57} + x^{54} + x^{22} + x^{21} + x^{19} + x^{15} + x^{14}\\
&+ x^{11} + x^{9} + x^{6},\\
p_{12}(x) &= x^{120} + x^{108} + x^{96} + x^{72} + x^{60} + x^{48} + x^{24} + x^{12} + 1,
\end{aligned}
$$

and the initial terms are [0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 0].

For $\phi(W^o, 1, 1)$:

$$
\begin{aligned}
p_0(x) &= x^{129} + x^{123} + x^{121} + x^{120} + x^{119} + x^{118} + x^{114} + x^{111} + x^{110} + x^{109}\\
&+ x^{106} + x^{100} + x^{95} + x^{94} + x^{90} + x^{86} + x^{83} + x^{79} + x^{78} + x^{76} + x^{73}\\
&+ x^{72} + x^{71} + x^{64} + x^{63} + x^{58} + x^{57} + x^{54} + x^{49} + x^{48} + x^{46} + x^{43}\\
&+ x^{42},\\
p_3(x) &= x^{124} + x^{122} + x^{121} + x^{120} + x^{119} + x^{117} + x^{116} + x^{115} + x^{112} + x^{107}
\end{aligned}
$$

$$
\begin{aligned}
&+ x^{106} + x^{105} + x^{104} + x^{101} + x^{100} + x^{98} + x^{95} + x^{89} + x^{86} + x^{81}\\
&+ x^{78} + x^{73} + x^{70} + x^{65} + x^{62} + x^{57} + x^{54} + x^{52} + x^{50} + x^{48} + x^{47}\\
&+ x^{46} + x^{45} + x^{44} + x^{43} + x^{41} + x^{40} + x^{38} + x^{35} + x^{34} + x^{32} + x^{30}\\
&+ x^{29} + x^{28} + x^{26} + x^{25} + x^{23} + x^{22},\\
p_6(x) = {}& x^{124} + x^{122} + x^{121} + x^{120} + x^{119} + x^{117} + x^{116} + x^{113} + x^{112} + x^{104}\\
&+ x^{103} + x^{102} + x^{99} + x^{98} + x^{96} + x^{95} + x^{94} + x^{92} + x^{90} + x^{80} + x^{79}\\
&+ x^{74} + x^{73} + x^{72} + x^{70} + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{59} + x^{58}\\
&+ x^{55} + x^{51} + x^{50} + x^{48} + x^{47} + x^{46} + x^{43} + x^{42} + x^{40} + x^{35} + x^{34}\\
&+ x^{32} + x^{30} + x^{28} + x^{26} + x^{25} + x^{24} + x^{23} + x^{21} + x^{19} + x^{17} + x^{11}\\
&+ x^{10} + x^{8} + x^{4} + x^{3} + x^{2} + 1,\\
p_9(x) = {}& x^{124} + x^{123} + x^{122} + x^{120} + x^{116} + x^{115} + x^{114} + x^{112} + x^{108} + x^{107}\\
&+ x^{106} + x^{104} + x^{76} + x^{75} + x^{74} + x^{72} + x^{68} + x^{67} + x^{66} + x^{64} + x^{60}\\
&+ x^{59} + x^{58} + x^{56} + x^{28} + x^{27} + x^{26} + x^{24} + x^{20} + x^{19} + x^{18} + x^{16}\\
&+ x^{12} + x^{11} + x^{10} + x^{8},\\
p_{12}(x) = {}& x^{124} + x^{123} + x^{122} + x^{120} + x^{112} + x^{111} + x^{110} + x^{108} + x^{100} + x^{99}\\
&+ x^{98} + x^{96} + x^{76} + x^{75} + x^{74} + x^{72} + x^{64} + x^{63} + x^{62} + x^{60} + x^{52}\\
&+ x^{51} + x^{50} + x^{48} + x^{28} + x^{27} + x^{26} + x^{24} + x^{16} + x^{15} + x^{14} + x^{12}\\
&+ x^{4} + x^{3} + x^{2} + 1,
\end{aligned}
$$

and the initial terms are [0, 0, 0, 0, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 0].

Below is the transition function and output function of an 2-automaton that generates $T = M^o_{0,0}$:

Transition function $(n, j) \mapsto \delta(n, j)$ $(\Lambda(n) := [\delta(n, 0), \delta(n, 1)])$:

| $n$ | $\Lambda(n)$ | $n$ | $\Lambda(n)$ | $n$ | $\Lambda(n)$ | $n$ | $\Lambda(n)$ |
|---|---|---|---|---|---|---|---|
| 0 | [1, 2] | 1111 | [1772, 1773] | 2222 | [2968, 643] | 3333 | [3105, 1974] |
| 1 | [3, 4] | 1112 | [1741, 1774] | 2223 | [2969, 181] | 3334 | [2001, 3798] |
| 2 | [5, 6] | 1113 | [666, 710] | 2224 | [1875, 2970] | 3335 | [1748, 1696] |
| 3 | [7, 8] | 1114 | [628, 1660] | 2225 | [2971, 668] | 3336 | [3799, 481] |
| 4 | [9, 10] | 1115 | [733, 1471] | 2226 | [1868, 1411] | 3337 | [3770, 693] |
| 5 | [11, 12] | 1116 | [1775, 1571] | 2227 | [727, 2972] | 3338 | [3800, 2908] |
| 6 | [13, 14] | 1117 | [1776, 676] | 2228 | [142, 665] | 3339 | [3801, 675] |
| 7 | [15, 16] | 1118 | [152, 1693] | 2229 | [2939, 742] | 3340 | [3802, 1399] |
| 8 | [17, 18] | 1119 | [197, 1777] | 2230 | [1797, 1541] | 3341 | [3803, 1712] |
| 9 | [19, 20] | 1120 | [1778, 1779] | 2231 | [1859, 1892] | 3342 | [161, 2893] |
| 10 | [6, 21] | 1121 | [1554, 1780] | 2232 | [2973, 2974] | 3343 | [1548, 2860] |
| 11 | [22, 23] | 1122 | [582, 640] | 2233 | [1694, 1694] | 3344 | [539, 1890] |
| 12 | [24, 25] | 1123 | [1781, 486] | 2234 | [1818, 2975] | 3345 | [3134, 3026] |
| 13 | [26, 27] | 1124 | [1782, 725] | 2235 | [1901, 1788] | 3346 | [3140, 3033] |
| 14 | [28, 29] | 1125 | [1783, 1579] | 2236 | [2976, 2977] | 3347 | [2991, 1452] |
| 15 | [30, 31] | 1126 | [1784, 1785] | 2237 | [2978, 1672] | 3348 | [3112, 2999] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16 | [32, 33] | 1127 | [1786, 1604] | 2238 | [1570, 1429] | 3349 | [150, 539] |
| 17 | [34, 35] | 1128 | [1787, 1750] | 2239 | [2979, 444] | 3350 | [3804, 211] |
| 18 | [36, 37] | 1129 | [1401, 1788] | 2240 | [2919, 447] | 3351 | [3805, 3806] |
| 19 | [38, 39] | 1130 | [1607, 1536] | 2241 | [2980, 1575] | 3352 | [466, 1611] |
| 20 | [40, 41] | 1131 | [1789, 624] | 2242 | [2981, 766] | 3353 | [3807, 716] |
| 21 | [12, 42] | 1132 | [461, 670] | 2243 | [497, 1885] | 3354 | [3165, 3071] |
| 22 | [43, 44] | 1133 | [193, 1790] | 2244 | [1815, 2982] | 3355 | [1521, 525] |
| 23 | [45, 46] | 1134 | [1450, 1791] | 2245 | [773, 1421] | 3356 | [3064, 1570] |
| 24 | [47, 48] | 1135 | [205, 1792] | 2246 | [2983, 2984] | 3357 | [3249, 1473] |
| 25 | [49, 50] | 1136 | [1793, 461] | 2247 | [1558, 1690] | 3358 | [1478, 3119] |
| 26 | [51, 52] | 1137 | [1794, 762] | 2248 | [595, 2876] | 3359 | [3808, 2842] |
| 27 | [53, 54] | 1138 | [1795, 1796] | 2249 | [1736, 1539] | 3360 | [3809, 1412] |
| 28 | [55, 56] | 1139 | [1797, 1798] | 2250 | [2985, 1587] | 3361 | [3097, 1731] |
| 29 | [57, 58] | 1140 | [1799, 441] | 2251 | [449, 120] | 3362 | [3202, 1813] |
| 30 | [59, 60] | 1141 | [1416, 1800] | 2252 | [2986, 1393] | 3363 | [1961, 2890] |
| 31 | [61, 62] | 1142 | [143, 592] | 2253 | [2987, 526] | 3364 | [1820, 481] |
| 32 | [63, 5] | 1143 | [1626, 1801] | 2254 | [1947, 2988] | 3365 | [3787, 626] |
| 33 | [64, 65] | 1144 | [1632, 1802] | 2255 | [46, 1638] | 3366 | [3810, 2862] |
| 34 | [66, 67] | 1145 | [1803, 1804] | 2256 | [2989, 2990] | 3367 | [3259, 1452] |
| 35 | [68, 69] | 1146 | [1805, 452] | 2257 | [2991, 2985] | 3368 | [3811, 1586] |
| 36 | [70, 71] | 1147 | [1806, 1426] | 2258 | [1801, 1774] | 3369 | [629, 2875] |
| 37 | [72, 73] | 1148 | [615, 510] | 2259 | [537, 2913] | 3370 | [3093, 3124] |
| 38 | [74, 75] | 1149 | [478, 1807] | 2260 | [1887, 1588] | 3371 | [706, 3798] |
| 39 | [76, 77] | 1150 | [631, 1808] | 2261 | [2907, 1815] | 3372 | [1858, 654] |
| 40 | [78, 79] | 1151 | [527, 1809] | 2262 | [1727, 147] | 3373 | [3812, 1939] |
| 41 | [80, 81] | 1152 | [1810, 1811] | 2263 | [1954, 1764] | 3374 | [673, 3813] |
| 42 | [23, 82] | 1153 | [656, 632] | 2264 | [1656, 564] | 3375 | [3814, 544] |
| 43 | [83, 84] | 1154 | [472, 1812] | 2265 | [551, 704] | 3376 | [3815, 1458] |
| 44 | [85, 86] | 1155 | [1813, 1524] | 2266 | [2992, 1959] | 3377 | [3138, 3816] |
| 45 | [87, 88] | 1156 | [652, 757] | 2267 | [2993, 2974] | 3378 | [3193, 776] |
| 46 | [89, 90] | 1157 | [1814, 1804] | 2268 | [1783, 2994] | 3379 | [563, 683] |
| 47 | [91, 92] | 1158 | [1815, 1816] | 2269 | [499, 579] | 3380 | [3123, 1857] |
| 48 | [93, 94] | 1159 | [626, 494] | 2270 | [600, 2995] | 3381 | [3817, 1727] |
| 49 | [95, 96] | 1160 | [697, 1817] | 2271 | [556, 735] | 3382 | [3058, 3143] |
| 50 | [97, 98] | 1161 | [1818, 1515] | 2272 | [1986, 534] | 3383 | [1881, 1746] |
| 51 | [99, 100] | 1162 | [515, 1819] | 2273 | [216, 1731] | 3384 | [1732, 1655] |
| 52 | [101, 102] | 1163 | [1820, 534] | 2274 | [1639, 2996] | 3385 | [3818, 2946] |
| 53 | [103, 104] | 1164 | [1679, 1821] | 2275 | [1983, 652] | 3386 | [632, 1574] |
| 54 | [105, 106] | 1165 | [1822, 1823] | 2276 | [2997, 731] | 3387 | [3819, 3100] |
| 55 | [107, 108] | 1166 | [1471, 475] | 2277 | [2998, 1476] | 3388 | [3820, 2908] |
| 56 | [109, 110] | 1167 | [701, 1824] | 2278 | [541, 2999] | 3389 | [446, 1555] |
| 57 | [111, 112] | 1168 | [501, 1825] | 2279 | [1839, 2899] | 3390 | [3148, 1679] |
| 58 | [113, 114] | 1169 | [1826, 1420] | 2280 | [1992, 647] | 3391 | [3821, 198] |
| 59 | [115, 116] | 1170 | [1827, 561] | 2281 | [2839, 211] | 3392 | [3822, 1920] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 60 | [117, 118] | 1171 | [1828, 1443] | 2282 | [3000, 740] | 3393 | [683, 139] |
| 61 | [119, 120] | 1172 | [1829, 491] | 2283 | [1944, 3001] | 3394 | [3051, 2962] |
| 62 | [121, 122] | 1173 | [1830, 1831] | 2284 | [3002, 181] | 3395 | [447, 1506] |
| 63 | [123, 124] | 1174 | [1519, 1832] | 2285 | [3003, 3004] | 3396 | [2944, 1396] |
| 64 | [125, 126] | 1175 | [1684, 759] | 2286 | [1813, 3005] | 3397 | [3194, 1579] |
| 65 | [127, 128] | 1176 | [1833, 1834] | 2287 | [3006, 500] | 3398 | [3823, 3071] |
| 66 | [129, 130] | 1177 | [1835, 1836] | 2288 | [3007, 41] | 3399 | [3824, 1621] |
| 67 | [131, 132] | 1178 | [611, 1511] | 2289 | [1963, 3008] | 3400 | [3031, 3825] |
| 68 | [133, 134] | 1179 | [1837, 139] | 2290 | [1476, 514] | 3401 | [1594, 199] |
| 69 | [135, 136] | 1180 | [1838, 703] | 2291 | [2968, 640] | 3402 | [1634, 1451] |
| 70 | [137, 138] | 1181 | [1511, 1839] | 2292 | [3009, 2878] | 3403 | [3817, 613] |
| 71 | [139, 140] | 1182 | [1840, 195] | 2293 | [3010, 3011] | 3404 | [3241, 1760] |
| 72 | [141, 142] | 1183 | [1841, 1842] | 2294 | [2907, 3012] | 3405 | [3826, 770] |
| 73 | [143, 144] | 1184 | [1502, 1843] | 2295 | [3013, 1969] | 3406 | [2892, 2875] |
| 74 | [145, 146] | 1185 | [1757, 148] | 2296 | [3014, 204] | 3407 | [3777, 3827] |
| 75 | [147, 148] | 1186 | [1844, 1845] | 2297 | [2921, 507] | 3408 | [3828, 1589] |
| 76 | [149, 150] | 1187 | [1846, 548] | 2298 | [3015, 1988] | 3409 | [3206, 1711] |
| 77 | [151, 152] | 1188 | [1847, 1848] | 2299 | [2989, 3016] | 3410 | [3255, 1775] |
| 78 | [153, 154] | 1189 | [1849, 632] | 2300 | [758, 696] | 3411 | [3829, 191] |
| 79 | [155, 156] | 1190 | [1535, 145] | 2301 | [687, 560] | 3412 | [1746, 3070] |
| 80 | [157, 158] | 1191 | [1850, 1495] | 2302 | [1978, 2883] | 3413 | [588, 1740] |
| 81 | [159, 160] | 1192 | [1393, 189] | 2303 | [1516, 207] | 3414 | [3078, 1536] |
| 82 | [44, 161] | 1193 | [1851, 210] | 2304 | [2972, 1589] | 3415 | [3057, 3144] |
| 83 | [162, 163] | 1194 | [1852, 161] | 2305 | [748, 458] | 3416 | [3228, 1405] |
| 84 | [164, 165] | 1195 | [589, 1853] | 2306 | [581, 639] | 3417 | [1512, 1510] |
| 85 | [166, 167] | 1196 | [128, 1419] | 2307 | [3017, 1913] | 3418 | [611, 599] |
| 86 | [168, 169] | 1197 | [126, 1554] | 2308 | [164, 1732] | 3419 | [3183, 1872] |
| 87 | [170, 171] | 1198 | [1854, 708] | 2309 | [1787, 1593] | 3420 | [3830, 1708] |
| 88 | [172, 173] | 1199 | [1855, 464] | 2310 | [3018, 568] | 3421 | [3008, 1910] |
| 89 | [174, 175] | 1200 | [1856, 679] | 2311 | [3019, 1404] | 3422 | [434, 214] |
| 90 | [176, 177] | 1201 | [741, 477] | 2312 | [1447, 3020] | 3423 | [3831, 1631] |
| 91 | [178, 179] | 1202 | [1857, 472] | 2313 | [36, 3021] | 3424 | [768, 641] |
| 92 | [180, 181] | 1203 | [1858, 1699] | 2314 | [2950, 1586] | 3425 | [3832, 1773] |
| 93 | [182, 183] | 1204 | [1859, 1621] | 2315 | [1938, 3022] | 3426 | [610, 1539] |
| 94 | [184, 185] | 1205 | [436, 1860] | 2316 | [1403, 199] | 3427 | [3833, 732] |
| 95 | [186, 187] | 1206 | [1832, 214] | 2317 | [519, 685] | 3428 | [3834, 2878] |
| 96 | [188, 189] | 1207 | [1861, 700] | 2318 | [1705, 614] | 3429 | [3835, 3004] |
| 97 | [45, 190] | 1208 | [1862, 1863] | 2319 | [3023, 118] | 3430 | [3836, 3837] |
| 98 | [191, 192] | 1209 | [1864, 1608] | 2320 | [3024, 617] | 3431 | [3151, 543] |
| 99 | [193, 194] | 1210 | [190, 657] | 2321 | [3025, 3026] | 3432 | [1634, 1791] |
| 100 | [195, 196] | 1211 | [1865, 1866] | 2322 | [3027, 3028] | 3433 | [1585, 136] |
| 101 | [197, 198] | 1212 | [1867, 660] | 2323 | [749, 783] | 3434 | [1828, 1788] |
| 102 | [199, 200] | 1213 | [207, 1545] | 2324 | [1843, 2876] | 3435 | [3838, 3032] |
| 103 | [201, 202] | 1214 | [1868, 1869] | 2325 | [2949, 1679] | 3436 | [3839, 3840] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 104 | [156, 203] | 1215 | [34, 769] | 2326 | [3029, 1629] | 3437 | [783, 2931] |
| 105 | [204, 205] | 1216 | [718, 1870] | 2327 | [576, 3030] | 3438 | [506, 628] |
| 106 | [206, 207] | 1217 | [1448, 1871] | 2328 | [3031, 3032] | 3439 | [3841, 3252] |
| 107 | [208, 209] | 1218 | [1559, 1872] | 2329 | [748, 732] | 3440 | [1966, 2898] |
| 108 | [210, 211] | 1219 | [1873, 56] | 2330 | [1596, 498] | 3441 | [3842, 1930] |
| 109 | [212, 213] | 1220 | [1874, 1699] | 2331 | [641, 1514] | 3442 | [3843, 1414] |
| 110 | [214, 215] | 1221 | [1875, 1876] | 2332 | [53, 1394] | 3443 | [3844, 759] |
| 111 | [216, 217] | 1222 | [1877, 1754] | 2333 | [3033, 772] | 3444 | [2993, 3231] |
| 112 | [218, 219] | 1223 | [712, 1878] | 2334 | [507, 1735] | 3445 | [3845, 1440] |
| 113 | [220, 221] | 1224 | [1879, 1647] | 2335 | [675, 3033] | 3446 | [3846, 1746] |
| 114 | [222, 223] | 1225 | [1880, 1726] | 2336 | [2861, 3034] | 3447 | [3124, 1538] |
| 115 | [224, 225] | 1226 | [1758, 173] | 2337 | [2934, 3035] | 3448 | [3847, 2926] |
| 116 | [226, 227] | 1227 | [1743, 1779] | 2338 | [1619, 13] | 3449 | [664, 460] |
| 117 | [228, 229] | 1228 | [783, 1704] | 2339 | [622, 3036] | 3450 | [1955, 1823] |
| 118 | [230, 231] | 1229 | [1881, 1882] | 2340 | [201, 550] | 3451 | [3780, 1588] |
| 119 | [232, 233] | 1230 | [1883, 1884] | 2341 | [622, 1752] | 3452 | [3848, 1799] |
| 120 | [234, 235] | 1231 | [116, 1629] | 2342 | [1772, 1938] | 3453 | [2979, 704] |
| 121 | [236, 237] | 1232 | [1619, 1561] | 2343 | [505, 627] | 3454 | [493, 3837] |
| 122 | [238, 239] | 1233 | [1596, 1885] | 2344 | [2906, 2923] | 3455 | [495, 1696] |
| 123 | [240, 241] | 1234 | [1886, 1790] | 2345 | [688, 53] | 3456 | [3233, 1909] |
| 124 | [242, 243] | 1235 | [1887, 1888] | 2346 | [3037, 3038] | 3457 | [54, 218] |
| 125 | [244, 245] | 1236 | [1515, 206] | 2347 | [1652, 2891] | 3458 | [3849, 1651] |
| 126 | [246, 247] | 1237 | [191, 1481] | 2348 | [3039, 1755] | 3459 | [3850, 698] |
| 127 | [248, 249] | 1238 | [1536, 1889] | 2349 | [3040, 588] | 3460 | [3851, 1606] |
| 128 | [250, 251] | 1239 | [185, 1890] | 2350 | [137, 1968] | 3461 | [1864, 469] |
| 129 | [252, 253] | 1240 | [1507, 1751] | 2351 | [1481, 1893] | 3462 | [1712, 1866] |
| 130 | [130, 130] | 1241 | [1891, 1624] | 2352 | [1672, 2942] | 3463 | [221, 521] |
| 131 | [254, 255] | 1242 | [1473, 1892] | 2353 | [1675, 485] | 3464 | [176, 3116] |
| 132 | [256, 257] | 1243 | [1608, 1456] | 2354 | [3041, 1756] | 3465 | [3852, 3095] |
| 133 | [258, 234] | 1244 | [648, 1669] | 2355 | [3042, 1610] | 3466 | [1856, 1831] |
| 134 | [259, 260] | 1245 | [192, 1893] | 2356 | [1466, 3043] | 3467 | [3229, 1586] |
| 135 | [261, 262] | 1246 | [1894, 1895] | 2357 | [689, 3044] | 3468 | [3204, 541] |
| 136 | [263, 264] | 1247 | [1896, 176] | 2358 | [217, 602] | 3469 | [529, 3769] |
| 137 | [265, 266] | 1248 | [1766, 1766] | 2359 | [3045, 1438] | 3470 | [1861, 2977] |
| 138 | [267, 268] | 1249 | [1832, 435] | 2360 | [1893, 3020] | 3471 | [3853, 1467] |
| 139 | [269, 270] | 1250 | [1389, 1897] | 2361 | [3046, 1541] | 3472 | [753, 662] |
| 140 | [271, 272] | 1251 | [182, 752] | 2362 | [3047, 1398] | 3473 | [3854, 1993] |
| 141 | [273, 274] | 1252 | [1898, 1899] | 2363 | [3048, 1620] | 3474 | [2840, 1839] |
| 142 | [275, 276] | 1253 | [1900, 1901] | 2364 | [2975, 1516] | 3475 | [3855, 1480] |
| 143 | [277, 278] | 1254 | [1902, 647] | 2365 | [488, 1819] | 3476 | [1503, 128] |
| 144 | [279, 280] | 1255 | [1903, 141] | 2366 | [3049, 1979] | 3477 | [3069, 3075] |
| 145 | [281, 282] | 1256 | [550, 1904] | 2367 | [685, 723] | 3478 | [1750, 1508] |
| 146 | [283, 284] | 1257 | [676, 1905] | 2368 | [1943, 2832] | 3479 | [3831, 1930] |
| 147 | [285, 286] | 1258 | [1561, 515] | 2369 | [3050, 1796] | 3480 | [3002, 1681] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 148 | [287, 288] | 1259 | [1906, 502] | 2370 | [3051, 3052] | 3481 | [1523, 3005] |
| 149 | [289, 290] | 1260 | [1907, 1908] | 2371 | [1854, 1671] | 3482 | [3856, 3857] |
| 150 | [291, 292] | 1261 | [1704, 1909] | 2372 | [1700, 3023] | 3483 | [1831, 3110] |
| 151 | [293, 294] | 1262 | [1762, 1910] | 2373 | [476, 2956] | 3484 | [730, 1464] |
| 152 | [295, 296] | 1263 | [1911, 1487] | 2374 | [1680, 1444] | 3485 | [619, 1929] |
| 153 | [297, 298] | 1264 | [1626, 1741] | 2375 | [2960, 2902] | 3486 | [3858, 1452] |
| 154 | [299, 300] | 1265 | [702, 1845] | 2376 | [739, 1646] | 3487 | [3859, 31] |
| 155 | [301, 302] | 1266 | [476, 1912] | 2377 | [1432, 1703] | 3488 | [1644, 714] |
| 156 | [303, 304] | 1267 | [14, 1819] | 2378 | [1970, 1689] | 3489 | [1826, 168] |
| 157 | [305, 306] | 1268 | [1593, 1751] | 2379 | [2891, 1896] | 3490 | [3250, 617] |
| 158 | [307, 308] | 1269 | [1913, 1442] | 2380 | [3053, 219] | 3491 | [3128, 179] |
| 159 | [309, 310] | 1270 | [1914, 1804] | 2381 | [3054, 1876] | 3492 | [3815, 134] |
| 160 | [311, 312] | 1271 | [1915, 1916] | 2382 | [3055, 1476] | 3493 | [3860, 557] |
| 161 | [84, 313] | 1272 | [1904, 704] | 2383 | [2948, 755] | 3494 | [1949, 3861] |
| 162 | [314, 315] | 1273 | [1917, 1701] | 2384 | [1651, 1959] | 3495 | [1664, 1768] |
| 163 | [316, 317] | 1274 | [1918, 499] | 2385 | [1387, 760] | 3496 | [3045, 3765] |
| 164 | [318, 319] | 1275 | [1582, 1919] | 2386 | [2980, 461] | 3497 | [525, 3774] |
| 165 | [320, 321] | 1276 | [1920, 50] | 2387 | [3056, 550] | 3498 | [561, 145] |
| 166 | [322, 323] | 1277 | [1921, 664] | 2388 | [2886, 485] | 3499 | [3862, 1980] |
| 167 | [324, 325] | 1278 | [1922, 535] | 2389 | [3057, 604] | 3500 | [3863, 1750] |
| 168 | [326, 327] | 1279 | [1923, 1924] | 2390 | [127, 1418] | 3501 | [3112, 542] |
| 169 | [328, 329] | 1280 | [1925, 1410] | 2391 | [3058, 3059] | 3502 | [3864, 1583] |
| 170 | [330, 331] | 1281 | [1926, 1719] | 2392 | [1508, 2834] | 3503 | [3865, 625] |
| 171 | [332, 333] | 1282 | [456, 1927] | 2393 | [3060, 757] | 3504 | [1469, 3153] |
| 172 | [334, 61] | 1283 | [1928, 1929] | 2394 | [3061, 2941] | 3505 | [3866, 1834] |
| 173 | [335, 336] | 1284 | [1630, 1930] | 2395 | [2915, 1718] | 3506 | [1471, 2933] |
| 174 | [337, 338] | 1285 | [1627, 1931] | 2396 | [1885, 1854] | 3507 | [2867, 1965] |
| 175 | [339, 340] | 1286 | [1700, 117] | 2397 | [634, 1445] | 3508 | [3794, 745] |
| 176 | [341, 342] | 1287 | [704, 1932] | 2398 | [1642, 3062] | 3509 | [3867, 3857] |
| 177 | [343, 344] | 1288 | [1933, 613] | 2399 | [156, 1808] | 3510 | [3840, 570] |
| 178 | [345, 346] | 1289 | [1891, 1934] | 2400 | [3063, 120] | 3511 | [1951, 3220] |
| 179 | [347, 348] | 1290 | [1935, 1896] | 2401 | [1446, 1868] | 3512 | [1673, 3205] |
| 180 | [349, 350] | 1291 | [1936, 1602] | 2402 | [3064, 1644] | 3513 | [2832, 1766] |
| 181 | [29, 351] | 1292 | [1937, 728] | 2403 | [3065, 648] | 3514 | [3258, 670] |
| 182 | [352, 353] | 1293 | [1771, 1852] | 2404 | [1387, 1959] | 3515 | [3868, 3869] |
| 183 | [354, 355] | 1294 | [1938, 1939] | 2405 | [1695, 1749] | 3516 | [3179, 3870] |
| 184 | [356, 357] | 1295 | [1928, 620] | 2406 | [1830, 679] | 3517 | [3843, 1422] |
| 185 | [358, 359] | 1296 | [1940, 1941] | 2407 | [1600, 495] | 3518 | [3120, 1553] |
| 186 | [360, 361] | 1297 | [1889, 1942] | 2408 | [3066, 1667] | 3519 | [3814, 565] |
| 187 | [362, 363] | 1298 | [1518, 1387] | 2409 | [3067, 585] | 3520 | [3129, 3243] |
| 188 | [364, 365] | 1299 | [1943, 1766] | 2410 | [3068, 3005] | 3521 | [766, 1503] |
| 189 | [366, 367] | 1300 | [1944, 1945] | 2411 | [3069, 51] | 3522 | [3113, 1744] |
| 190 | [368, 369] | 1301 | [208, 672] | 2412 | [1444, 1405] | 3523 | [3871, 1691] |
| 191 | [370, 371] | 1302 | [776, 1946] | 2413 | [1527, 483] | 3524 | [3872, 1646] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 192 | [372, 373] | 1303 | [1947, 1948] | 2414 | [1882, 3070] | 3525 | [3873, 1836] |
| 193 | [374, 375] | 1304 | [1949, 1811] | 2415 | [1483, 1616] | 3526 | [3874, 143] |
| 194 | [376, 377] | 1305 | [1923, 1553] | 2416 | [3071, 637] | 3527 | [3875, 2900] |
| 195 | [378, 379] | 1306 | [1915, 12] | 2417 | [3072, 3073] | 3528 | [3859, 717] |
| 196 | [380, 381] | 1307 | [1950, 1863] | 2418 | [1469, 1722] | 3529 | [3876, 2913] |
| 197 | [382, 383] | 1308 | [607, 1469] | 2419 | [1724, 3074] | 3530 | [2835, 202] |
| 198 | [384, 385] | 1309 | [1951, 1952] | 2420 | [3075, 635] | 3531 | [3877, 598] |
| 199 | [386, 387] | 1310 | [720, 1548] | 2421 | [3076, 487] | 3532 | [3053, 483] |
| 200 | [388, 28] | 1311 | [1953, 480] | 2422 | [3077, 1710] | 3533 | [3878, 3096] |
| 201 | [389, 390] | 1312 | [1954, 1502] | 2423 | [3078, 737] | 3534 | [1906, 1825] |
| 202 | [391, 392] | 1313 | [1955, 1956] | 2424 | [2887, 3079] | 3535 | [567, 1409] |
| 203 | [393, 394] | 1314 | [1957, 1958] | 2425 | [3080, 595] | 3536 | [3879, 2889] |
| 204 | [395, 396] | 1315 | [1959, 761] | 2426 | [3081, 2856] | 3537 | [3880, 584] |
| 205 | [397, 398] | 1316 | [1960, 1961] | 2427 | [3082, 156] | 3538 | [2894, 624] |
| 206 | [399, 400] | 1317 | [35, 1962] | 2428 | [623, 1520] | 3539 | [3881, 46] |
| 207 | [401, 402] | 1318 | [51, 635] | 2429 | [2882, 745] | 3540 | [3882, 165] |
| 208 | [403, 404] | 1319 | [602, 1963] | 2430 | [3083, 3084] | 3541 | [3819, 2859] |
| 209 | [405, 406] | 1320 | [1540, 1798] | 2431 | [171, 508] | 3542 | [3883, 1764] |
| 210 | [407, 408] | 1321 | [655, 1849] | 2432 | [1898, 3085] | 3543 | [1738, 2851] |
| 211 | [409, 410] | 1322 | [766, 127] | 2433 | [738, 1942] | 3544 | [3884, 560] |
| 212 | [411, 412] | 1323 | [1964, 1965] | 2434 | [435, 1983] | 3545 | [1455, 3167] |
| 213 | [413, 414] | 1324 | [1966, 476] | 2435 | [2832, 2832] | 3546 | [3063, 450] |
| 214 | [415, 416] | 1325 | [1967, 1968] | 2436 | [3086, 538] | 3547 | [3885, 198] |
| 215 | [417, 418] | 1326 | [1770, 1969] | 2437 | [3087, 3088] | 3548 | [3809, 2869] |
| 216 | [419, 420] | 1327 | [755, 1546] | 2438 | [3089, 1798] | 3549 | [3886, 533] |
| 217 | [421, 422] | 1328 | [1439, 693] | 2439 | [3090, 441] | 3550 | [3887, 2838] |
| 218 | [423, 424] | 1329 | [1548, 593] | 2440 | [3091, 3092] | 3551 | [3215, 1396] |
| 219 | [425, 426] | 1330 | [1889, 1485] | 2441 | [1963, 1762] | 3552 | [3793, 1543] |
| 220 | [427, 428] | 1331 | [1970, 1558] | 2442 | [1916, 42] | 3553 | [3888, 455] |
| 221 | [429, 430] | 1332 | [1618, 1560] | 2443 | [3093, 1537] | 3554 | [547, 3015] |
| 222 | [431, 309] | 1333 | [1773, 1939] | 2444 | [117, 3094] | 3555 | [1971, 668] |
| 223 | [432, 433] | 1334 | [1971, 501] | 2445 | [1657, 3095] | 3556 | [1551, 771] |
| 224 | [434, 435] | 1335 | [1572, 124] | 2446 | [9, 3096] | 3557 | [1836, 2001] |
| 225 | [436, 437] | 1336 | [446, 1780] | 2447 | [3075, 52] | 3558 | [3889, 175] |
| 226 | [438, 439] | 1337 | [1972, 1864] | 2448 | [3097, 217] | 3559 | [1941, 3890] |
| 227 | [440, 441] | 1338 | [55, 1973] | 2449 | [1776, 3033] | 3560 | [1405, 661] |
| 228 | [442, 443] | 1339 | [1974, 56] | 2450 | [1599, 494] | 3561 | [1565, 116] |
| 229 | [444, 445] | 1340 | [1975, 1669] | 2451 | [35, 770] | 3562 | [3203, 1870] |
| 230 | [126, 446] | 1341 | [1976, 1977] | 2452 | [642, 1550] | 3563 | [3891, 2883] |
| 231 | [447, 448] | 1342 | [1734, 1978] | 2453 | [1393, 3098] | 3564 | [444, 1932] |
| 232 | [449, 450] | 1343 | [1979, 1529] | 2454 | [3099, 3100] | 3565 | [2951, 3247] |
| 233 | [451, 452] | 1344 | [43, 1852] | 2455 | [1899, 3101] | 3566 | [3844, 696] |
| 234 | [453, 141] | 1345 | [1474, 1980] | 2456 | [1799, 1622] | 3567 | [3892, 1985] |
| 235 | [454, 455] | 1346 | [1916, 1981] | 2457 | [475, 2898] | 3568 | [3257, 185] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 236 | [456, 457] | 1347 | [1961, 587] | 2458 | [3102, 1741] | 3569 | [3893, 3152] |
| 237 | [458, 459] | 1348 | [757, 1388] | 2459 | [3103, 625] | 3570 | [3840, 2918] |
| 238 | [142, 460] | 1349 | [1959, 1982] | 2460 | [1603, 1422] | 3571 | [3894, 124] |
| 239 | [461, 462] | 1350 | [1651, 760] | 2461 | [522, 2953] | 3572 | [451, 1534] |
| 240 | [463, 464] | 1351 | [573, 1684] | 2462 | [3083, 2838] | 3573 | [3192, 1864] |
| 241 | [465, 466] | 1352 | [1462, 1684] | 2463 | [1614, 626] | 3574 | [681, 1712] |
| 242 | [467, 468] | 1353 | [1388, 762] | 2464 | [3104, 628] | 3575 | [2928, 3212] |
| 243 | [469, 470] | 1354 | [214, 1983] | 2465 | [3105, 55] | 3576 | [754, 3248] |
| 244 | [471, 472] | 1355 | [573, 758] | 2466 | [3023, 3094] | 3577 | [3895, 577] |
| 245 | [473, 474] | 1356 | [761, 1462] | 2467 | [3106, 1564] | 3578 | [503, 2960] |
| 246 | [475, 476] | 1357 | [1984, 1651] | 2468 | [1390, 3107] | 3579 | [3896, 1417] |
| 247 | [477, 478] | 1358 | [131, 1985] | 2469 | [150, 185] | 3580 | [3897, 3898] |
| 248 | [479, 480] | 1359 | [438, 1396] | 2470 | [2909, 1489] | 3581 | [477, 586] |
| 249 | [481, 482] | 1360 | [1986, 481] | 2471 | [3108, 1697] | 3582 | [129, 1694] |
| 250 | [218, 483] | 1361 | [1987, 612] | 2472 | [2914, 1920] | 3583 | [1454, 558] |
| 251 | [484, 485] | 1362 | [516, 1988] | 2473 | [1591, 2931] | 3584 | [1950, 1633] |
| 252 | [486, 487] | 1363 | [728, 1989] | 2474 | [1585, 2889] | 3585 | [188, 3098] |
| 253 | [435, 215] | 1364 | [1676, 1990] | 2475 | [3109, 8] | 3586 | [3858, 2985] |
| 254 | [488, 489] | 1365 | [1673, 1991] | 2476 | [679, 3110] | 3587 | [1588, 2919] |
| 255 | [490, 491] | 1366 | [1992, 1993] | 2477 | [3076, 1388] | 3588 | [2924, 1962] |
| 256 | [492, 493] | 1367 | [1994, 1946] | 2478 | [1767, 1665] | 3589 | [3868, 3899] |
| 257 | [494, 495] | 1368 | [1751, 503] | 2479 | [3111, 1809] | 3590 | [3121, 1784] |
| 258 | [496, 209] | 1369 | [1706, 1449] | 2480 | [1793, 1575] | 3591 | [734, 475] |
| 259 | [497, 498] | 1370 | [1995, 1610] | 2481 | [498, 1854] | 3592 | [1863, 1634] |
| 260 | [499, 500] | 1371 | [1996, 1969] | 2482 | [3004, 3112] | 3593 | [3251, 1938] |
| 261 | [501, 502] | 1372 | [1690, 1872] | 2483 | [498, 707] | 3594 | [2992, 760] |
| 262 | [503, 504] | 1373 | [494, 1748] | 2484 | [713, 2868] | 3595 | [3892, 132] |
| 263 | [505, 506] | 1374 | [1997, 675] | 2485 | [3113, 1779] | 3596 | [3900, 3152] |
| 264 | [507, 508] | 1375 | [1764, 1843] | 2486 | [3114, 1583] | 3597 | [1899, 3901] |
| 265 | [509, 510] | 1376 | [1547, 163] | 2487 | [49, 3115] | 3598 | [3902, 777] |
| 266 | [511, 512] | 1377 | [1998, 1821] | 2488 | [3116, 1612] | 3599 | [3903, 3904] |
| 267 | [513, 514] | 1378 | [1693, 1420] | 2489 | [1883, 3117] | 3600 | [2844, 52] |
| 268 | [515, 489] | 1379 | [1402, 1594] | 2490 | [3118, 737] | 3601 | [2843, 469] |
| 269 | [516, 517] | 1380 | [1999, 48] | 2491 | [3027, 2984] | 3602 | [3905, 1660] |
| 270 | [518, 519] | 1381 | [2000, 518] | 2492 | [598, 1785] | 3603 | [3871, 48] |
| 271 | [520, 521] | 1382 | [455, 448] | 2493 | [1521, 3119] | 3604 | [1839, 2995] |
| 272 | [522, 523] | 1383 | [2001, 1628] | 2494 | [3012, 2982] | 3605 | [3906, 1752] |
| 273 | [524, 525] | 1384 | [2002, 1743] | 2495 | [1689, 1559] | 3606 | [3785, 3907] |
| 274 | [526, 195] | 1385 | [1491, 1745] | 2496 | [562, 57] | 3607 | [1516, 2948] |
| 275 | [527, 528] | 1386 | [1350, 2003] | 2497 | [1773, 3022] | 3608 | [3908, 1927] |
| 276 | [529, 530] | 1387 | [1249, 2004] | 2498 | [3120, 1924] | 3609 | [3782, 1490] |
| 277 | [531, 532] | 1388 | [1348, 2005] | 2499 | [3121, 598] | 3610 | [3909, 545] |
| 278 | [533, 519] | 1389 | [1317, 2006] | 2500 | [3122, 1503] | 3611 | [3008, 1763] |
| 279 | [534, 482] | 1390 | [2007, 2008] | 2501 | [1751, 2834] | 3612 | [166, 1911] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 280 | [535, 536] | 1391 | [2009, 299] | 2502 | [1559, 1756] | 3613 | [1550, 690] |
| 281 | [537, 538] | 1392 | [2010, 2011] | 2503 | [1731, 1551] | 3614 | [1933, 1727] |
| 282 | [539, 540] | 1393 | [2012, 2013] | 2504 | [2971, 501] | 3615 | [1509, 1513] |
| 283 | [541, 542] | 1394 | [2014, 2015] | 2505 | [743, 1949] | 3616 | [3910, 152] |
| 284 | [543, 544] | 1395 | [2016, 2017] | 2506 | [1735, 642] | 3617 | [3788, 3907] |
| 285 | [545, 458] | 1396 | [2006, 2018] | 2507 | [2847, 3123] | 3618 | [3049, 1528] |
| 286 | [546, 547] | 1397 | [2019, 2020] | 2508 | [3124, 1577] | 3619 | [1549, 689] |
| 287 | [548, 549] | 1398 | [2021, 2022] | 2509 | [3125, 520] | 3620 | [3911, 134] |
| 288 | [550, 551] | 1399 | [2023, 1071] | 2510 | [3126, 1732] | 3621 | [2978, 3190] |
| 289 | [552, 553] | 1400 | [325, 2024] | 2511 | [1709, 3127] | 3622 | [3912, 487] |
| 290 | [554, 555] | 1401 | [2025, 2026] | 2512 | [762, 1832] | 3623 | [737, 1889] |
| 291 | [556, 557] | 1402 | [2027, 337] | 2513 | [3128, 1557] | 3624 | [3818, 1495] |
| 292 | [558, 559] | 1403 | [2028, 2029] | 2514 | [3129, 3130] | 3625 | [1902, 1993] |
| 293 | [560, 53] | 1404 | [797, 996] | 2515 | [3131, 769] | 3626 | [3873, 705] |
| 294 | [561, 553] | 1405 | [2030, 2031] | 2516 | [1441, 3132] | 3627 | [658, 1638] |
| 295 | [562, 563] | 1406 | [2032, 1097] | 2517 | [588, 1931] | 3628 | [2837, 3184] |
| 296 | [564, 565] | 1407 | [1134, 2033] | 2518 | [1893, 3133] | 3629 | [3240, 728] |
| 297 | [566, 200] | 1408 | [2034, 2035] | 2519 | [1552, 1924] | 3630 | [3821, 1777] |
| 298 | [567, 568] | 1409 | [255, 2036] | 2520 | [3033, 1905] | 3631 | [3779, 3840] |
| 299 | [569, 570] | 1410 | [2037, 2038] | 2521 | [478, 2846] | 3632 | [3230, 3201] |
| 300 | [504, 571] | 1411 | [2039, 1178] | 2522 | [764, 3036] | 3633 | [3203, 719] |
| 301 | [572, 573] | 1412 | [2040, 2041] | 2523 | [1487, 1400] | 3634 | [3913, 1648] |
| 302 | [574, 575] | 1413 | [2042, 2043] | 2524 | [1702, 1436] | 3635 | [3914, 1421] |
| 303 | [576, 577] | 1414 | [2044, 864] | 2525 | [3134, 3135] | 3636 | [1841, 2002] |
| 304 | [578, 579] | 1415 | [2045, 2046] | 2526 | [1586, 607] | 3637 | [3849, 1387] |
| 305 | [580, 443] | 1416 | [2047, 2048] | 2527 | [626, 1600] | 3638 | [3915, 3149] |
| 306 | [581, 582] | 1417 | [365, 1262] | 2528 | [668, 1825] | 3639 | [1604, 536] |
| 307 | [583, 584] | 1418 | [1362, 2049] | 2529 | [1789, 1520] | 3640 | [3090, 1622] |
| 308 | [585, 586] | 1419 | [965, 2050] | 2530 | [2972, 1989] | 3641 | [3916, 1717] |
| 309 | [587, 588] | 1420 | [1363, 2051] | 2531 | [3136, 640] | 3642 | [3088, 3890] |
| 310 | [585, 478] | 1421 | [1235, 2052] | 2532 | [3137, 3130] | 3643 | [3872, 740] |
| 311 | [589, 590] | 1422 | [1028, 2053] | 2533 | [3138, 3139] | 3644 | [1903, 1921] |
| 312 | [591, 592] | 1423 | [2054, 2055] | 2534 | [627, 1659] | 3645 | [3917, 1949] |
| 313 | [163, 593] | 1424 | [2056, 1238] | 2535 | [470, 1457] | 3646 | [2936, 1735] |
| 314 | [594, 595] | 1425 | [2057, 2058] | 2536 | [749, 1591] | 3647 | [3918, 1598] |
| 315 | [596, 597] | 1426 | [2059, 847] | 2537 | [3140, 676] | 3648 | [3919, 1456] |
| 316 | [598, 39] | 1427 | [2060, 2061] | 2538 | [3141, 1658] | 3649 | [3085, 3901] |
| 317 | [599, 600] | 1428 | [2062, 2063] | 2539 | [3024, 519] | 3650 | [1942, 1486] |
| 318 | [601, 602] | 1429 | [2064, 2065] | 2540 | [3142, 3143] | 3651 | [1837, 1632] |
| 319 | [603, 604] | 1430 | [2066, 2067] | 2541 | [1857, 1436] | 3652 | [3920, 443] |
| 320 | [605, 606] | 1431 | [2068, 2069] | 2542 | [603, 3144] | 3653 | [1625, 3102] |
| 321 | [607, 608] | 1432 | [2070, 2071] | 2543 | [624, 524] | 3654 | [3921, 480] |
| 322 | [609, 564] | 1433 | [2072, 2073] | 2544 | [1491, 176] | 3655 | [3018, 1409] |
| 323 | [610, 611] | 1434 | [2074, 1369] | 2545 | [167, 2855] | 3656 | [3922, 151] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 324 | [612, 613] | 1435 | [2075, 884] | 2546 | [2002, 1778] | 3657 | [2976, 700] |
| 325 | [614, 615] | 1436 | [2076, 2077] | 2547 | [760, 1982] | 3658 | [1394, 1527] |
| 326 | [557, 616] | 1437 | [2078, 95] | 2548 | [3145, 1612] | 3659 | [3896, 1800] |
| 327 | [202, 551] | 1438 | [2079, 2080] | 2549 | [3146, 674] | 3660 | [3923, 194] |
| 328 | [617, 618] | 1439 | [2081, 2082] | 2550 | [11, 1916] | 3661 | [3924, 3092] |
| 329 | [619, 620] | 1440 | [351, 2083] | 2551 | [3147, 1751] | 3662 | [3799, 534] |
| 330 | [621, 622] | 1441 | [2084, 2085] | 2552 | [763, 622] | 3663 | [3126, 165] |
| 331 | [623, 624] | 1442 | [2086, 328] | 2553 | [3148, 1998] | 3664 | [3925, 2975] |
| 332 | [625, 626] | 1443 | [2024, 407] | 2554 | [695, 759] | 3665 | [3926, 3075] |
| 333 | [627, 628] | 1444 | [2087, 2088] | 2555 | [1957, 3149] | 3666 | [3927, 3130] |
| 334 | [629, 121] | 1445 | [1177, 2089] | 2556 | [3068, 1524] | 3667 | [3767, 520] |
| 335 | [630, 631] | 1446 | [2090, 2091] | 2557 | [699, 2977] | 3668 | [3889, 200] |
| 336 | [632, 633] | 1447 | [2092, 1109] | 2558 | [2867, 3150] | 3669 | [3080, 1843] |
| 337 | [634, 124] | 1448 | [2093, 2094] | 2559 | [3151, 564] | 3670 | [3928, 2854] |
| 338 | [635, 636] | 1449 | [2095, 794] | 2560 | [3039, 196] | 3671 | [1727, 1757] |
| 339 | [637, 638] | 1450 | [2096, 2097] | 2561 | [1835, 705] | 3672 | [3796, 1871] |
| 340 | [639, 640] | 1451 | [2098, 2099] | 2562 | [32, 3152] | 3673 | [3893, 33] |
| 341 | [204, 641] | 1452 | [2100, 2101] | 2563 | [641, 1792] | 3674 | [1644, 1429] |
| 342 | [508, 642] | 1453 | [2102, 252] | 2564 | [2985, 1453] | 3675 | [3905, 1407] |
| 343 | [582, 643] | 1454 | [2103, 2104] | 2565 | [1398, 36] | 3676 | [3114, 1919] |
| 344 | [644, 645] | 1455 | [2105, 2106] | 2566 | [608, 3153] | 3677 | [3060, 486] |
| 345 | [646, 647] | 1456 | [2107, 2108] | 2567 | [3154, 1501] | 3678 | [3186, 1968] |
| 346 | [648, 649] | 1457 | [2109, 2110] | 2568 | [3155, 3156] | 3679 | [3929, 1938] |
| 347 | [650, 651] | 1458 | [2111, 973] | 2569 | [3157, 1711] | 3680 | [3204, 3112] |
| 348 | [215, 652] | 1459 | [2112, 2113] | 2570 | [3158, 656] | 3681 | [3930, 221] |
| 349 | [653, 654] | 1460 | [2114, 2115] | 2571 | [618, 686] | 3682 | [170, 507] |
| 350 | [655, 656] | 1461 | [825, 2116] | 2572 | [1997, 1776] | 3683 | [3931, 614] |
| 351 | [46, 657] | 1462 | [2117, 1351] | 2573 | [1911, 2855] | 3684 | [3932, 672] |
| 352 | [658, 657] | 1463 | [2118, 2119] | 2574 | [3159, 749] | 3685 | [3253, 1719] |
| 353 | [659, 660] | 1464 | [2120, 2121] | 2575 | [1937, 2972] | 3686 | [3933, 707] |
| 354 | [661, 516] | 1465 | [2122, 2123] | 2576 | [2958, 1412] | 3687 | [3934, 1948] |
| 355 | [662, 663] | 1466 | [2124, 2125] | 2577 | [3160, 534] | 3688 | [3935, 1823] |
| 356 | [630, 156] | 1467 | [2126, 2127] | 2578 | [1645, 740] | 3689 | [3936, 1672] |
| 357 | [664, 665] | 1468 | [2128, 2129] | 2579 | [139, 1802] | 3690 | [3937, 459] |
| 358 | [666, 667] | 1469 | [2130, 1236] | 2580 | [564, 544] | 3691 | [3938, 2929] |
| 359 | [668, 502] | 1470 | [2131, 2132] | 2581 | [572, 1462] | 3692 | [3939, 1890] |
| 360 | [669, 670] | 1471 | [2133, 2134] | 2582 | [3161, 1988] | 3693 | [1873, 1973] |
| 361 | [671, 672] | 1472 | [2135, 2136] | 2583 | [3046, 1798] | 3694 | [3084, 1928] |
| 362 | [673, 674] | 1473 | [2137, 2138] | 2584 | [3162, 468] | 3695 | [2966, 1675] |
| 363 | [675, 676] | 1474 | [2139, 1203] | 2585 | [1784, 39] | 3696 | [3940, 1558] |
| 364 | [677, 678] | 1475 | [1251, 341] | 2586 | [661, 3015] | 3697 | [3855, 154] |
| 365 | [679, 680] | 1476 | [2140, 2079] | 2587 | [1410, 1869] | 3698 | [1436, 3164] |
| 366 | [681, 682] | 1477 | [2141, 2142] | 2588 | [3015, 517] | 3699 | [3190, 2942] |
| 367 | [57, 683] | 1478 | [2143, 2144] | 2589 | [2841, 3163] | 3700 | [1810, 3861] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 368 | [31, 684] | 1479 | [2145, 2146] | 2590 | [472, 3164] | 3701 | [3895, 3030] |
| 369 | [685, 686] | 1480 | [2147, 2148] | 2591 | [463, 1871] | 3702 | [3208, 461] |
| 370 | [687, 688] | 1481 | [2149, 2150] | 2592 | [1662, 2837] | 3703 | [3941, 1832] |
| 371 | [689, 690] | 1482 | [1272, 1286] | 2593 | [3165, 159] | 3704 | [3254, 1973] |
| 372 | [691, 692] | 1483 | [69, 2151] | 2594 | [599, 1839] | 3705 | [3217, 3942] |
| 373 | [693, 694] | 1484 | [2152, 2153] | 2595 | [2916, 3122] | 3706 | [3943, 55] |
| 374 | [695, 696] | 1485 | [2154, 2155] | 2596 | [3061, 1426] | 3707 | [3944, 1596] |
| 375 | [697, 698] | 1486 | [1319, 2156] | 2597 | [1418, 1635] | 3708 | [3945, 582] |
| 376 | [699, 700] | 1487 | [2157, 2025] | 2598 | [168, 1606] | 3709 | [3935, 1956] |
| 377 | [701, 606] | 1488 | [2158, 2159] | 2599 | [2869, 1413] | 3710 | [3946, 1626] |
| 378 | [702, 703] | 1489 | [2160, 2161] | 2600 | [1882, 1747] | 3711 | [38, 1785] |
| 379 | [704, 445] | 1490 | [852, 2162] | 2601 | [222, 3074] | 3712 | [3947, 1848] |
| 380 | [705, 706] | 1491 | [2163, 343] | 2602 | [1900, 1401] | 3713 | [3948, 33] |
| 381 | [707, 708] | 1492 | [2164, 2165] | 2603 | [1803, 3166] | 3714 | [2998, 513] |
| 382 | [709, 710] | 1493 | [2166, 2167] | 2604 | [1814, 3166] | 3715 | [2933, 2898] |
| 383 | [711, 712] | 1494 | [2168, 2169] | 2605 | [2875, 122] | 3716 | [3949, 1441] |
| 384 | [467, 713] | 1495 | [2170, 2171] | 2606 | [558, 3167] | 3717 | [1953, 1483] |
| 385 | [714, 143] | 1496 | [2172, 2173] | 2607 | [3055, 513] | 3718 | [3925, 1515] |
| 386 | [715, 716] | 1497 | [2174, 2175] | 2608 | [547, 516] | 3719 | [3950, 1594] |
| 387 | [717, 684] | 1498 | [911, 2176] | 2609 | [3082, 631] | 3720 | [3848, 440] |
| 388 | [718, 719] | 1499 | [2177, 2178] | 2610 | [3168, 1852] | 3721 | [3123, 1702] |
| 389 | [720, 163] | 1500 | [2179, 2180] | 2611 | [3118, 1536] | 3722 | [3951, 1790] |
| 390 | [721, 535] | 1501 | [2181, 2182] | 2612 | [3169, 3079] | 3723 | [3811, 1562] |
| 391 | [722, 151] | 1502 | [270, 2183] | 2613 | [1421, 1394] | 3724 | [3952, 199] |
| 392 | [723, 724] | 1503 | [2184, 2185] | 2614 | [3170, 1711] | 3725 | [3953, 731] |
| 393 | [212, 725] | 1504 | [2186, 2124] | 2615 | [3171, 780] | 3726 | [3010, 3954] |
| 394 | [726, 214] | 1505 | [2125, 2130] | 2616 | [3109, 2971] | 3727 | [3930, 520] |
| 395 | [727, 728] | 1506 | [2187, 802] | 2617 | [3104, 1659] | 3728 | [3955, 544] |
| 396 | [729, 633] | 1507 | [907, 2188] | 2618 | [644, 743] | 3729 | [642, 689] |
| 397 | [730, 731] | 1508 | [2189, 914] | 2619 | [3172, 1965] | 3730 | [3956, 1593] |
| 398 | [732, 459] | 1509 | [2190, 2133] | 2620 | [3173, 3174] | 3731 | [3913, 1703] |
| 399 | [733, 734] | 1510 | [2191, 1149] | 2621 | [3175, 1590] | 3732 | [3957, 2855] |
| 400 | [735, 736] | 1511 | [2192, 2193] | 2622 | [3176, 744] | 3733 | [609, 543] |
| 401 | [173, 31] | 1512 | [2194, 2195] | 2623 | [3099, 2859] | 3734 | [3958, 1888] |
| 402 | [737, 738] | 1513 | [2196, 2197] | 2624 | [1831, 680] | 3735 | [1392, 188] |
| 403 | [739, 740] | 1514 | [396, 937] | 2625 | [1983, 756] | 3736 | [2876, 1498] |
| 404 | [741, 585] | 1515 | [955, 401] | 2626 | [3177, 1579] | 3737 | [3792, 450] |
| 405 | [742, 743] | 1516 | [2198, 2199] | 2627 | [3178, 1447] | 3738 | [3959, 1684] |
| 406 | [744, 745] | 1517 | [2200, 2201] | 2628 | [3179, 474] | 3739 | [3960, 1461] |
| 407 | [615, 746] | 1518 | [1206, 1353] | 2629 | [1467, 446] | 3740 | [3914, 53] |
| 408 | [147, 531] | 1519 | [2202, 2203] | 2630 | [3180, 2904] | 3741 | [3839, 569] |
| 409 | [747, 748] | 1520 | [2204, 2205] | 2631 | [1760, 3181] | 3742 | [1745, 3116] |
| 410 | [484, 749] | 1521 | [2206, 2207] | 2632 | [3182, 2982] | 3743 | [1994, 777] |
| 411 | [750, 571] | 1522 | [100, 2208] | 2633 | [524, 3119] | 3744 | [3111, 528] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 412 | [751, 752] | 1523 | [2178, 2209] | 2634 | [1849, 729] | 3745 | [3961, 764] |
| 413 | [753, 754] | 1524 | [2210, 1130] | 2635 | [1563, 641] | 3746 | [1467, 1554] |
| 414 | [207, 755] | 1525 | [2211, 2212] | 2636 | [1715, 1775] | 3747 | [3812, 3022] |
| 415 | [756, 757] | 1526 | [2213, 1017] | 2637 | [160, 638] | 3748 | [490, 3962] |
| 416 | [758, 759] | 1527 | [2052, 2214] | 2638 | [765, 3122] | 3749 | [3065, 1668] |
| 417 | [760, 761] | 1528 | [2215, 2216] | 2639 | [631, 203] | 3750 | [202, 1904] |
| 418 | [762, 726] | 1529 | [2217, 2218] | 2640 | [3183, 1756] | 3751 | [3207, 625] |
| 419 | [763, 764] | 1530 | [2219, 1328] | 2641 | [2858, 3100] | 3752 | [3210, 1519] |
| 420 | [765, 766] | 1531 | [2220, 2221] | 2642 | [712, 3184] | 3753 | [3963, 529] |
| 421 | [151, 767] | 1532 | [2222, 2223] | 2643 | [2960, 571] | 3754 | [3964, 2962] |
| 422 | [768, 205] | 1533 | [2224, 2225] | 2644 | [3185, 1518] | 3755 | [2969, 1681] |
| 423 | [769, 770] | 1534 | [2146, 2226] | 2645 | [3186, 138] | 3756 | [3965, 1694] |
| 424 | [563, 58] | 1535 | [2227, 2228] | 2646 | [3187, 1452] | 3757 | [3915, 1958] |
| 425 | [602, 771] | 1536 | [2229, 2154] | 2647 | [3188, 3189] | 3758 | [3921, 1483] |
| 426 | [676, 772] | 1537 | [2230, 2231] | 2648 | [3190, 1673] | 3759 | [3923, 1790] |
| 427 | [773, 53] | 1538 | [2232, 2233] | 2649 | [1718, 1455] | 3760 | [3009, 3252] |
| 428 | [774, 775] | 1539 | [2234, 2235] | 2650 | [3191, 1589] | 3761 | [1765, 2832] |
| 429 | [776, 777] | 1540 | [2236, 2237] | 2651 | [1880, 612] | 3762 | [3077, 3127] |
| 430 | [778, 529] | 1541 | [2238, 971] | 2652 | [3103, 1614] | 3763 | [3966, 222] |
| 431 | [779, 780] | 1542 | [2239, 228] | 2653 | [686, 1897] | 3764 | [3967, 3968] |
| 432 | [781, 782] | 1543 | [2240, 230] | 2654 | [2908, 737] | 3765 | [21, 2092] |
| 433 | [485, 783] | 1544 | [2241, 2242] | 2655 | [1914, 3166] | 3766 | [3969, 236] |
| 434 | [784, 417] | 1545 | [2199, 2243] | 2656 | [1925, 1868] | 3767 | [3970, 946] |
| 435 | [785, 786] | 1546 | [2153, 2244] | 2657 | [3192, 2843] | 3768 | [3971, 3972] |
| 436 | [787, 788] | 1547 | [2245, 2246] | 2658 | [3193, 1994] | 3769 | [313, 3973] |
| 437 | [789, 790] | 1548 | [834, 246] | 2659 | [2959, 222] | 3770 | [3974, 2336] |
| 438 | [791, 792] | 1549 | [2247, 2248] | 2660 | [3194, 2994] | 3771 | [3975, 1185] |
| 439 | [793, 431] | 1550 | [922, 2111] | 2661 | [3195, 526] | 3772 | [3976, 2780] |
| 440 | [794, 795] | 1551 | [2249, 2250] | 2662 | [2948, 1545] | 3773 | [3729, 2356] |
| 441 | [796, 797] | 1552 | [2251, 2252] | 2663 | [1693, 168] | 3774 | [2050, 3977] |
| 442 | [798, 799] | 1553 | [2253, 273] | 2664 | [3196, 1699] | 3775 | [3978, 351] |
| 443 | [800, 801] | 1554 | [2254, 2191] | 2665 | [3047, 1428] | 3776 | [2586, 2587] |
| 444 | [392, 421] | 1555 | [2127, 1382] | 2666 | [3197, 1469] | 3777 | [3979, 391] |
| 445 | [802, 803] | 1556 | [1220, 2255] | 2667 | [3198, 1853] | 3778 | [3980, 3981] |
| 446 | [804, 805] | 1557 | [2256, 2202] | 2668 | [1428, 1567] | 3779 | [3982, 1037] |
| 447 | [806, 807] | 1558 | [2257, 2258] | 2669 | [2931, 1730] | 3780 | [3983, 3364] |
| 448 | [808, 809] | 1559 | [2259, 74] | 2670 | [1726, 613] | 3781 | [3984, 2054] |
| 449 | [810, 811] | 1560 | [2260, 935] | 2671 | [3199, 474] | 3782 | [3985, 3986] |
| 450 | [812, 813] | 1561 | [2261, 2262] | 2672 | [3200, 3201] | 3783 | [3987, 3988] |
| 451 | [814, 815] | 1562 | [2263, 1103] | 2673 | [513, 1477] | 3784 | [2673, 3989] |
| 452 | [816, 817] | 1563 | [2264, 1086] | 2674 | [3202, 3068] | 3785 | [3990, 3991] |
| 453 | [818, 819] | 1564 | [350, 2265] | 2675 | [1562, 1468] | 3786 | [1144, 3992] |
| 454 | [820, 821] | 1565 | [2266, 2267] | 2676 | [1482, 3203] | 3787 | [2573, 3406] |
| 455 | [822, 823] | 1566 | [2268, 2269] | 2677 | [3119, 1674] | 3788 | [3993, 1326] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 456 | [824, 825] | 1567 | [2020, 2270] | 2678 | [3003, 3204] | 3789 | [278, 2316] |
| 457 | [404, 826] | 1568 | [2271, 2166] | 2679 | [645, 1810] | 3790 | [3994, 3995] |
| 458 | [827, 828] | 1569 | [2272, 1278] | 2680 | [2942, 3205] | 3791 | [3745, 3386] |
| 459 | [829, 830] | 1570 | [2273, 1075] | 2681 | [1775, 549] | 3792 | [3996, 2382] |
| 460 | [831, 832] | 1571 | [2274, 2275] | 2682 | [3206, 1637] | 3793 | [3997, 3998] |
| 461 | [833, 834] | 1572 | [2276, 2277] | 2683 | [1395, 439] | 3794 | [102, 3489] |
| 462 | [835, 836] | 1573 | [2278, 1294] | 2684 | [3006, 579] | 3795 | [3999, 2271] |
| 463 | [837, 838] | 1574 | [1182, 2279] | 2685 | [3191, 1989] | 3796 | [4000, 3436] |
| 464 | [839, 840] | 1575 | [2280, 2281] | 2686 | [1851, 2839] | 3797 | [4001, 2815] |
| 465 | [841, 842] | 1576 | [2282, 2018] | 2687 | [3207, 1614] | 3798 | [4002, 4003] |
| 466 | [843, 844] | 1577 | [2283, 1041] | 2688 | [3208, 1575] | 3799 | [4004, 4005] |
| 467 | [845, 846] | 1578 | [2284, 2285] | 2689 | [601, 1551] | 3800 | [4006, 4007] |
| 468 | [847, 848] | 1579 | [2155, 2286] | 2690 | [3169, 2888] | 3801 | [4008, 3511] |
| 469 | [849, 850] | 1580 | [2287, 2288] | 2691 | [682, 1713] | 3802 | [4009, 4010] |
| 470 | [851, 852] | 1581 | [2289, 2290] | 2692 | [551, 444] | 3803 | [4011, 4012] |
| 471 | [853, 803] | 1582 | [2291, 2292] | 2693 | [2853, 3209] | 3804 | [1114, 3742] |
| 472 | [854, 855] | 1583 | [2293, 2294] | 2694 | [3210, 762] | 3805 | [4013, 4014] |
| 473 | [856, 857] | 1584 | [2295, 2296] | 2695 | [3017, 1441] | 3806 | [4015, 72] |
| 474 | [858, 859] | 1585 | [2244, 1342] | 2696 | [2000, 533] | 3807 | [4016, 3741] |
| 475 | [860, 861] | 1586 | [2297, 2298] | 2697 | [3116, 1613] | 3808 | [4017, 4018] |
| 476 | [862, 863] | 1587 | [2299, 2300] | 2698 | [1508, 503] | 3809 | [4019, 3305] |
| 477 | [864, 865] | 1588 | [2301, 806] | 2699 | [3211, 3212] | 3810 | [4020, 4021] |
| 478 | [866, 867] | 1589 | [1300, 1248] | 2700 | [3213, 1726] | 3811 | [4022, 853] |
| 479 | [868, 869] | 1590 | [1381, 2302] | 2701 | [3014, 768] | 3812 | [2035, 1050] |
| 480 | [870, 871] | 1591 | [877, 2303] | 2702 | [1490, 1896] | 3813 | [3457, 1074] |
| 481 | [108, 872] | 1592 | [2228, 2304] | 2703 | [688, 1421] | 3814 | [2822, 3318] |
| 482 | [873, 874] | 1593 | [1268, 2305] | 2704 | [2954, 2965] | 3815 | [4023, 4024] |
| 483 | [106, 875] | 1594 | [2306, 339] | 2705 | [3214, 2891] | 3816 | [2138, 2476] |
| 484 | [876, 877] | 1595 | [2307, 2308] | 2706 | [591, 144] | 3817 | [410, 930] |
| 485 | [878, 879] | 1596 | [2309, 1267] | 2707 | [1960, 1399] | 3818 | [4025, 68] |
| 486 | [880, 881] | 1597 | [2310, 2311] | 2708 | [1974, 1973] | 3819 | [4026, 3755] |
| 487 | [882, 883] | 1598 | [2312, 2313] | 2709 | [1530, 742] | 3820 | [4027, 1316] |
| 488 | [296, 884] | 1599 | [2314, 2315] | 2710 | [2881, 744] | 3821 | [4028, 4029] |
| 489 | [27, 885] | 1600 | [2316, 2317] | 2711 | [3085, 3101] | 3822 | [4030, 4031] |
| 490 | [886, 887] | 1601 | [2318, 324] | 2712 | [1421, 54] | 3823 | [4032, 1151] |
| 491 | [888, 889] | 1602 | [867, 2319] | 2713 | [1701, 1857] | 3824 | [1120, 2663] |
| 492 | [890, 891] | 1603 | [2320, 2321] | 2714 | [3215, 439] | 3825 | [2433, 3649] |
| 493 | [892, 893] | 1604 | [1302, 2240] | 2715 | [3158, 1849] | 3826 | [2292, 870] |
| 494 | [894, 895] | 1605 | [2322, 2323] | 2716 | [3216, 128] | 3827 | [3278, 2398] |
| 495 | [896, 897] | 1606 | [2324, 2070] | 2717 | [1723, 1913] | 3828 | [2223, 260] |
| 496 | [898, 899] | 1607 | [1076, 1318] | 2718 | [480, 1500] | 3829 | [4033, 2149] |
| 497 | [900, 901] | 1608 | [2325, 2109] | 2719 | [637, 2957] | 3830 | [4034, 4035] |
| 498 | [902, 903] | 1609 | [2326, 2327] | 2720 | [1990, 1557] | 3831 | [4036, 24] |
| 499 | [904, 905] | 1610 | [2328, 2329] | 2721 | [3141, 3095] | 3832 | [4037, 4038] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 500 | [906, 907] | 1611 | [2061, 2330] | 2722 | [1449, 746] | 3833 | [2646, 829] |
| 501 | [908, 909] | 1612 | [342, 2331] | 2723 | [2943, 616] | 3834 | [4039, 4040] |
| 502 | [910, 911] | 1613 | [2332, 2333] | 2724 | [3217, 3218] | 3835 | [4041, 4042] |
| 503 | [912, 913] | 1614 | [2334, 2335] | 2725 | [3084, 619] | 3836 | [4043, 800] |
| 504 | [914, 915] | 1615 | [2336, 2181] | 2726 | [534, 1424] | 3837 | [891, 2618] |
| 505 | [916, 917] | 1616 | [2337, 2338] | 2727 | [3219, 3220] | 3838 | [4044, 2805] |
| 506 | [918, 919] | 1617 | [993, 2339] | 2728 | [3087, 1941] | 3839 | [4045, 4046] |
| 507 | [807, 920] | 1618 | [2049, 2261] | 2729 | [3221, 57] | 3840 | [4047, 4048] |
| 508 | [921, 922] | 1619 | [2340, 2341] | 2730 | [3222, 1585] | 3841 | [4049, 3584] |
| 509 | [923, 924] | 1620 | [2342, 2278] | 2731 | [3088, 3223] | 3842 | [4050, 4051] |
| 510 | [925, 926] | 1621 | [2343, 332] | 2732 | [2871, 2904] | 3843 | [4052, 2045] |
| 511 | [927, 928] | 1622 | [2344, 2345] | 2733 | [3160, 481] | 3844 | [2759, 836] |
| 512 | [929, 930] | 1623 | [2346, 2347] | 2734 | [3224, 1404] | 3845 | [4053, 4054] |
| 513 | [931, 932] | 1624 | [1196, 2348] | 2735 | [3225, 150] | 3846 | [4055, 4056] |
| 514 | [933, 934] | 1625 | [2349, 2350] | 2736 | [3155, 3226] | 3847 | [4057, 2280] |
| 515 | [935, 936] | 1626 | [2351, 2352] | 2737 | [1842, 1743] | 3848 | [4058, 4059] |
| 516 | [937, 938] | 1627 | [1261, 2353] | 2738 | [3200, 3227] | 3849 | [348, 110] |
| 517 | [939, 940] | 1628 | [1264, 1085] | 2739 | [12, 1981] | 3850 | [4060, 4061] |
| 518 | [941, 942] | 1629 | [225, 253] | 2740 | [3228, 546] | 3851 | [340, 934] |
| 519 | [943, 944] | 1630 | [2354, 2355] | 2741 | [1425, 2941] | 3852 | [4062, 4063] |
| 520 | [227, 945] | 1631 | [2356, 2357] | 2742 | [711, 2837] | 3853 | [4064, 804] |
| 521 | [946, 947] | 1632 | [112, 2358] | 2743 | [2890, 1627] | 3854 | [4065, 2678] |
| 522 | [948, 949] | 1633 | [871, 2098] | 2744 | [3229, 1562] | 3855 | [4066, 4067] |
| 523 | [950, 951] | 1634 | [2359, 2360] | 2745 | [3040, 1627] | 3856 | [4068, 2443] |
| 524 | [952, 953] | 1635 | [2185, 2144] | 2746 | [1806, 2941] | 3857 | [353, 4069] |
| 525 | [954, 955] | 1636 | [2361, 2362] | 2747 | [1978, 1499] | 3858 | [4070, 2299] |
| 526 | [956, 957] | 1637 | [2051, 429] | 2748 | [2904, 3181] | 3859 | [3660, 3992] |
| 527 | [958, 959] | 1638 | [2363, 2364] | 2749 | [1422, 1415] | 3860 | [4071, 1314] |
| 528 | [960, 961] | 1639 | [2365, 2328] | 2750 | [1913, 3132] | 3861 | [1164, 2726] |
| 529 | [962, 963] | 1640 | [2366, 2367] | 2751 | [2975, 206] | 3862 | [4072, 3760] |
| 530 | [964, 965] | 1641 | [2368, 2369] | 2752 | [506, 1659] | 3863 | [4073, 4074] |
| 531 | [966, 967] | 1642 | [2370, 2371] | 2753 | [1447, 3133] | 3864 | [4075, 3372] |
| 532 | [286, 968] | 1643 | [2372, 2373] | 2754 | [8, 668] | 3865 | [4076, 4077] |
| 533 | [969, 970] | 1644 | [2374, 2375] | 2755 | [3230, 3227] | 3866 | [4078, 1307] |
| 534 | [971, 972] | 1645 | [2376, 2059] | 2756 | [1984, 1387] | 3867 | [4079, 4080] |
| 535 | [973, 974] | 1646 | [2218, 2377] | 2757 | [2973, 3231] | 3868 | [4081, 3661] |
| 536 | [975, 976] | 1647 | [1008, 2009] | 2758 | [1874, 654] | 3869 | [3270, 267] |
| 537 | [977, 978] | 1648 | [2378, 2379] | 2759 | [759, 1518] | 3870 | [2453, 4082] |
| 538 | [979, 980] | 1649 | [2380, 2381] | 2760 | [3175, 191] | 3871 | [4083, 4084] |
| 539 | [290, 981] | 1650 | [2382, 2383] | 2761 | [3232, 779] | 3872 | [4085, 4086] |
| 540 | [982, 983] | 1651 | [2384, 2385] | 2762 | [1433, 3038] | 3873 | [4087, 4088] |
| 541 | [984, 985] | 1652 | [2386, 2387] | 2763 | [734, 2933] | 3874 | [2577, 2415] |
| 542 | [986, 987] | 1653 | [2388, 2389] | 2764 | [3233, 1730] | 3875 | [4089, 1191] |
| 543 | [988, 989] | 1654 | [1323, 2390] | 2765 | [1940, 3088] | 3876 | [4090, 1252] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 544 | [990, 991] | 1655 | [2391, 2392] | 2766 | [1400, 1901] | 3877 | [4091, 76] |
| 545 | [992, 993] | 1656 | [2393, 990] | 2767 | [149, 184] | 3878 | [4092, 3580] |
| 546 | [994, 995] | 1657 | [2394, 256] | 2768 | [3041, 1872] | 3879 | [2502, 2766] |
| 547 | [996, 997] | 1658 | [2395, 2396] | 2769 | [2925, 512] | 3880 | [4093, 4094] |
| 548 | [998, 999] | 1659 | [2397, 1257] | 2770 | [1969, 1619] | 3881 | [4095, 1183] |
| 549 | [1000, 1001] | 1660 | [2398, 2399] | 2771 | [3178, 1893] | 3882 | [4096, 2391] |
| 550 | [1002, 1003] | 1661 | [2400, 2401] | 2772 | [1661, 3095] | 3883 | [4097, 4098] |
| 551 | [1004, 1005] | 1662 | [2402, 2403] | 2773 | [465, 1496] | 3884 | [4099, 4100] |
| 552 | [1006, 283] | 1663 | [2404, 991] | 2774 | [2987, 1840] | 3885 | [4101, 3472] |
| 553 | [1007, 1008] | 1664 | [2405, 2170] | 2775 | [3234, 1619] | 3886 | [4102, 4103] |
| 554 | [1009, 1010] | 1665 | [2406, 2407] | 2776 | [1886, 194] | 3887 | [4104, 1119] |
| 555 | [792, 956] | 1666 | [2408, 2409] | 2777 | [496, 672] | 3888 | [2784, 2187] |
| 556 | [1011, 1012] | 1667 | [2176, 2410] | 2778 | [750, 2902] | 3889 | [4105, 407] |
| 557 | [1013, 1014] | 1668 | [1158, 888] | 2779 | [3235, 1391] | 3890 | [3574, 3461] |
| 558 | [1015, 1016] | 1669 | [2411, 2412] | 2780 | [1805, 1534] | 3891 | [1132, 367] |
| 559 | [1017, 1018] | 1670 | [889, 2413] | 2781 | [1734, 1498] | 3892 | [4106, 4107] |
| 560 | [1019, 1020] | 1671 | [2414, 2415] | 2782 | [1982, 573] | 3893 | [4108, 4109] |
| 561 | [1021, 1022] | 1672 | [2083, 2416] | 2783 | [1677, 1414] | 3894 | [4110, 4111] |
| 562 | [1023, 1024] | 1673 | [2417, 2418] | 2784 | [3236, 1412] | 3895 | [4112, 1201] |
| 563 | [1025, 1026] | 1674 | [2207, 2419] | 2785 | [3237, 1607] | 3896 | [4113, 4114] |
| 564 | [1027, 1028] | 1675 | [2353, 2420] | 2786 | [1942, 1501] | 3897 | [4115, 4116] |
| 565 | [1029, 1030] | 1676 | [2421, 2422] | 2787 | [3050, 3238] | 3898 | [4117, 1197] |
| 566 | [1031, 1032] | 1677 | [2423, 2424] | 2788 | [487, 1519] | 3899 | [1046, 4118] |
| 567 | [1033, 226] | 1678 | [2425, 2426] | 2789 | [1551, 1963] | 3900 | [4119, 1173] |
| 568 | [1034, 1035] | 1679 | [2286, 2062] | 2790 | [1600, 1748] | 3901 | [2710, 405] |
| 569 | [1036, 858] | 1680 | [2427, 2428] | 2791 | [3048, 2892] | 3902 | [2528, 2473] |
| 570 | [1037, 259] | 1681 | [884, 2429] | 2792 | [2903, 152] | 3903 | [4120, 4121] |
| 571 | [1038, 1039] | 1682 | [2430, 2431] | 2793 | [3180, 1760] | 3904 | [887, 4122] |
| 572 | [1001, 1040] | 1683 | [2432, 2433] | 2794 | [3239, 1522] | 3905 | [4123, 2178] |
| 573 | [1041, 1042] | 1684 | [2434, 2435] | 2795 | [1941, 3223] | 3906 | [4035, 948] |
| 574 | [1043, 1044] | 1685 | [2436, 2437] | 2796 | [1842, 1778] | 3907 | [1016, 60] |
| 575 | [1045, 1046] | 1686 | [2438, 2040] | 2797 | [552, 145] | 3908 | [4124, 3975] |
| 576 | [1047, 1048] | 1687 | [2439, 2440] | 2798 | [3240, 2972] | 3909 | [4125, 827] |
| 577 | [1049, 1050] | 1688 | [2441, 2442] | 2799 | [2868, 3062] | 3910 | [1072, 3401] |
| 578 | [1051, 1052] | 1689 | [2443, 2444] | 2800 | [3241, 2904] | 3911 | [4126, 812] |
| 579 | [1053, 1054] | 1690 | [2445, 261] | 2801 | [574, 3242] | 3912 | [110, 2202] |
| 580 | [1055, 1056] | 1691 | [2446, 2447] | 2802 | [3137, 3243] | 3913 | [2722, 1253] |
| 581 | [1057, 1058] | 1692 | [2448, 906] | 2803 | [3171, 1459] | 3914 | [2702, 2014] |
| 582 | [1059, 1060] | 1693 | [2449, 2450] | 2804 | [153, 1480] | 3915 | [4127, 3515] |
| 583 | [1061, 1062] | 1694 | [253, 784] | 2805 | [3244, 3245] | 3916 | [4128, 99] |
| 584 | [1063, 1064] | 1695 | [2451, 1194] | 2806 | [1921, 142] | 3917 | [3265, 280] |
| 585 | [1065, 1066] | 1696 | [895, 2137] | 2807 | [3122, 127] | 3918 | [4129, 2263] |
| 586 | [1067, 1068] | 1697 | [2452, 2453] | 2808 | [3246, 3247] | 3919 | [2067, 2419] |
| 587 | [1069, 1070] | 1698 | [2454, 2455] | 2809 | [662, 3248] | 3920 | [4130, 4131] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 588 | [1071, 1072] | 1699 | [288, 2456] | 2810 | [3249, 1859] | 3921 | [4132, 4133] |
| 589 | [1073, 364] | 1700 | [2457, 2458] | 2811 | [771, 1762] | 3922 | [4134, 4135] |
| 590 | [1074, 250] | 1701 | [2459, 2076] | 2812 | [3250, 519] | 3923 | [4136, 4137] |
| 591 | [1075, 1076] | 1702 | [2460, 2461] | 2813 | [3251, 1773] | 3924 | [4138, 2831] |
| 592 | [1077, 1078] | 1703 | [2462, 2463] | 2814 | [767, 1826] | 3925 | [4139, 4140] |
| 593 | [315, 1079] | 1704 | [1338, 1209] | 2815 | [2877, 3252] | 3926 | [4141, 1147] |
| 594 | [1080, 94] | 1705 | [2464, 1113] | 2816 | [2882, 1682] | 3927 | [4142, 2774] |
| 595 | [1081, 1082] | 1706 | [2465, 2466] | 2817 | [1633, 1450] | 3928 | [4143, 4144] |
| 596 | [1083, 1084] | 1707 | [2467, 1295] | 2818 | [3066, 1834] | 3929 | [4145, 4146] |
| 597 | [1085, 1086] | 1708 | [2468, 2469] | 2819 | [3253, 1482] | 3930 | [4147, 2152] |
| 598 | [1087, 1088] | 1709 | [2470, 2471] | 2820 | [771, 3008] | 3931 | [4148, 4149] |
| 599 | [1089, 1090] | 1710 | [2472, 2473] | 2821 | [3254, 56] | 3932 | [4150, 4151] |
| 600 | [1091, 969] | 1711 | [934, 2474] | 2822 | [671, 209] | 3933 | [1024, 272] |
| 601 | [1092, 1093] | 1712 | [2331, 2452] | 2823 | [3255, 548] | 3934 | [4152, 4153] |
| 602 | [420, 1094] | 1713 | [2475, 1019] | 2824 | [3256, 644] | 3935 | [4154, 4155] |
| 603 | [1095, 1025] | 1714 | [2476, 851] | 2825 | [3257, 539] | 3936 | [4156, 3394] |
| 604 | [312, 1096] | 1715 | [2477, 2478] | 2826 | [1964, 3150] | 3937 | [4157, 885] |
| 605 | [1097, 1098] | 1716 | [2479, 2480] | 2827 | [1468, 608] | 3938 | [4158, 1125] |
| 606 | [1099, 1100] | 1717 | [2288, 1153] | 2828 | [3258, 462] | 3939 | [4159, 968] |
| 607 | [1101, 1102] | 1718 | [2481, 2482] | 2829 | [3259, 2985] | 3940 | [4160, 4161] |
| 608 | [1103, 1104] | 1719 | [2483, 2484] | 2830 | [3260, 57] | 3941 | [836, 415] |
| 609 | [1105, 1106] | 1720 | [2485, 2486] | 2831 | [1641, 764] | 3942 | [2473, 4162] |
| 610 | [1107, 1089] | 1721 | [2487, 2488] | 2832 | [2547, 3261] | 3943 | [4163, 4164] |
| 611 | [1108, 1091] | 1722 | [2489, 964] | 2833 | [3262, 3263] | 3944 | [4165, 4166] |
| 612 | [1109, 285] | 1723 | [2490, 2491] | 2834 | [2534, 1038] | 3945 | [4167, 1160] |
| 613 | [1110, 966] | 1724 | [2492, 2493] | 2835 | [3264, 3265] | 3946 | [4168, 4169] |
| 614 | [1111, 1112] | 1725 | [2338, 2494] | 2836 | [3266, 3267] | 3947 | [4170, 2227] |
| 615 | [1113, 1114] | 1726 | [2379, 2495] | 2837 | [2769, 2795] | 3948 | [4171, 4172] |
| 616 | [1012, 415] | 1727 | [2496, 2497] | 2838 | [3268, 3269] | 3949 | [4173, 4174] |
| 617 | [1115, 1116] | 1728 | [2498, 2070] | 2839 | [338, 3270] | 3950 | [4175, 3324] |
| 618 | [1117, 1118] | 1729 | [2499, 2500] | 2840 | [3271, 2749] | 3951 | [4176, 4177] |
| 619 | [1119, 1120] | 1730 | [2501, 2502] | 2841 | [3272, 2623] | 3952 | [4178, 2348] |
| 620 | [1121, 1122] | 1731 | [2503, 2504] | 2842 | [2809, 277] | 3953 | [4179, 2366] |
| 621 | [1123, 1124] | 1732 | [406, 2505] | 2843 | [3273, 2107] | 3954 | [2209, 2642] |
| 622 | [1125, 1126] | 1733 | [319, 425] | 2844 | [3274, 1149] | 3955 | [3520, 2044] |
| 623 | [1127, 952] | 1734 | [94, 2506] | 2845 | [3275, 3276] | 3956 | [4180, 2189] |
| 624 | [1128, 1129] | 1735 | [2507, 2508] | 2846 | [3277, 3278] | 3957 | [2703, 2225] |
| 625 | [1130, 894] | 1736 | [2509, 2510] | 2847 | [3279, 3280] | 3958 | [4181, 4182] |
| 626 | [1131, 1132] | 1737 | [2511, 2512] | 2848 | [3281, 3282] | 3959 | [1175, 2404] |
| 627 | [1133, 1134] | 1738 | [2513, 2514] | 2849 | [3283, 2472] | 3960 | [4183, 362] |
| 628 | [917, 1135] | 1739 | [2515, 2157] | 2850 | [375, 882] | 3961 | [4184, 4185] |
| 629 | [1136, 238] | 1740 | [1070, 2516] | 2851 | [3284, 1190] | 3962 | [414, 4186] |
| 630 | [1137, 1138] | 1741 | [2350, 2517] | 2852 | [3285, 3286] | 3963 | [2132, 3639] |
| 631 | [1139, 1140] | 1742 | [2352, 2518] | 2853 | [3287, 2273] | 3964 | [4187, 2762] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 632 | [1141, 1142] | 1743 | [2519, 2520] | 2854 | [229, 910] | 3965 | [2005, 3282] |
| 633 | [1143, 1144] | 1744 | [2521, 2522] | 2855 | [3288, 3289] | 3966 | [4188, 432] |
| 634 | [1145, 1146] | 1745 | [2162, 2523] | 2856 | [3290, 3291] | 3967 | [4189, 146] |
| 635 | [1147, 1148] | 1746 | [1050, 2524] | 2857 | [1335, 2494] | 3968 | [1609, 4190] |
| 636 | [1149, 1150] | 1747 | [2525, 2501] | 2858 | [3292, 2578] | 3969 | [3833, 458] |
| 637 | [1151, 1152] | 1748 | [2315, 2526] | 2859 | [3293, 3294] | 3970 | [3789, 1599] |
| 638 | [1153, 1154] | 1749 | [2527, 2528] | 2860 | [3295, 2527] | 3971 | [4191, 532] |
| 639 | [92, 1155] | 1750 | [1332, 912] | 2861 | [3296, 2459] | 3972 | [4192, 3776] |
| 640 | [1058, 1156] | 1751 | [2529, 2530] | 2862 | [2099, 925] | 3973 | [165, 1733] |
| 641 | [1157, 1158] | 1752 | [1358, 2384] | 2863 | [3297, 3298] | 3974 | [4193, 206] |
| 642 | [333, 1159] | 1753 | [2531, 2532] | 2864 | [3299, 2217] | 3975 | [492, 3836] |
| 643 | [1160, 417] | 1754 | [2533, 2534] | 2865 | [3300, 902] | 3976 | [4194, 1553] |
| 644 | [1161, 1162] | 1755 | [957, 2535] | 2866 | [3301, 3302] | 3977 | [1654, 3117] |
| 645 | [1163, 1164] | 1756 | [2444, 896] | 2867 | [2156, 2289] | 3978 | [3089, 1541] |
| 646 | [1165, 839] | 1757 | [930, 2536] | 2868 | [3303, 3304] | 3979 | [1753, 1908] |
| 647 | [1166, 1167] | 1758 | [2537, 2538] | 2869 | [999, 2351] | 3980 | [3948, 3152] |
| 648 | [1168, 1169] | 1759 | [2539, 2540] | 2870 | [3305, 3306] | 3981 | [4195, 662] |
| 649 | [1170, 293] | 1760 | [346, 2541] | 2871 | [3307, 3308] | 3982 | [2865, 497] |
| 650 | [1171, 1172] | 1761 | [2542, 2332] | 2872 | [3309, 3295] | 3983 | [3781, 1422] |
| 651 | [1173, 75] | 1762 | [1122, 2543] | 2873 | [3310, 3311] | 3984 | [4196, 508] |
| 652 | [1174, 1175] | 1763 | [2544, 89] | 2874 | [3312, 3313] | 3985 | [3832, 1938] |
| 653 | [1176, 1177] | 1764 | [2545, 2546] | 2875 | [3314, 3315] | 3986 | [3958, 1588] |
| 654 | [1178, 870] | 1765 | [394, 1001] | 2876 | [2546, 2177] | 3987 | [4197, 1815] |
| 655 | [1179, 1180] | 1766 | [2275, 2547] | 2877 | [3316, 3317] | 3988 | [2940, 1426] |
| 656 | [1181, 1182] | 1767 | [2548, 2549] | 2878 | [2214, 3318] | 3989 | [1901, 1443] |
| 657 | [1183, 1184] | 1768 | [2550, 2441] | 2879 | [3319, 3320] | 3990 | [3864, 1919] |
| 658 | [282, 1185] | 1769 | [2551, 2525] | 2880 | [2781, 3321] | 3991 | [4198, 518] |
| 659 | [1186, 1187] | 1770 | [2552, 2340] | 2881 | [3322, 1331] | 3992 | [1801, 1742] |
| 660 | [1188, 1189] | 1771 | [2553, 1376] | 2882 | [1283, 1213] | 3993 | [3847, 512] |
| 661 | [1190, 939] | 1772 | [2554, 2555] | 2883 | [3323, 1097] | 3994 | [1781, 757] |
| 662 | [1191, 1192] | 1773 | [2073, 2556] | 2884 | [3324, 1168] | 3995 | [4199, 1860] |
| 663 | [1193, 1194] | 1774 | [81, 2196] | 2885 | [3325, 1166] | 3996 | [3908, 457] |
| 664 | [1195, 1196] | 1775 | [2557, 2558] | 2886 | [2412, 3294] | 3997 | [3933, 1854] |
| 665 | [1197, 1198] | 1776 | [2559, 2560] | 2887 | [3326, 3327] | 3998 | [4200, 1809] |
| 666 | [1199, 1200] | 1777 | [2561, 2126] | 2888 | [1304, 3328] | 3999 | [4201, 3073] |
| 667 | [1201, 1202] | 1778 | [2562, 2563] | 2889 | [2296, 3329] | 4000 | [3772, 3220] |
| 668 | [16, 368] | 1779 | [1096, 2564] | 2890 | [3330, 3331] | 4001 | [3955, 565] |
| 669 | [1203, 1204] | 1780 | [2565, 2566] | 2891 | [1054, 3332] | 4002 | [1840, 3039] |
| 670 | [1205, 1206] | 1781 | [1356, 2512] | 2892 | [3333, 3334] | 4003 | [1436, 1812] |
| 671 | [1207, 1208] | 1782 | [2567, 2568] | 2893 | [3335, 2087] | 4004 | [4202, 2855] |
| 672 | [1209, 1210] | 1783 | [2569, 2570] | 2894 | [3336, 3337] | 4005 | [4203, 2935] |
| 673 | [1211, 1212] | 1784 | [2563, 2571] | 2895 | [3338, 3339] | 4006 | [3790, 2972] |
| 674 | [1213, 1214] | 1785 | [2572, 2573] | 2896 | [3340, 3341] | 4007 | [3056, 202] |
| 675 | [1215, 1216] | 1786 | [2574, 2322] | 2897 | [2017, 3342] | 4008 | [4204, 1743] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 676 | [1217, 1218] | 1787 | [2575, 2529] | 2898 | [300, 2751] | 4009 | [3949, 1913] |
| 677 | [1219, 1220] | 1788 | [2043, 1032] | 2899 | [2193, 2748] | 4010 | [721, 1604] |
| 678 | [1221, 26] | 1789 | [2576, 2577] | 2900 | [2173, 954] | 4011 | [3800, 1607] |
| 679 | [1222, 1223] | 1790 | [2578, 1244] | 2901 | [2419, 3343] | 4012 | [4205, 1842] |
| 680 | [1224, 1049] | 1791 | [308, 2579] | 2902 | [433, 3344] | 4013 | [4206, 1721] |
| 681 | [1225, 1226] | 1792 | [1086, 2580] | 2903 | [2077, 2449] | 4014 | [4207, 735] |
| 682 | [1227, 1228] | 1793 | [2581, 835] | 2904 | [2255, 2103] | 4015 | [4208, 3174] |
| 683 | [1229, 1230] | 1794 | [2233, 252] | 2905 | [3345, 3323] | 4016 | [2912, 538] |
| 684 | [60, 1231] | 1795 | [2582, 2293] | 2906 | [3346, 2032] | 4017 | [3937, 1617] |
| 685 | [970, 1232] | 1796 | [1010, 2209] | 2907 | [3347, 3348] | 4018 | [4209, 2952] |
| 686 | [944, 1233] | 1797 | [2583, 2584] | 2908 | [77, 3349] | 4019 | [4196, 1735] |
| 687 | [1234, 1235] | 1798 | [2243, 2585] | 2909 | [2708, 98] | 4020 | [1995, 4190] |
| 688 | [1236, 105] | 1799 | [1295, 2586] | 2910 | [3350, 3351] | 4021 | [4210, 484] |
| 689 | [926, 1237] | 1800 | [2587, 2588] | 2911 | [1052, 3352] | 4022 | [4211, 692] |
| 690 | [1238, 1239] | 1801 | [2589, 2590] | 2912 | [3353, 2607] | 4023 | [4212, 3243] |
| 691 | [1240, 1241] | 1802 | [1230, 2414] | 2913 | [3354, 3355] | 4024 | [3946, 3102] |
| 692 | [1242, 1243] | 1803 | [2591, 2592] | 2914 | [3356, 3357] | 4025 | [3136, 643] |
| 693 | [1244, 1245] | 1804 | [2593, 2594] | 2915 | [3358, 3359] | 4026 | [4213, 1939] |
| 694 | [1246, 1247] | 1805 | [2595, 2499] | 2916 | [3360, 2184] | 4027 | [3131, 35] |
| 695 | [786, 1206] | 1806 | [2596, 2406] | 2917 | [3361, 2616] | 4028 | [3894, 1445] |
| 696 | [1248, 1249] | 1807 | [865, 2597] | 2918 | [3362, 3363] | 4029 | [2986, 188] |
| 697 | [1250, 1251] | 1808 | [302, 1355] | 2919 | [3364, 808] | 4030 | [1917, 3123] |
| 698 | [1252, 1253] | 1809 | [1192, 2598] | 2920 | [3365, 3366] | 4031 | [4214, 2867] |
| 699 | [1254, 1255] | 1810 | [859, 2334] | 2921 | [3367, 3368] | 4032 | [3917, 1810] |
| 700 | [1256, 1204] | 1811 | [280, 2599] | 2922 | [3369, 2604] | 4033 | [1786, 535] |
| 701 | [1257, 1258] | 1812 | [2600, 2601] | 2923 | [3370, 3371] | 4034 | [4215, 1587] |
| 702 | [1259, 1260] | 1813 | [981, 2602] | 2924 | [3372, 2456] | 4035 | [3866, 1667] |
| 703 | [817, 1261] | 1814 | [2603, 789] | 2925 | [3373, 833] | 4036 | [4216, 502] |
| 704 | [1262, 1263] | 1815 | [2604, 2605] | 2926 | [3374, 2752] | 4037 | [4217, 1462] |
| 705 | [980, 1264] | 1816 | [2606, 287] | 2927 | [3313, 426] | 4038 | [4218, 1683] |
| 706 | [1265, 1266] | 1817 | [2607, 2608] | 2928 | [3375, 3376] | 4039 | [3932, 209] |
| 707 | [1267, 1268] | 1818 | [2609, 2610] | 2929 | [3377, 1117] | 4040 | [3067, 477] |
| 708 | [1269, 1077] | 1819 | [2055, 904] | 2930 | [3378, 3379] | 4041 | [3874, 591] |
| 709 | [1270, 1271] | 1820 | [2611, 2056] | 2931 | [830, 3380] | 4042 | [4219, 3784] |
| 710 | [1048, 1272] | 1821 | [2612, 2613] | 2932 | [3381, 3382] | 4043 | [3246, 2952] |
| 711 | [1273, 1274] | 1822 | [2614, 384] | 2933 | [3383, 3384] | 4044 | [4220, 606] |
| 712 | [1275, 1276] | 1823 | [2526, 2615] | 2934 | [3385, 2301] | 4045 | [1470, 734] |
| 713 | [321, 1277] | 1824 | [2616, 2503] | 2935 | [1154, 3386] | 4046 | [4221, 648] |
| 714 | [1278, 279] | 1825 | [18, 2451] | 2936 | [2670, 2329] | 4047 | [3042, 4190] |
| 715 | [1279, 1280] | 1826 | [2171, 2324] | 2937 | [3387, 3388] | 4048 | [3836, 2885] |
| 716 | [1281, 1065] | 1827 | [2617, 1007] | 2938 | [2097, 3389] | 4049 | [3927, 3243] |
| 717 | [1282, 1283] | 1828 | [1333, 2618] | 2939 | [3390, 1163] | 4050 | [4222, 1905] |
| 718 | [1284, 1285] | 1829 | [2619, 2620] | 2940 | [3391, 3392] | 4051 | [4223, 3201] |
| 719 | [1286, 1287] | 1830 | [2621, 2622] | 2941 | [1321, 3393] | 4052 | [3957, 1487] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 720 | [1288, 1289] | 1831 | [2623, 2624] | 2942 | [3394, 3395] | 4053 | [4224, 546] |
| 721 | [1290, 1291] | 1832 | [2300, 2625] | 2943 | [3396, 1210] | 4054 | [3025, 3135] |
| 722 | [1292, 1293] | 1833 | [2626, 2120] | 2944 | [3397, 3398] | 4055 | [3910, 767] |
| 723 | [1294, 793] | 1834 | [367, 2040] | 2945 | [3399, 1063] | 4056 | [3810, 3034] |
| 724 | [976, 1295] | 1835 | [2627, 2628] | 2946 | [3400, 3401] | 4057 | [3826, 1962] |
| 725 | [1296, 1297] | 1836 | [430, 2629] | 2947 | [987, 3402] | 4058 | [3886, 518] |
| 726 | [883, 1298] | 1837 | [2630, 2631] | 2948 | [2036, 2160] | 4059 | [4225, 627] |
| 727 | [1299, 1300] | 1838 | [2632, 2215] | 2949 | [3403, 3345] | 4060 | [4226, 1763] |
| 728 | [1301, 1302] | 1839 | [961, 1080] | 2950 | [3404, 1101] | 4061 | [4227, 3156] |
| 729 | [1303, 1304] | 1840 | [2633, 2634] | 2951 | [3405, 107] | 4062 | [2863, 1927] |
| 730 | [1305, 1306] | 1841 | [2635, 2562] | 2952 | [1044, 3406] | 4063 | [4228, 1466] |
| 731 | [1307, 1308] | 1842 | [2636, 2637] | 2953 | [3407, 2814] | 4064 | [3216, 1418] |
| 732 | [1309, 1051] | 1843 | [2638, 2639] | 2954 | [3408, 3409] | 4065 | [3177, 2994] |
| 733 | [1310, 1311] | 1844 | [2640, 2641] | 2955 | [3410, 3411] | 4066 | [2857, 1890] |
| 734 | [1312, 862] | 1845 | [2642, 2643] | 2956 | [3384, 3412] | 4067 | [3830, 678] |
| 735 | [1313, 320] | 1846 | [2644, 1000] | 2957 | [310, 3413] | 4068 | [4229, 1670] |
| 736 | [1314, 1315] | 1847 | [2645, 2646] | 2958 | [3414, 3415] | 4069 | [3071, 160] |
| 737 | [1316, 1317] | 1848 | [2647, 2648] | 2959 | [3416, 3417] | 4070 | [4230, 758] |
| 738 | [1318, 1319] | 1849 | [972, 2649] | 2960 | [1231, 3418] | 4071 | [4231, 1959] |
| 739 | [1320, 1321] | 1850 | [2650, 1366] | 2961 | [3419, 3420] | 4072 | [4213, 3022] |
| 740 | [1322, 1323] | 1851 | [2651, 2318] | 2962 | [2711, 3421] | 4073 | [4232, 1556] |
| 741 | [1324, 1325] | 1852 | [2652, 962] | 2963 | [3422, 109] | 4074 | [4233, 1644] |
| 742 | [1326, 1327] | 1853 | [1223, 2653] | 2964 | [3423, 3347] | 4075 | [3828, 1989] |
| 743 | [1328, 1329] | 1854 | [2357, 2654] | 2965 | [788, 3424] | 4076 | [3943, 1974] |
| 744 | [1239, 1330] | 1855 | [2655, 2656] | 2966 | [3425, 3426] | 4077 | [4234, 3123] |
| 745 | [1331, 1332] | 1856 | [2657, 2658] | 2967 | [3427, 397] | 4078 | [1822, 1956] |
| 746 | [1112, 1333] | 1857 | [2659, 2600] | 2968 | [361, 2377] | 4079 | [4206, 2900] |
| 747 | [1334, 1335] | 1858 | [2660, 2661] | 2969 | [3428, 3429] | 4080 | [4235, 1990] |
| 748 | [1062, 1336] | 1859 | [237, 2662] | 2970 | [1185, 3430] | 4081 | [3824, 1892] |
| 749 | [1337, 1338] | 1860 | [2592, 2663] | 2971 | [3431, 3432] | 4082 | [1550, 3044] |
| 750 | [1339, 82] | 1861 | [2664, 2665] | 2972 | [2532, 3433] | 4083 | [4236, 1808] |
| 751 | [1340, 1341] | 1862 | [2666, 2667] | 2973 | [3434, 3435] | 4084 | [4237, 2977] |
| 752 | [1342, 1343] | 1863 | [813, 2668] | 2974 | [3436, 3437] | 4085 | [4238, 577] |
| 753 | [1344, 1193] | 1864 | [2347, 2669] | 2975 | [264, 3438] | 4086 | [3835, 3204] |
| 754 | [1345, 1346] | 1865 | [940, 2407] | 2976 | [3439, 2593] | 4087 | [3197, 608] |
| 755 | [284, 1347] | 1866 | [1226, 2670] | 2977 | [3418, 316] | 4088 | [4239, 1417] |
| 756 | [416, 1348] | 1867 | [2671, 17] | 2978 | [3440, 3441] | 4089 | [2884, 1514] |
| 757 | [991, 1349] | 1868 | [2672, 2673] | 2979 | [3442, 802] | 4090 | [4240, 555] |
| 758 | [1040, 1350] | 1869 | [2674, 2675] | 2980 | [3443, 3444] | 4091 | [4241, 151] |
| 759 | [1351, 1352] | 1870 | [2676, 2677] | 2981 | [3445, 3446] | 4092 | [4242, 1459] |
| 760 | [1353, 1354] | 1871 | [2678, 2679] | 2982 | [3371, 3447] | 4093 | [3764, 1438] |
| 761 | [1355, 1356] | 1872 | [2680, 2681] | 2983 | [3448, 900] | 4094 | [4243, 35] |
| 762 | [881, 785] | 1873 | [2682, 971] | 2984 | [2590, 3449] | 4095 | [4244, 1502] |
| 763 | [1357, 1358] | 1874 | [2683, 242] | 2985 | [3450, 2826] | 4096 | [3147, 1508] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 764 | [1359, 1242] | 1875 | [2684, 1188] | 2986 | [3451, 3452] | 4097 | [4245, 116] |
| 765 | [1360, 248] | 1876 | [90, 960] | 2987 | [3453, 378] | 4098 | [4246, 2843] |
| 766 | [1361, 1362] | 1877 | [2685, 1301] | 2988 | [3454, 3455] | 4099 | [4245, 1566] |
| 767 | [1293, 1363] | 1878 | [2686, 2006] | 2989 | [3456, 2446] | 4100 | [4247, 1961] |
| 768 | [1364, 1365] | 1879 | [2687, 2462] | 2990 | [1146, 3457] | 4101 | [3807, 1564] |
| 769 | [1366, 1367] | 1880 | [2688, 1110] | 2991 | [3458, 3459] | 4102 | [621, 764] |
| 770 | [67, 1040] | 1881 | [2689, 2690] | 2992 | [2203, 394] | 4103 | [3168, 44] |
| 771 | [1093, 1368] | 1882 | [2691, 2692] | 2993 | [3460, 929] | 4104 | [4204, 1778] |
| 772 | [1216, 423] | 1883 | [1155, 2483] | 2994 | [3461, 3462] | 4105 | [2849, 667] |
| 773 | [823, 1369] | 1884 | [2693, 2544] | 2995 | [2749, 3463] | 4106 | [4248, 690] |
| 774 | [1370, 1371] | 1885 | [2308, 1269] | 2996 | [2119, 3464] | 4107 | [4249, 3218] |
| 775 | [1285, 283] | 1886 | [2694, 2511] | 2997 | [3465, 3466] | 4108 | [4250, 716] |
| 776 | [1372, 1373] | 1887 | [2695, 820] | 2998 | [3467, 933] | 4109 | [2864, 1979] |
| 777 | [1374, 1375] | 1888 | [2696, 2697] | 2999 | [3468, 3469] | 4110 | [3219, 1952] |
| 778 | [1376, 1377] | 1889 | [2294, 2698] | 3000 | [3470, 3471] | 4111 | [4251, 3085] |
| 779 | [1039, 1378] | 1890 | [292, 326] | 3001 | [3472, 354] | 4112 | [3854, 647] |
| 780 | [1379, 941] | 1891 | [2699, 2700] | 3002 | [3473, 1281] | 4113 | [566, 175] |
| 781 | [1380, 1381] | 1892 | [2701, 2702] | 3003 | [3474, 3475] | 4114 | [1907, 1754] |
| 782 | [1382, 1383] | 1893 | [371, 2703] | 3004 | [3476, 986] | 4115 | [1844, 703] |
| 783 | [1384, 1385] | 1894 | [2704, 2705] | 3005 | [3477, 3478] | 4116 | [4252, 582] |
| 784 | [487, 762] | 1895 | [2706, 829] | 3006 | [3344, 257] | 4117 | [4253, 3806] |
| 785 | [1386, 1387] | 1896 | [2707, 2708] | 3007 | [3479, 2342] | 4118 | [1698, 3043] |
| 786 | [486, 1388] | 1897 | [1232, 924] | 3008 | [1094, 1322] | 4119 | [4254, 667] |
| 787 | [1389, 724] | 1898 | [2709, 2710] | 3009 | [3480, 2395] | 4120 | [2961, 3052] |
| 788 | [1390, 1391] | 1899 | [1056, 2711] | 3010 | [3481, 3482] | 4121 | [4255, 1537] |
| 789 | [1392, 1393] | 1900 | [2225, 2712] | 3011 | [2602, 3483] | 4122 | [713, 1642] |
| 790 | [1394, 218] | 1901 | [2033, 2713] | 3012 | [3484, 3485] | 4123 | [1685, 2897] |
| 791 | [1395, 1396] | 1902 | [2714, 2715] | 3013 | [3486, 2260] | 4124 | [4254, 710] |
| 792 | [1397, 1398] | 1903 | [2716, 1195] | 3014 | [3487, 1031] | 4125 | [4256, 1449] |
| 793 | [1399, 587] | 1904 | [2717, 2718] | 3015 | [995, 3488] | 4126 | [3170, 1637] |
| 794 | [185, 540] | 1905 | [2719, 2720] | 3016 | [241, 3489] | 4127 | [3154, 1486] |
| 795 | [1400, 1401] | 1906 | [2721, 2722] | 3017 | [3490, 2086] | 4128 | [4257, 590] |
| 796 | [1402, 1403] | 1907 | [2723, 2438] | 3018 | [3491, 3492] | 4129 | [3797, 678] |
| 797 | [1404, 1405] | 1908 | [2724, 2188] | 3019 | [3493, 994] | 4130 | [4258, 122] |
| 798 | [1406, 1407] | 1909 | [1385, 1087] | 3020 | [2110, 271] | 4131 | [4259, 3038] |
| 799 | [1408, 1409] | 1910 | [1368, 2722] | 3021 | [2063, 3494] | 4132 | [4260, 602] |
| 800 | [1410, 1411] | 1911 | [863, 2725] | 3022 | [3495, 1174] | 4133 | [774, 782] |
| 801 | [148, 532] | 1912 | [2726, 2187] | 3023 | [3496, 3497] | 4134 | [4232, 1990] |
| 802 | [1412, 1413] | 1913 | [304, 2633] | 3024 | [2358, 3498] | 4135 | [4261, 734] |
| 803 | [1414, 1415] | 1914 | [2727, 2728] | 3025 | [3499, 3500] | 4136 | [4262, 726] |
| 804 | [1416, 1417] | 1915 | [2729, 2730] | 3026 | [985, 3501] | 4137 | [4263, 2] |
| 805 | [1418, 1419] | 1916 | [2355, 2731] | 3027 | [3502, 3503] | 4138 | [4264, 2988] |
| 806 | [1420, 169] | 1917 | [2732, 2733] | 3028 | [3504, 2606] | 4139 | [3951, 194] |
| 807 | [560, 1421] | 1918 | [2734, 2735] | 3029 | [3505, 429] | 4140 | [3260, 563] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 808 | [1422, 1423] | 1919 | [2736, 2737] | 3030 | [3506, 3507] | 4141 | [4256, 615] |
| 809 | [481, 1424] | 1920 | [2738, 2739] | 3031 | [3508, 3509] | 4142 | [3841, 2878] |
| 810 | [1425, 1426] | 1921 | [1243, 831] | 3032 | [1378, 3510] | 4143 | [3211, 2929] |
| 811 | [1427, 466] | 1922 | [2740, 975] | 3033 | [3511, 1227] | 4144 | [4265, 171] |
| 812 | [1397, 1428] | 1923 | [2741, 2742] | 3034 | [3304, 3512] | 4145 | [4262, 1832] |
| 813 | [1429, 143] | 1924 | [2237, 2743] | 3035 | [2418, 2680] | 4146 | [4266, 1640] |
| 814 | [1430, 611] | 1925 | [2744, 2674] | 3036 | [2369, 3513] | 4147 | [594, 1843] |
| 815 | [1431, 1432] | 1926 | [2745, 1284] | 3037 | [3514, 2758] | 4148 | [3791, 1690] |
| 816 | [1433, 1434] | 1927 | [899, 2021] | 3038 | [3515, 2014] | 4149 | [4267, 3166] |
| 817 | [452, 1435] | 1928 | [2746, 1372] | 3039 | [3516, 3290] | 4150 | [4238, 3030] |
| 818 | [471, 1436] | 1929 | [2313, 1339] | 3040 | [3517, 2748] | 4151 | [4268, 1454] |
| 819 | [1437, 1438] | 1930 | [25, 2747] | 3041 | [3518, 2244] | 4152 | [4222, 772] |
| 820 | [1439, 1440] | 1931 | [2748, 2749] | 3042 | [3519, 3520] | 4153 | [4269, 1475] |
| 821 | [1441, 1442] | 1932 | [2718, 2750] | 3043 | [2123, 3521] | 4154 | [4270, 181] |
| 822 | [1401, 1443] | 1933 | [2751, 2752] | 3044 | [1159, 2165] | 4155 | [3195, 1840] |
| 823 | [1444, 546] | 1934 | [2753, 388] | 3045 | [3522, 3523] | 4156 | [3888, 447] |
| 824 | [123, 1445] | 1935 | [2654, 2754] | 3046 | [3524, 3525] | 4157 | [4267, 1804] |
| 825 | [1446, 1410] | 1936 | [2755, 1128] | 3047 | [3526, 3527] | 4158 | [3029, 2848] |
| 826 | [192, 1447] | 1937 | [2756, 2757] | 3048 | [3528, 3529] | 4159 | [3106, 716] |
| 827 | [1448, 464] | 1938 | [2758, 2691] | 3049 | [3530, 3531] | 4160 | [3952, 174] |
| 828 | [1449, 510] | 1939 | [2555, 2759] | 3050 | [3532, 3533] | 4161 | [4271, 457] |
| 829 | [1450, 1451] | 1940 | [2760, 2761] | 3051 | [3534, 3535] | 4162 | [1920, 3115] |
| 830 | [1452, 1453] | 1941 | [2762, 2147] | 3052 | [355, 269] | 4163 | [4272, 652] |
| 831 | [1454, 1455] | 1942 | [1150, 2763] | 3053 | [2497, 3286] | 4164 | [1795, 3238] |
| 832 | [1456, 1457] | 1943 | [2385, 2275] | 3054 | [3536, 3537] | 4165 | [4273, 1654] |
| 833 | [133, 1458] | 1944 | [2764, 1221] | 3055 | [3538, 3539] | 4166 | [4274, 522] |
| 834 | [779, 1459] | 1945 | [2765, 2766] | 3056 | [3540, 1004] | 4167 | [4231, 760] |
| 835 | [1460, 1461] | 1946 | [2767, 876] | 3057 | [3541, 3542] | 4168 | [3963, 2893] |
| 836 | [1462, 758] | 1947 | [2768, 2769] | 3058 | [3543, 3544] | 4169 | [4275, 1505] |
| 837 | [1463, 1464] | 1948 | [2739, 822] | 3059 | [832, 3545] | 4170 | [4276, 2842] |
| 838 | [1465, 1466] | 1949 | [1327, 2770] | 3060 | [2788, 882] | 4171 | [3778, 555] |
| 839 | [125, 1467] | 1950 | [2771, 2359] | 3061 | [3546, 2550] | 4172 | [3822, 49] |
| 840 | [1468, 1469] | 1951 | [2772, 2773] | 3062 | [848, 2753] | 4173 | [4202, 1487] |
| 841 | [1470, 1471] | 1952 | [2774, 1181] | 3063 | [3547, 2432] | 4174 | [1936, 597] |
| 842 | [1472, 1473] | 1953 | [2775, 2337] | 3064 | [3548, 2064] | 4175 | [4197, 3012] |
| 843 | [1474, 1475] | 1954 | [2776, 1081] | 3065 | [3549, 3550] | 4176 | [4217, 573] |
| 844 | [1476, 1477] | 1955 | [2777, 2561] | 3066 | [3551, 3552] | 4177 | [4277, 3016] |
| 845 | [1478, 525] | 1956 | [1194, 948] | 3067 | [3553, 866] | 4178 | [3929, 1773] |
| 846 | [1479, 1480] | 1957 | [2778, 2779] | 3068 | [968, 3554] | 4179 | [3900, 33] |
| 847 | [1481, 1447] | 1958 | [2780, 2781] | 3069 | [3555, 3518] | 4180 | [4278, 543] |
| 848 | [1482, 718] | 1959 | [2782, 2117] | 3070 | [2690, 3556] | 4181 | [4273, 1883] |
| 849 | [479, 1483] | 1960 | [2783, 2784] | 3071 | [2089, 3557] | 4182 | [4279, 222] |
| 850 | [221, 1484] | 1961 | [2785, 2786] | 3072 | [3558, 1036] | 4183 | [3891, 1499] |
| 851 | [1485, 1486] | 1962 | [2787, 2788] | 3073 | [3559, 3335] | 4184 | [3959, 758] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 852 | [167, 1487] | 1963 | [2504, 2789] | 3074 | [3417, 3560] | 4185 | [4280, 575] |
| 853 | [1488, 1441] | 1964 | [1148, 2790] | 3075 | [3561, 3562] | 4186 | [754, 663] |
| 854 | [755, 1489] | 1965 | [2791, 2792] | 3076 | [2003, 348] | 4187 | [3182, 1816] |
| 855 | [1490, 1491] | 1966 | [2793, 2599] | 3077 | [3563, 3377] | 4188 | [3159, 485] |
| 856 | [1492, 1493] | 1967 | [2794, 843] | 3078 | [2770, 2737] | 4189 | [3569, 329] |
| 857 | [1494, 1495] | 1968 | [2795, 854] | 3079 | [3564, 2719] | 4190 | [4281, 2247] |
| 858 | [1496, 1497] | 1969 | [1184, 2796] | 3080 | [2113, 2447] | 4191 | [2720, 2675] |
| 859 | [1498, 1499] | 1970 | [2797, 2259] | 3081 | [3565, 2023] | 4192 | [4282, 4015] |
| 860 | [220, 520] | 1971 | [2798, 2799] | 3082 | [3566, 3567] | 4193 | [1100, 2036] |
| 861 | [1483, 1500] | 1972 | [2800, 2325] | 3083 | [3568, 3569] | 4194 | [4283, 1296] |
| 862 | [1485, 1501] | 1973 | [2801, 2782] | 3084 | [306, 1121] | 4195 | [4284, 4285] |
| 863 | [1502, 595] | 1974 | [2802, 2803] | 3085 | [799, 3570] | 4196 | [1104, 2247] |
| 864 | [1503, 1418] | 1975 | [1218, 1297] | 3086 | [3571, 3572] | 4197 | [4286, 3449] |
| 865 | [141, 664] | 1976 | [2804, 2798] | 3087 | [3573, 3574] | 4198 | [4287, 943] |
| 866 | [1504, 1505] | 1977 | [2805, 2806] | 3088 | [3575, 3576] | 4199 | [4288, 4289] |
| 867 | [455, 1506] | 1978 | [2639, 2807] | 3089 | [3577, 2253] | 4200 | [4290, 2672] |
| 868 | [1507, 1508] | 1979 | [2808, 2809] | 3090 | [1032, 3578] | 4201 | [4291, 4047] |
| 869 | [1509, 1510] | 1980 | [4, 2754] | 3091 | [3579, 2264] | 4202 | [2463, 3424] |
| 870 | [578, 500] | 1981 | [2810, 1256] | 3092 | [3580, 3581] | 4203 | [4292, 4293] |
| 871 | [1511, 600] | 1982 | [2004, 2434] | 3093 | [3582, 2232] | 4204 | [4294, 1096] |
| 872 | [454, 447] | 1983 | [2625, 880] | 3094 | [3583, 3504] | 4205 | [4295, 4296] |
| 873 | [1512, 1513] | 1984 | [1349, 2782] | 3095 | [3584, 3476] | 4206 | [4297, 4298] |
| 874 | [519, 618] | 1985 | [2401, 2811] | 3096 | [2571, 3585] | 4207 | [4299, 4300] |
| 875 | [205, 1514] | 1986 | [2812, 873] | 3097 | [3586, 2249] | 4208 | [4301, 2028] |
| 876 | [1515, 1516] | 1987 | [2813, 2496] | 3098 | [3452, 3587] | 4209 | [4302, 4303] |
| 877 | [184, 539] | 1988 | [2814, 1168] | 3099 | [3588, 2682] | 4210 | [4304, 878] |
| 878 | [1517, 191] | 1989 | [2757, 2404] | 3100 | [3589, 1384] | 4211 | [4305, 4306] |
| 879 | [639, 643] | 1990 | [2815, 2816] | 3101 | [3590, 3591] | 4212 | [4307, 4308] |
| 880 | [696, 1386] | 1991 | [2817, 2706] | 3102 | [1308, 3592] | 4213 | [3492, 3507] |
| 881 | [756, 486] | 1992 | [2818, 2819] | 3103 | [3593, 2314] | 4214 | [4309, 2791] |
| 882 | [696, 1518] | 1993 | [2713, 346] | 3104 | [79, 2398] | 4215 | [2169, 3462] |
| 883 | [1519, 726] | 1994 | [426, 2820] | 3105 | [3594, 3595] | 4216 | [3529, 89] |
| 884 | [1520, 1521] | 1995 | [2821, 2822] | 3106 | [3596, 1045] | 4217 | [3261, 2788] |
| 885 | [52, 1522] | 1996 | [2823, 2824] | 3107 | [1253, 3597] | 4218 | [4310, 3293] |
| 886 | [1523, 1524] | 1997 | [2825, 2467] | 3108 | [3598, 3599] | 4219 | [4311, 4312] |
| 887 | [1525, 1526] | 1998 | [2826, 2827] | 3109 | [3600, 908] | 4220 | [359, 3464] |
| 888 | [54, 1527] | 1999 | [2828, 1059] | 3110 | [2658, 3601] | 4221 | [4313, 1170] |
| 889 | [1528, 1529] | 2000 | [2829, 2830] | 3111 | [3602, 3603] | 4222 | [4149, 2333] |
| 890 | [1530, 644] | 2001 | [2628, 2312] | 3112 | [3475, 3604] | 4223 | [4314, 2282] |
| 891 | [1531, 779] | 2002 | [2831, 2521] | 3113 | [2538, 2502] | 4224 | [2364, 363] |
| 892 | [1532, 1533] | 2003 | [1694, 130] | 3114 | [3605, 3450] | 4225 | [4315, 4316] |
| 893 | [1534, 1435] | 2004 | [1766, 2832] | 3115 | [3357, 2238] | 4226 | [2530, 3379] |
| 894 | [1535, 553] | 2005 | [759, 1386] | 3116 | [2522, 3506] | 4227 | [4317, 4117] |
| 895 | [1536, 738] | 2006 | [1590, 192] | 3117 | [3606, 3607] | 4228 | [4318, 4319] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 896 | [1537, 1538] | 2007 | [1865, 1713] | 3118 | [3478, 2294] | 4229 | [4320, 2454] |
| 897 | [1539, 599] | 2008 | [2833, 158] | 3119 | [1129, 1092] | 4230 | [2512, 1248] |
| 898 | [1540, 1541] | 2009 | [2834, 504] | 3120 | [3608, 413] | 4231 | [1315, 1355] |
| 899 | [1542, 1543] | 2010 | [2835, 550] | 3121 | [3609, 3610] | 4232 | [4321, 4322] |
| 900 | [1544, 484] | 2011 | [2836, 605] | 3122 | [3327, 3611] | 4233 | [4323, 4324] |
| 901 | [1545, 1546] | 2012 | [1408, 568] | 3123 | [3612, 3613] | 4234 | [4325, 2659] |
| 902 | [1547, 1548] | 2013 | [2837, 1878] | 3124 | [2327, 2492] | 4235 | [4326, 2256] |
| 903 | [1414, 1423] | 2014 | [2838, 1928] | 3125 | [3614, 3615] | 4236 | [4327, 3743] |
| 904 | [31, 1493] | 2015 | [1896, 1745] | 3126 | [3616, 3617] | 4237 | [4328, 3653] |
| 905 | [1549, 1550] | 2016 | [1833, 1667] | 3127 | [3618, 3619] | 4238 | [4329, 4330] |
| 906 | [747, 545] | 2017 | [453, 1921] | 3128 | [3376, 1167] | 4239 | [4331, 4043] |
| 907 | [217, 1551] | 2018 | [2839, 1601] | 3129 | [3620, 3621] | 4240 | [4332, 3735] |
| 908 | [1552, 1553] | 2019 | [2840, 600] | 3130 | [2175, 2084] | 4241 | [4333, 295] |
| 909 | [52, 636] | 2020 | [2841, 2842] | 3131 | [3622, 2787] | 4242 | [828, 2433] |
| 910 | [1554, 1555] | 2021 | [58, 139] | 3132 | [2491, 3623] | 4243 | [4334, 4335] |
| 911 | [1556, 1557] | 2022 | [1543, 117] | 3133 | [2150, 2631] | 4244 | [4336, 2638] |
| 912 | [1558, 1559] | 2023 | [1987, 1726] | 3134 | [3624, 85] | 4245 | [4337, 4338] |
| 913 | [1560, 1561] | 2024 | [613, 147] | 3135 | [381, 982] | 4246 | [4339, 3271] |
| 914 | [543, 565] | 2025 | [769, 1962] | 3136 | [2514, 1323] | 4247 | [4340, 1069] |
| 915 | [1562, 607] | 2026 | [2843, 1608] | 3137 | [3625, 3626] | 4248 | [3289, 3363] |
| 916 | [1563, 205] | 2027 | [2844, 635] | 3138 | [3627, 80] | 4249 | [4341, 307] |
| 917 | [715, 1564] | 2028 | [2845, 1575] | 3139 | [2663, 3628] | 4250 | [4342, 4343] |
| 918 | [1565, 1566] | 2029 | [586, 2846] | 3140 | [3629, 3328] | 4251 | [4344, 4345] |
| 919 | [1567, 37] | 2030 | [2847, 1701] | 3141 | [3630, 3631] | 4252 | [4346, 4347] |
| 920 | [1568, 31] | 2031 | [1566, 2848] | 3142 | [3632, 2234] | 4253 | [4348, 2465] |
| 921 | [1569, 1570] | 2032 | [2849, 710] | 3143 | [2270, 238] | 4254 | [4349, 3618] |
| 922 | [548, 1571] | 2033 | [1790, 2850] | 3144 | [2677, 3633] | 4255 | [4350, 4351] |
| 923 | [1572, 1445] | 2034 | [669, 462] | 3145 | [2304, 3601] | 4256 | [2480, 925] |
| 924 | [121, 1573] | 2035 | [646, 1993] | 3146 | [3634, 2213] | 4257 | [4352, 2012] |
| 925 | [729, 1574] | 2036 | [545, 732] | 3147 | [2108, 2534] | 4258 | [3988, 2528] |
| 926 | [1575, 462] | 2037 | [186, 2851] | 3148 | [3635, 2612] | 4259 | [4353, 4354] |
| 927 | [1576, 1577] | 2038 | [1698, 2852] | 3149 | [2773, 3578] | 4260 | [3329, 3694] |
| 928 | [1578, 1579] | 2039 | [1692, 578] | 3150 | [3636, 2545] | 4261 | [4355, 3383] |
| 929 | [1580, 1581] | 2040 | [682, 1866] | 3151 | [3637, 3638] | 4262 | [2435, 1315] |
| 930 | [173, 717] | 2041 | [683, 1632] | 3152 | [2285, 2481] | 4263 | [4356, 2724] |
| 931 | [1582, 1583] | 2042 | [2853, 2854] | 3153 | [2129, 3639] | 4264 | [4357, 1275] |
| 932 | [466, 1497] | 2043 | [2855, 1900] | 3154 | [239, 3461] | 4265 | [4358, 2507] |
| 933 | [1584, 1585] | 2044 | [605, 1824] | 3155 | [3640, 3641] | 4266 | [4359, 4360] |
| 934 | [1586, 1468] | 2045 | [1894, 2856] | 3156 | [1098, 3642] | 4267 | [4361, 4362] |
| 935 | [1452, 1587] | 2046 | [1487, 1900] | 3157 | [3643, 3644] | 4268 | [4363, 2105] |
| 936 | [1588, 454] | 2047 | [2857, 540] | 3158 | [3645, 1303] | 4269 | [4364, 1013] |
| 937 | [728, 1589] | 2048 | [2858, 2859] | 3159 | [855, 1384] | 4270 | [4365, 4366] |
| 938 | [1590, 1481] | 2049 | [612, 1727] | 3160 | [3646, 3647] | 4271 | [4367, 4368] |
| 939 | [485, 1591] | 2050 | [163, 2860] | 3161 | [879, 2175] | 4272 | [1042, 1030] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 940 | [145, 1592] | 2051 | [1852, 778] | 3162 | [3648, 3303] | 4273 | [4369, 4370] |
| 941 | [1593, 1508] | 2052 | [1790, 1737] | 3163 | [3649, 3650] | 4274 | [4371, 950] |
| 942 | [1594, 174] | 2053 | [1885, 707] | 3164 | [2750, 2489] | 4275 | [4372, 4373] |
| 943 | [1595, 1596] | 2054 | [2861, 2862] | 3165 | [3651, 3652] | 4276 | [4374, 1222] |
| 944 | [1537, 1577] | 2055 | [508, 1549] | 3166 | [3653, 2457] | 4277 | [4375, 4376] |
| 945 | [469, 1456] | 2056 | [781, 775] | 3167 | [2104, 3564] | 4278 | [4377, 1029] |
| 946 | [1597, 1598] | 2057 | [2863, 457] | 3168 | [3654, 2793] | 4279 | [4378, 4379] |
| 947 | [1599, 1600] | 2058 | [2864, 1528] | 3169 | [3655, 3656] | 4280 | [4380, 4381] |
| 948 | [210, 1601] | 2059 | [1926, 1482] | 3170 | [3657, 979] | 4281 | [2945, 4382] |
| 949 | [161, 529] | 2060 | [2865, 1596] | 3171 | [2605, 3658] | 4282 | [4220, 1824] |
| 950 | [596, 1602] | 2061 | [2866, 2867] | 3172 | [2165, 3437] | 4283 | [3885, 1777] |
| 951 | [1560, 13] | 2062 | [645, 1949] | 3173 | [3659, 3660] | 4284 | [3221, 563] |
| 952 | [1603, 1414] | 2063 | [468, 2868] | 3174 | [3661, 3583] | 4285 | [4383, 3068] |
| 953 | [1604, 1605] | 2064 | [1759, 2869] | 3175 | [3662, 3663] | 4286 | [3961, 622] |
| 954 | [1420, 1606] | 2065 | [2869, 2870] | 3176 | [3664, 3665] | 4287 | [4384, 1537] |
| 955 | [1607, 737] | 2066 | [2871, 1760] | 3177 | [3666, 64] | 4288 | [4226, 1910] |
| 956 | [1608, 470] | 2067 | [2872, 1548] | 3178 | [3667, 2110] | 4289 | [4385, 3869] |
| 957 | [1398, 1567] | 2068 | [2873, 167] | 3179 | [3668, 931] | 4290 | [3239, 636] |
| 958 | [509, 746] | 2069 | [2874, 561] | 3180 | [3669, 3670] | 4291 | [3939, 540] |
| 959 | [1609, 1610] | 2070 | [2875, 1573] | 3181 | [3382, 3671] | 4292 | [3862, 1475] |
| 960 | [1496, 1611] | 2071 | [2876, 1978] | 3182 | [3672, 1039] | 4293 | [4386, 2975] |
| 961 | [177, 1612] | 2072 | [178, 1557] | 3183 | [3673, 2161] | 4294 | [3187, 2985] |
| 962 | [177, 1613] | 2073 | [2877, 2878] | 3184 | [2403, 3674] | 4295 | [4387, 619] |
| 963 | [1614, 1599] | 2074 | [2879, 2880] | 3185 | [1298, 2384] | 4296 | [4388, 1777] |
| 964 | [1440, 1615] | 2075 | [2881, 2882] | 3186 | [3675, 3676] | 4297 | [4189, 1592] |
| 965 | [480, 1616] | 2076 | [1498, 2883] | 3187 | [3677, 2102] | 4298 | [511, 2926] |
| 966 | [1575, 670] | 2077 | [625, 1599] | 3188 | [3678, 3679] | 4299 | [4389, 761] |
| 967 | [44, 778] | 2078 | [2884, 1792] | 3189 | [3482, 3277] | 4300 | [4218, 1650] |
| 968 | [458, 1617] | 2079 | [493, 2885] | 3190 | [2679, 3680] | 4301 | [4264, 1948] |
| 969 | [1618, 1619] | 2080 | [1545, 1489] | 3191 | [3409, 973] | 4302 | [1576, 1538] |
| 970 | [1620, 121] | 2081 | [2886, 749] | 3192 | [3681, 849] | 4303 | [4390, 3030] |
| 971 | [1473, 1621] | 2082 | [2887, 2888] | 3193 | [3682, 3683] | 4304 | [3945, 639] |
| 972 | [1429, 591] | 2083 | [58, 1632] | 3194 | [3684, 3685] | 4305 | [4260, 1551] |
| 973 | [440, 1622] | 2084 | [135, 2889] | 3195 | [3686, 3687] | 4306 | [2983, 3028] |
| 974 | [714, 591] | 2085 | [2890, 588] | 3196 | [3688, 3689] | 4307 | [3196, 654] |
| 975 | [1623, 1624] | 2086 | [1623, 1934] | 3197 | [2733, 2601] | 4308 | [3162, 713] |
| 976 | [546, 661] | 2087 | [2891, 1491] | 3198 | [3690, 3691] | 4309 | [4241, 2903] |
| 977 | [709, 667] | 2088 | [2892, 121] | 3199 | [3692, 2140] | 4310 | [3161, 517] |
| 978 | [1427, 1496] | 2089 | [778, 2893] | 3200 | [3693, 988] | 4311 | [1492, 684] |
| 979 | [1625, 1626] | 2090 | [2894, 1520] | 3201 | [2568, 3694] | 4312 | [4391, 187] |
| 980 | [587, 1627] | 2091 | [2895, 210] | 3202 | [3695, 3696] | 4313 | [4392, 560] |
| 981 | [553, 146] | 2092 | [14, 489] | 3203 | [3697, 3698] | 4314 | [4215, 1453] |
| 982 | [706, 1628] | 2093 | [1855, 1871] | 3204 | [2524, 3699] | 4315 | [4387, 1928] |
| 983 | [1566, 1629] | 2094 | [2896, 493] | 3205 | [3680, 3700] | 4316 | [4393, 3220] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 984 | [1630, 1631] | 2095 | [554, 2897] | 3206 | [3701, 3354] | 4317 | [3902, 1946] |
| 985 | [1632, 140] | 2096 | [442, 1714] | 3207 | [3702, 1131] | 4318 | [1430, 1539] |
| 986 | [1633, 1634] | 2097 | [2898, 1912] | 3208 | [3703, 1205] | 4319 | [4394, 1799] |
| 987 | [128, 1635] | 2098 | [656, 729] | 3209 | [3494, 2799] | 4320 | [1707, 746] |
| 988 | [1636, 1637] | 2099 | [600, 2899] | 3210 | [1354, 2300] | 4321 | [3965, 130] |
| 989 | [190, 1638] | 2100 | [1666, 1834] | 3211 | [3704, 345] | 4322 | [3850, 1817] |
| 990 | [1639, 1640] | 2101 | [1432, 1648] | 3212 | [3705, 3498] | 4323 | [3845, 693] |
| 991 | [757, 487] | 2102 | [650, 2] | 3213 | [3706, 3707] | 4324 | [4395, 1654] |
| 992 | [1641, 622] | 2103 | [1904, 444] | 3214 | [3708, 2163] | 4325 | [1769, 1882] |
| 993 | [1642, 1643] | 2104 | [159, 637] | 3215 | [3709, 3710] | 4326 | [3185, 1386] |
| 994 | [1569, 1644] | 2105 | [1720, 2900] | 3216 | [2201, 965] | 4327 | [3000, 1646] |
| 995 | [557, 736] | 2106 | [470, 2901] | 3217 | [3711, 3712] | 4328 | [3911, 1458] |
| 996 | [1403, 174] | 2107 | [504, 2902] | 3218 | [1373, 3559] | 4329 | [4396, 1458] |
| 997 | [1405, 547] | 2108 | [2903, 767] | 3219 | [3713, 3714] | 4330 | [1862, 1633] |
| 998 | [1645, 1646] | 2109 | [2904, 1761] | 3220 | [3621, 3715] | 4331 | [2927, 620] |
| 999 | [1647, 1648] | 2110 | [1679, 2905] | 3221 | [3716, 3717] | 4332 | [4194, 1924] |
| 1000 | [1649, 1650] | 2111 | [1570, 714] | 3222 | [3718, 3719] | 4333 | [4278, 564] |
| 1001 | [1518, 1651] | 2112 | [2906, 2907] | 3223 | [3720, 3721] | 4334 | [4397, 215] |
| 1002 | [1652, 1490] | 2113 | [2908, 1536] | 3224 | [3722, 3723] | 4335 | [1782, 213] |
| 1003 | [1527, 219] | 2114 | [2909, 1546] | 3225 | [3724, 3725] | 4336 | [4398, 631] |
| 1004 | [1653, 1654] | 2115 | [2910, 2911] | 3226 | [3464, 2487] | 4337 | [4272, 756] |
| 1005 | [165, 1655] | 2116 | [1561, 14] | 3227 | [3726, 1093] | 4338 | [3768, 3001] |
| 1006 | [1656, 543] | 2117 | [1982, 1462] | 3228 | [251, 1190] | 4339 | [4211, 522] |
| 1007 | [1657, 1658] | 2118 | [2912, 2913] | 3229 | [3727, 2128] | 4340 | [3966, 1724] |
| 1008 | [1659, 1660] | 2119 | [2914, 49] | 3230 | [3728, 1027] | 4341 | [4242, 780] |
| 1009 | [1661, 1658] | 2120 | [2915, 1454] | 3231 | [838, 3729] | 4342 | [3852, 1658] |
| 1010 | [1662, 712] | 2121 | [743, 1810] | 3232 | [3730, 1379] | 4343 | [2896, 3836] |
| 1011 | [1663, 756] | 2122 | [2916, 766] | 3233 | [2580, 405] | 4344 | [3802, 1961] |
| 1012 | [1664, 1665] | 2123 | [2917, 605] | 3234 | [2345, 26] | 4345 | [4399, 1994] |
| 1013 | [1666, 1667] | 2124 | [1877, 1908] | 3235 | [3731, 2647] | 4346 | [4389, 1982] |
| 1014 | [1668, 1669] | 2125 | [569, 2918] | 3236 | [3732, 2042] | 4347 | [4277, 2990] |
| 1015 | [1504, 1670] | 2126 | [2919, 455] | 3237 | [3733, 3734] | 4348 | [4229, 1505] |
| 1016 | [707, 1671] | 2127 | [705, 2001] | 3238 | [3735, 3736] | 4349 | [1463, 731] |
| 1017 | [1672, 1673] | 2128 | [1922, 1604] | 3239 | [3737, 2156] | 4350 | [4397, 1983] |
| 1018 | [525, 1674] | 2129 | [520, 1484] | 3240 | [3738, 3739] | 4351 | [4199, 437] |
| 1019 | [1675, 749] | 2130 | [723, 1897] | 3241 | [3740, 2542] | 4352 | [4400, 1779] |
| 1020 | [8, 501] | 2131 | [2920, 1679] | 3242 | [3741, 3742] | 4353 | [4236, 203] |
| 1021 | [1676, 1556] | 2132 | [1678, 1998] | 3243 | [938, 3743] | 4354 | [4401, 1823] |
| 1022 | [1455, 559] | 2133 | [2921, 171] | 3244 | [3744, 3745] | 4355 | [3882, 1732] |
| 1023 | [1677, 1422] | 2134 | [148, 1725] | 3245 | [3599, 3746] | 4356 | [3851, 169] |
| 1024 | [1678, 1679] | 2135 | [2873, 1911] | 3246 | [3747, 2802] | 4357 | [4216, 1825] |
| 1025 | [1680, 1404] | 2136 | [2922, 2923] | 3247 | [3748, 2316] | 4358 | [4384, 3124] |
| 1026 | [686, 724] | 2137 | [553, 1592] | 3248 | [3749, 3750] | 4359 | [4248, 3044] |
| 1027 | [180, 1681] | 2138 | [738, 1485] | 3249 | [3751, 2343] | 4360 | [4402, 1581] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1028 | [744, 1682] | 2139 | [2924, 770] | 3250 | [2792, 1117] | 4361 | [2997, 1464] |
| 1029 | [1649, 1683] | 2140 | [2925, 2926] | 3251 | [3752, 3495] | 4362 | [4195, 754] |
| 1030 | [1684, 696] | 2141 | [2866, 1964] | 3252 | [3521, 2044] | 4363 | [3919, 470] |
| 1031 | [1685, 555] | 2142 | [1539, 1511] | 3253 | [3753, 3754] | 4364 | [3775, 1737] |
| 1032 | [199, 175] | 2143 | [1488, 1913] | 3254 | [3755, 2585] | 4365 | [4396, 134] |
| 1033 | [1686, 1571] | 2144 | [1998, 2905] | 3255 | [3756, 3757] | 4366 | [3853, 126] |
| 1034 | [1687, 1688] | 2145 | [2927, 1929] | 3256 | [3758, 3442] | 4367 | [4250, 1564] |
| 1035 | [1689, 1690] | 2146 | [2928, 2929] | 3257 | [3759, 3501] | 4368 | [4228, 1698] |
| 1036 | [47, 1691] | 2147 | [1528, 2930] | 3258 | [3760, 316] | 4369 | [4224, 1405] |
| 1037 | [1692, 499] | 2148 | [2931, 1909] | 3259 | [3761, 3762] | 4370 | [3142, 3059] |
| 1038 | [767, 1693] | 2149 | [2932, 1760] | 3260 | [3763, 113] | 4371 | [3234, 1560] |
| 1039 | [1659, 1407] | 2150 | [535, 1605] | 3261 | [652, 486] | 4372 | [4258, 1573] |
| 1040 | [130, 1694] | 2151 | [2933, 476] | 3262 | [3764, 3765] | 4373 | [4403, 2965] |
| 1041 | [1388, 1519] | 2152 | [2934, 2935] | 3263 | [115, 1566] | 4374 | [4400, 1744] |
| 1042 | [726, 435] | 2153 | [1843, 1734] | 3264 | [2920, 1998] | 4375 | [4191, 1725] |
| 1043 | [1695, 1696] | 2154 | [1556, 179] | 3265 | [3236, 2869] | 4376 | [4404, 3011] |
| 1044 | [1687, 1697] | 2155 | [742, 645] | 3266 | [3224, 1444] | 4377 | [4230, 1684] |
| 1045 | [1465, 1698] | 2156 | [635, 1522] | 3267 | [3766, 2892] | 4378 | [1935, 1491] |
| 1046 | [618, 723] | 2157 | [1972, 2843] | 3268 | [2845, 461] | 4379 | [4203, 3035] |
| 1047 | [653, 1699] | 2158 | [2936, 508] | 3269 | [2868, 1643] | 4380 | [3145, 1613] |
| 1048 | [1542, 1700] | 2159 | [2937, 2938] | 3270 | [13, 515] | 4381 | [4405, 3816] |
| 1049 | [1701, 1702] | 2160 | [617, 685] | 3271 | [3767, 221] | 4382 | [257, 3454] |
| 1050 | [1647, 1703] | 2161 | [732, 1617] | 3272 | [1728, 146] | 4383 | [4406, 3477] |
| 1051 | [174, 200] | 2162 | [2838, 619] | 3273 | [722, 2903] | 4384 | [4407, 2283] |
| 1052 | [1591, 1704] | 2163 | [2939, 644] | 3274 | [155, 631] | 4385 | [4408, 4409] |
| 1053 | [1705, 1706] | 2164 | [2940, 2941] | 3275 | [1794, 1519] | 4386 | [4410, 399] |
| 1054 | [518, 617] | 2165 | [628, 1407] | 3276 | [3768, 1945] | 4387 | [3679, 3402] |
| 1055 | [1707, 510] | 2166 | [2942, 1991] | 3277 | [468, 1642] | 4388 | [4411, 2765] |
| 1056 | [677, 1708] | 2167 | [735, 616] | 3278 | [2893, 3769] | 4389 | [1030, 2233] |
| 1057 | [1663, 652] | 2168 | [2943, 736] | 3279 | [3125, 221] | 4390 | [4412, 4413] |
| 1058 | [1709, 1710] | 2169 | [2944, 439] | 3280 | [3770, 1440] | 4391 | [4414, 1139] |
| 1059 | [1636, 1711] | 2170 | [2945, 2911] | 3281 | [1460, 3771] | 4392 | [4415, 103] |
| 1060 | [1712, 1713] | 2171 | [1620, 2875] | 3282 | [761, 573] | 4393 | [4416, 4417] |
| 1061 | [580, 1714] | 2172 | [1850, 2946] | 3283 | [3772, 1952] | 4394 | [4418, 2344] |
| 1062 | [1715, 548] | 2173 | [1466, 2852] | 3284 | [1580, 3773] | 4395 | [4419, 3606] |
| 1063 | [1716, 1717] | 2174 | [1584, 135] | 3285 | [1531, 3171] | 4396 | [4420, 4421] |
| 1064 | [1718, 558] | 2175 | [1399, 2890] | 3286 | [624, 1521] | 4397 | [3513, 2759] |
| 1065 | [1702, 472] | 2176 | [1520, 524] | 3287 | [3037, 1434] | 4398 | [4422, 393] |
| 1066 | [1719, 718] | 2177 | [2855, 1400] | 3288 | [1517, 1590] | 4399 | [4423, 1374] |
| 1067 | [1720, 1721] | 2178 | [1778, 1744] | 3289 | [1990, 179] | 4400 | [4424, 1087] |
| 1068 | [608, 1722] | 2179 | [1597, 2947] | 3290 | [3119, 3774] | 4401 | [4425, 4426] |
| 1069 | [1723, 1441] | 2180 | [152, 1826] | 3291 | [1567, 3021] | 4402 | [4427, 4428] |
| 1070 | [1724, 223] | 2181 | [206, 2948] | 3292 | [3775, 2850] | 4403 | [4429, 2557] |
| 1071 | [531, 1725] | 2182 | [717, 1493] | 3293 | [2879, 3776] | 4404 | [4430, 4431] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1072 | [1726, 1727] | 2183 | [2923, 1815] | 3294 | [2923, 3012] | 4405 | [4432, 4433] |
| 1073 | [1728, 1592] | 2184 | [2949, 1998] | 3295 | [3777, 2938] | 4406 | [3956, 1750] |
| 1074 | [452, 1729] | 2185 | [1412, 2870] | 3296 | [1999, 1691] | 4407 | [3912, 1388] |
| 1075 | [1704, 1730] | 2186 | [1406, 1660] | 3297 | [3778, 2897] | 4408 | [3804, 1601] |
| 1076 | [1731, 602] | 2187 | [692, 523] | 3298 | [3779, 569] | 4409 | [4434, 3904] |
| 1077 | [1732, 1733] | 2188 | [1568, 717] | 3299 | [3780, 1888] | 4410 | [3860, 735] |
| 1078 | [693, 1615] | 2189 | [2950, 1562] | 3300 | [3781, 1414] | 4411 | [4240, 2897] |
| 1079 | [595, 1734] | 2190 | [2951, 2952] | 3301 | [3782, 2891] | 4412 | [3834, 3252] |
| 1080 | [171, 1735] | 2191 | [2893, 530] | 3302 | [3783, 2971] | 4413 | [4268, 1718] |
| 1081 | [1736, 611] | 2192 | [2932, 2904] | 3303 | [3072, 3784] | 4414 | [1686, 549] |
| 1082 | [194, 1737] | 2193 | [692, 2953] | 3304 | [1456, 2901] | 4415 | [4398, 156] |
| 1083 | [1738, 187] | 2194 | [2954, 1533] | 3305 | [3785, 3786] | 4416 | [3086, 2913] |
| 1084 | [1739, 167] | 2195 | [2955, 1731] | 3306 | [1735, 1549] | 4417 | [4251, 1899] |
| 1085 | [1627, 1740] | 2196 | [2898, 2956] | 3307 | [3787, 1599] | 4418 | [4392, 688] |
| 1086 | [1741, 1742] | 2197 | [160, 2957] | 3308 | [3788, 3786] | 4419 | [4193, 1516] |
| 1087 | [1743, 1744] | 2198 | [1595, 497] | 3309 | [3789, 626] | 4420 | [4270, 1681] |
| 1088 | [1745, 177] | 2199 | [116, 2848] | 3310 | [3790, 728] | 4421 | [3823, 159] |
| 1089 | [691, 522] | 2200 | [2958, 2869] | 3311 | [2981, 3122] | 4422 | [3941, 726] |
| 1090 | [1746, 1747] | 2201 | [2872, 163] | 3312 | [3791, 1559] | 4423 | [4244, 1764] |
| 1091 | [1748, 1749] | 2202 | [1386, 1651] | 3313 | [3792, 120] | 4424 | [3876, 538] |
| 1092 | [1750, 1751] | 2203 | [215, 756] | 3314 | [119, 450] | 4425 | [4212, 3130] |
| 1093 | [614, 1449] | 2204 | [1544, 1675] | 3315 | [3012, 1816] | 4426 | [3936, 3190] |
| 1094 | [764, 1752] | 2205 | [495, 1749] | 3316 | [3157, 1637] | 4427 | [3879, 136] |
| 1095 | [1753, 1754] | 2206 | [2959, 1724] | 3317 | [3793, 1700] | 4428 | [4435, 3898] |
| 1096 | [195, 1755] | 2207 | [1440, 694] | 3318 | [1668, 649] | 4429 | [3906, 3036] |
| 1097 | [1690, 1756] | 2208 | [194, 2850] | 3319 | [3794, 1682] | 4430 | [3172, 3150] |
| 1098 | [1757, 531] | 2209 | [2834, 2960] | 3320 | [3795, 1526] | 4431 | [4436, 3245] |
| 1099 | [1758, 1568] | 2210 | [1827, 1535] | 3321 | [1534, 1729] | 4432 | [1975, 649] |
| 1100 | [533, 617] | 2211 | [2961, 2962] | 3322 | [3013, 1618] | 4433 | [4437, 3189] |
| 1101 | [1759, 1412] | 2212 | [2963, 55] | 3323 | [613, 1757] | 4434 | [4438, 1364] |
| 1102 | [1760, 1761] | 2213 | [2964, 1977] | 3324 | [3796, 464] | 4435 | [4439, 918] |
| 1103 | [1762, 1763] | 2214 | [1888, 454] | 3325 | [2917, 701] | 4436 | [4440, 2559] |
| 1104 | [1764, 595] | 2215 | [1532, 2965] | 3326 | [3797, 1708] | 4437 | [4441, 356] |
| 1105 | [1765, 1766] | 2216 | [1979, 2930] | 3327 | [3237, 2908] | 4438 | [4201, 3784] |
| 1106 | [1767, 1768] | 2217 | [1879, 1432] | 3328 | [586, 1807] | 4439 | [3199, 3870] |
| 1107 | [1769, 1746] | 2218 | [1888, 2919] | 3329 | [1969, 1560] | 4440 | [4257, 1853] |
| 1108 | [1770, 1618] | 2219 | [162, 1548] | 3330 | [1653, 1883] | 4441 | [4276, 3163] |
| 1109 | [1404, 546] | 2220 | [2966, 484] | 3331 | [1654, 1884] | | |
| 1110 | [1771, 44] | 2221 | [2967, 204] | 3332 | [1706, 615] | | |

Output function $n \mapsto \tau(n)$:

| $n$ | $\tau(n)$ | $n$ | $\tau(n)$ | $n$ | $\tau(n)$ | $n$ | $\tau(n)$ | $n$ | $\tau(n)$ | $n$ | $\tau(n)$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 741 | 1 | 1482 | 0 | 2223 | 0 | 2964 | 1 | 3705 | 0 |
| 1 | 0 | 742 | 0 | 1483 | 0 | 2224 | 1 | 2965 | 0 | 3706 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 0 | 743 | 1 | 1484 | 1 | 2225 | 1 | 2966 | 1 | 3707 | 1 |
| 3 | 0 | 744 | 0 | 1485 | 1 | 2226 | 1 | 2967 | 0 | 3708 | 0 |
| 4 | 0 | 745 | 0 | 1486 | 0 | 2227 | 0 | 2968 | 0 | 3709 | 0 |
| 5 | 0 | 746 | 0 | 1487 | 0 | 2228 | 0 | 2969 | 0 | 3710 | 1 |
| 6 | 0 | 747 | 1 | 1488 | 1 | 2229 | 0 | 2970 | 1 | 3711 | 0 |
| 7 | 0 | 748 | 1 | 1489 | 1 | 2230 | 0 | 2971 | 1 | 3712 | 1 |
| 8 | 0 | 749 | 0 | 1490 | 0 | 2231 | 0 | 2972 | 0 | 3713 | 0 |
| 9 | 0 | 750 | 0 | 1491 | 0 | 2232 | 0 | 2973 | 0 | 3714 | 0 |
| 10 | 0 | 751 | 0 | 1492 | 0 | 2233 | 1 | 2974 | 1 | 3715 | 0 |
| 11 | 0 | 752 | 1 | 1493 | 0 | 2234 | 1 | 2975 | 1 | 3716 | 1 |
| 12 | 1 | 753 | 0 | 1494 | 0 | 2235 | 1 | 2976 | 1 | 3717 | 0 |
| 13 | 0 | 754 | 0 | 1495 | 1 | 2236 | 1 | 2977 | 0 | 3718 | 1 |
| 14 | 1 | 755 | 0 | 1496 | 1 | 2237 | 1 | 2978 | 1 | 3719 | 1 |
| 15 | 0 | 756 | 0 | 1497 | 0 | 2238 | 0 | 2979 | 0 | 3720 | 1 |
| 16 | 1 | 757 | 1 | 1498 | 1 | 2239 | 0 | 2980 | 1 | 3721 | 1 |
| 17 | 0 | 758 | 0 | 1499 | 1 | 2240 | 0 | 2981 | 1 | 3722 | 1 |
| 18 | 0 | 759 | 1 | 1500 | 0 | 2241 | 1 | 2982 | 0 | 3723 | 1 |
| 19 | 0 | 760 | 1 | 1501 | 1 | 2242 | 1 | 2983 | 1 | 3724 | 1 |
| 20 | 0 | 761 | 1 | 1502 | 1 | 2243 | 1 | 2984 | 0 | 3725 | 1 |
| 21 | 1 | 762 | 0 | 1503 | 0 | 2244 | 1 | 2985 | 1 | 3726 | 1 |
| 22 | 0 | 763 | 0 | 1504 | 1 | 2245 | 1 | 2986 | 0 | 3727 | 0 |
| 23 | 1 | 764 | 1 | 1505 | 1 | 2246 | 1 | 2987 | 0 | 3728 | 1 |
| 24 | 1 | 765 | 0 | 1506 | 1 | 2247 | 1 | 2988 | 0 | 3729 | 0 |
| 25 | 0 | 766 | 0 | 1507 | 1 | 2248 | 1 | 2989 | 1 | 3730 | 0 |
| 26 | 0 | 767 | 0 | 1508 | 0 | 2249 | 1 | 2990 | 0 | 3731 | 1 |
| 27 | 1 | 768 | 1 | 1509 | 1 | 2250 | 1 | 2991 | 1 | 3732 | 0 |
| 28 | 1 | 769 | 0 | 1510 | 1 | 2251 | 0 | 2992 | 1 | 3733 | 1 |
| 29 | 0 | 770 | 1 | 1511 | 0 | 2252 | 0 | 2993 | 1 | 3734 | 1 |
| 30 | 0 | 771 | 0 | 1512 | 0 | 2253 | 0 | 2994 | 1 | 3735 | 1 |
| 31 | 0 | 772 | 1 | 1513 | 0 | 2254 | 1 | 2995 | 0 | 3736 | 0 |
| 32 | 1 | 773 | 1 | 1514 | 1 | 2255 | 1 | 2996 | 0 | 3737 | 1 |
| 33 | 1 | 774 | 0 | 1515 | 0 | 2256 | 1 | 2997 | 0 | 3738 | 1 |
| 34 | 0 | 775 | 1 | 1516 | 0 | 2257 | 1 | 2998 | 0 | 3739 | 1 |
| 35 | 1 | 776 | 1 | 1517 | 1 | 2258 | 1 | 2999 | 1 | 3740 | 0 |
| 36 | 0 | 777 | 1 | 1518 | 0 | 2259 | 0 | 3000 | 0 | 3741 | 1 |
| 37 | 1 | 778 | 1 | 1519 | 1 | 2260 | 0 | 3001 | 0 | 3742 | 1 |
| 38 | 0 | 779 | 1 | 1520 | 1 | 2261 | 1 | 3002 | 1 | 3743 | 0 |
| 39 | 0 | 780 | 0 | 1521 | 0 | 2262 | 1 | 3003 | 0 | 3744 | 0 |
| 40 | 0 | 781 | 1 | 1522 | 0 | 2263 | 0 | 3004 | 0 | 3745 | 1 |
| 41 | 1 | 782 | 0 | 1523 | 1 | 2264 | 0 | 3005 | 1 | 3746 | 0 |
| 42 | 1 | 783 | 0 | 1524 | 0 | 2265 | 1 | 3006 | 1 | 3747 | 1 |
| 43 | 0 | 784 | 0 | 1525 | 0 | 2266 | 1 | 3007 | 1 | 3748 | 1 |
| 44 | 1 | 785 | 1 | 1526 | 1 | 2267 | 1 | 3008 | 1 | 3749 | 1 |
| 45 | 1 | 786 | 0 | 1527 | 1 | 2268 | 0 | 3009 | 1 | 3750 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | 1 | 787 | 1 | 1528 | 0 | 2269 | 0 | 3010 | 1 | 3751 | 0 |
| 47 | 1 | 788 | 0 | 1529 | 0 | 2270 | 1 | 3011 | 1 | 3752 | 0 |
| 48 | 1 | 789 | 1 | 1530 | 0 | 2271 | 0 | 3012 | 0 | 3753 | 1 |
| 49 | 0 | 790 | 1 | 1531 | 1 | 2272 | 0 | 3013 | 0 | 3754 | 1 |
| 50 | 1 | 791 | 1 | 1532 | 0 | 2273 | 0 | 3014 | 1 | 3755 | 0 |
| 51 | 0 | 792 | 0 | 1533 | 1 | 2274 | 1 | 3015 | 0 | 3756 | 1 |
| 52 | 0 | 793 | 0 | 1534 | 0 | 2275 | 0 | 3016 | 1 | 3757 | 1 |
| 53 | 1 | 794 | 0 | 1535 | 0 | 2276 | 0 | 3017 | 0 | 3758 | 1 |
| 54 | 0 | 795 | 0 | 1536 | 0 | 2277 | 0 | 3018 | 0 | 3759 | 1 |
| 55 | 1 | 796 | 0 | 1537 | 0 | 2278 | 1 | 3019 | 0 | 3760 | 1 |
| 56 | 0 | 797 | 0 | 1538 | 0 | 2279 | 0 | 3020 | 1 | 3761 | 1 |
| 57 | 0 | 798 | 1 | 1539 | 1 | 2280 | 0 | 3021 | 0 | 3762 | 1 |
| 58 | 1 | 799 | 0 | 1540 | 1 | 2281 | 1 | 3022 | 1 | 3763 | 0 |
| 59 | 0 | 800 | 0 | 1541 | 0 | 2282 | 0 | 3023 | 0 | 3764 | 0 |
| 60 | 1 | 801 | 1 | 1542 | 0 | 2283 | 1 | 3024 | 1 | 3765 | 1 |
| 61 | 0 | 802 | 0 | 1543 | 0 | 2284 | 1 | 3025 | 0 | 3766 | 0 |
| 62 | 1 | 803 | 1 | 1544 | 1 | 2285 | 0 | 3026 | 0 | 3767 | 0 |
| 63 | 1 | 804 | 0 | 1545 | 1 | 2286 | 1 | 3027 | 0 | 3768 | 0 |
| 64 | 1 | 805 | 1 | 1546 | 0 | 2287 | 1 | 3028 | 1 | 3769 | 0 |
| 65 | 1 | 806 | 1 | 1547 | 1 | 2288 | 1 | 3029 | 1 | 3770 | 0 |
| 66 | 0 | 807 | 1 | 1548 | 1 | 2289 | 1 | 3030 | 1 | 3771 | 0 |
| 67 | 1 | 808 | 0 | 1549 | 1 | 2290 | 1 | 3031 | 0 | 3772 | 1 |
| 68 | 1 | 809 | 0 | 1550 | 1 | 2291 | 0 | 3032 | 1 | 3773 | 0 |
| 69 | 0 | 810 | 0 | 1551 | 1 | 2292 | 1 | 3033 | 1 | 3774 | 0 |
| 70 | 0 | 811 | 0 | 1552 | 0 | 2293 | 1 | 3034 | 0 | 3775 | 1 |
| 71 | 1 | 812 | 0 | 1553 | 0 | 2294 | 1 | 3035 | 1 | 3776 | 0 |
| 72 | 1 | 813 | 1 | 1554 | 1 | 2295 | 0 | 3036 | 0 | 3777 | 1 |
| 73 | 0 | 814 | 1 | 1555 | 0 | 2296 | 1 | 3037 | 1 | 3778 | 0 |
| 74 | 0 | 815 | 1 | 1556 | 1 | 2297 | 1 | 3038 | 1 | 3779 | 0 |
| 75 | 0 | 816 | 1 | 1557 | 1 | 2298 | 0 | 3039 | 1 | 3780 | 0 |
| 76 | 0 | 817 | 1 | 1558 | 1 | 2299 | 1 | 3040 | 0 | 3781 | 0 |
| 77 | 1 | 818 | 1 | 1559 | 0 | 2300 | 0 | 3041 | 1 | 3782 | 1 |
| 78 | 0 | 819 | 1 | 1560 | 0 | 2301 | 0 | 3042 | 0 | 3783 | 1 |
| 79 | 0 | 820 | 1 | 1561 | 1 | 2302 | 0 | 3043 | 0 | 3784 | 0 |
| 80 | 1 | 821 | 0 | 1562 | 0 | 2303 | 0 | 3044 | 1 | 3785 | 0 |
| 81 | 0 | 822 | 0 | 1563 | 0 | 2304 | 0 | 3045 | 0 | 3786 | 0 |
| 82 | 1 | 823 | 1 | 1564 | 1 | 2305 | 1 | 3046 | 0 | 3787 | 1 |
| 83 | 0 | 824 | 1 | 1565 | 1 | 2306 | 0 | 3047 | 1 | 3788 | 1 |
| 84 | 0 | 825 | 1 | 1566 | 0 | 2307 | 0 | 3048 | 1 | 3789 | 0 |
| 85 | 1 | 826 | 1 | 1567 | 1 | 2308 | 0 | 3049 | 1 | 3790 | 1 |
| 86 | 0 | 827 | 0 | 1568 | 0 | 2309 | 0 | 3050 | 0 | 3791 | 1 |
| 87 | 1 | 828 | 1 | 1569 | 0 | 2310 | 0 | 3051 | 0 | 3792 | 1 |
| 88 | 0 | 829 | 1 | 1570 | 0 | 2311 | 0 | 3052 | 1 | 3793 | 1 |
| 89 | 1 | 830 | 0 | 1571 | 1 | 2312 | 1 | 3053 | 0 | 3794 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 90 | 0 | 831 | 0 | 1572 | 0 | 2313 | 0 | 3054 | 0 | 3795 | 1 |
| 91 | 1 | 832 | 0 | 1573 | 1 | 2314 | 0 | 3055 | 1 | 3796 | 1 |
| 92 | 1 | 833 | 1 | 1574 | 1 | 2315 | 1 | 3056 | 0 | 3797 | 1 |
| 93 | 1 | 834 | 1 | 1575 | 0 | 2316 | 1 | 3057 | 0 | 3798 | 1 |
| 94 | 1 | 835 | 0 | 1576 | 0 | 2317 | 0 | 3058 | 0 | 3799 | 1 |
| 95 | 0 | 836 | 0 | 1577 | 1 | 2318 | 0 | 3059 | 0 | 3800 | 1 |
| 96 | 1 | 837 | 1 | 1578 | 1 | 2319 | 0 | 3060 | 0 | 3801 | 0 |
| 97 | 1 | 838 | 0 | 1579 | 0 | 2320 | 1 | 3061 | 1 | 3802 | 1 |
| 98 | 0 | 839 | 1 | 1580 | 1 | 2321 | 0 | 3062 | 0 | 3803 | 1 |
| 99 | 0 | 840 | 0 | 1581 | 1 | 2322 | 0 | 3063 | 1 | 3804 | 0 |
| 100 | 0 | 841 | 1 | 1582 | 0 | 2323 | 0 | 3064 | 0 | 3805 | 0 |
| 101 | 0 | 842 | 1 | 1583 | 1 | 2324 | 0 | 3065 | 1 | 3806 | 1 |
| 102 | 0 | 843 | 0 | 1584 | 0 | 2325 | 0 | 3066 | 0 | 3807 | 1 |
| 103 | 1 | 844 | 1 | 1585 | 1 | 2326 | 1 | 3067 | 0 | 3808 | 0 |
| 104 | 1 | 845 | 1 | 1586 | 1 | 2327 | 1 | 3068 | 0 | 3809 | 0 |
| 105 | 0 | 846 | 1 | 1587 | 1 | 2328 | 0 | 3069 | 1 | 3810 | 0 |
| 106 | 1 | 847 | 0 | 1588 | 0 | 2329 | 1 | 3070 | 0 | 3811 | 1 |
| 107 | 1 | 848 | 0 | 1589 | 1 | 2330 | 0 | 3071 | 1 | 3812 | 1 |
| 108 | 0 | 849 | 1 | 1590 | 1 | 2331 | 1 | 3072 | 1 | 3813 | 0 |
| 109 | 0 | 850 | 1 | 1591 | 1 | 2332 | 1 | 3073 | 1 | 3814 | 0 |
| 110 | 0 | 851 | 1 | 1592 | 0 | 2333 | 1 | 3074 | 0 | 3815 | 0 |
| 111 | 0 | 852 | 0 | 1593 | 1 | 2334 | 1 | 3075 | 1 | 3816 | 0 |
| 112 | 0 | 853 | 1 | 1594 | 0 | 2335 | 0 | 3076 | 1 | 3817 | 0 |
| 113 | 1 | 854 | 0 | 1595 | 0 | 2336 | 1 | 3077 | 1 | 3818 | 1 |
| 114 | 1 | 855 | 0 | 1596 | 0 | 2337 | 1 | 3078 | 1 | 3819 | 0 |
| 115 | 0 | 856 | 0 | 1597 | 0 | 2338 | 1 | 3079 | 1 | 3820 | 0 |
| 116 | 1 | 857 | 0 | 1598 | 1 | 2339 | 0 | 3080 | 1 | 3821 | 0 |
| 117 | 1 | 858 | 1 | 1599 | 0 | 2340 | 1 | 3081 | 1 | 3822 | 1 |
| 118 | 1 | 859 | 1 | 1600 | 1 | 2341 | 0 | 3082 | 1 | 3823 | 0 |
| 119 | 0 | 860 | 1 | 1601 | 0 | 2342 | 0 | 3083 | 1 | 3824 | 1 |
| 120 | 1 | 861 | 0 | 1602 | 0 | 2343 | 0 | 3084 | 0 | 3825 | 0 |
| 121 | 1 | 862 | 1 | 1603 | 1 | 2344 | 1 | 3085 | 0 | 3826 | 1 |
| 122 | 0 | 863 | 1 | 1604 | 1 | 2345 | 0 | 3086 | 0 | 3827 | 1 |
| 123 | 1 | 864 | 0 | 1605 | 0 | 2346 | 1 | 3087 | 0 | 3828 | 0 |
| 124 | 1 | 865 | 1 | 1606 | 0 | 2347 | 1 | 3088 | 0 | 3829 | 0 |
| 125 | 1 | 866 | 1 | 1607 | 0 | 2348 | 1 | 3089 | 1 | 3830 | 0 |
| 126 | 1 | 867 | 0 | 1608 | 0 | 2349 | 0 | 3090 | 0 | 3831 | 1 |
| 127 | 1 | 868 | 1 | 1609 | 1 | 2350 | 0 | 3091 | 0 | 3832 | 1 |
| 128 | 0 | 869 | 1 | 1610 | 0 | 2351 | 0 | 3092 | 0 | 3833 | 0 |
| 129 | 0 | 870 | 1 | 1611 | 1 | 2352 | 1 | 3093 | 0 | 3834 | 0 |
| 130 | 0 | 871 | 0 | 1612 | 0 | 2353 | 1 | 3094 | 0 | 3835 | 1 |
| 131 | 1 | 872 | 1 | 1613 | 1 | 2354 | 1 | 3095 | 0 | 3836 | 1 |
| 132 | 0 | 873 | 0 | 1614 | 1 | 2355 | 0 | 3096 | 1 | 3837 | 1 |
| 133 | 1 | 874 | 0 | 1615 | 1 | 2356 | 1 | 3097 | 0 | 3838 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 134 | 1 | 875 | 0 | 1616 | 1 | 2357 | 0 | 3098 | 1 | 3839 | 1 |
| 135 | 0 | 876 | 0 | 1617 | 0 | 2358 | 1 | 3099 | 0 | 3840 | 0 |
| 136 | 0 | 877 | 1 | 1618 | 0 | 2359 | 0 | 3100 | 1 | 3841 | 1 |
| 137 | 0 | 878 | 1 | 1619 | 1 | 2360 | 0 | 3101 | 1 | 3842 | 0 |
| 138 | 0 | 879 | 1 | 1620 | 0 | 2361 | 0 | 3102 | 1 | 3843 | 0 |
| 139 | 1 | 880 | 0 | 1621 | 0 | 2362 | 1 | 3103 | 0 | 3844 | 1 |
| 140 | 0 | 881 | 0 | 1622 | 1 | 2363 | 1 | 3104 | 0 | 3845 | 1 |
| 141 | 1 | 882 | 0 | 1623 | 1 | 2364 | 1 | 3105 | 1 | 3846 | 1 |
| 142 | 0 | 883 | 1 | 1624 | 0 | 2365 | 1 | 3106 | 1 | 3847 | 1 |
| 143 | 0 | 884 | 1 | 1625 | 0 | 2366 | 1 | 3107 | 1 | 3848 | 1 |
| 144 | 1 | 885 | 0 | 1626 | 0 | 2367 | 0 | 3108 | 1 | 3849 | 1 |
| 145 | 0 | 886 | 1 | 1627 | 1 | 2368 | 0 | 3109 | 0 | 3850 | 0 |
| 146 | 1 | 887 | 0 | 1628 | 0 | 2369 | 0 | 3110 | 1 | 3851 | 1 |
| 147 | 0 | 888 | 0 | 1629 | 1 | 2370 | 0 | 3111 | 0 | 3852 | 0 |
| 148 | 1 | 889 | 0 | 1630 | 1 | 2371 | 0 | 3112 | 0 | 3853 | 0 |
| 149 | 0 | 890 | 0 | 1631 | 1 | 2372 | 1 | 3113 | 0 | 3854 | 1 |
| 150 | 0 | 891 | 1 | 1632 | 0 | 2373 | 1 | 3114 | 1 | 3855 | 0 |
| 151 | 1 | 892 | 0 | 1633 | 0 | 2374 | 1 | 3115 | 0 | 3856 | 1 |
| 152 | 1 | 893 | 0 | 1634 | 0 | 2375 | 1 | 3116 | 1 | 3857 | 0 |
| 153 | 0 | 894 | 0 | 1635 | 0 | 2376 | 1 | 3117 | 0 | 3858 | 0 |
| 154 | 1 | 895 | 0 | 1636 | 0 | 2377 | 0 | 3118 | 0 | 3859 | 1 |
| 155 | 0 | 896 | 0 | 1637 | 0 | 2378 | 0 | 3119 | 0 | 3860 | 0 |
| 156 | 1 | 897 | 1 | 1638 | 1 | 2379 | 1 | 3120 | 1 | 3861 | 1 |
| 157 | 1 | 898 | 1 | 1639 | 1 | 2380 | 0 | 3121 | 1 | 3862 | 0 |
| 158 | 1 | 899 | 0 | 1640 | 1 | 2381 | 0 | 3122 | 1 | 3863 | 1 |
| 159 | 0 | 900 | 1 | 1641 | 0 | 2382 | 1 | 3123 | 1 | 3864 | 0 |
| 160 | 1 | 901 | 1 | 1642 | 0 | 2383 | 0 | 3124 | 1 | 3865 | 1 |
| 161 | 0 | 902 | 1 | 1643 | 1 | 2384 | 1 | 3125 | 1 | 3866 | 1 |
| 162 | 0 | 903 | 1 | 1644 | 1 | 2385 | 0 | 3126 | 1 | 3867 | 0 |
| 163 | 0 | 904 | 0 | 1645 | 1 | 2386 | 1 | 3127 | 1 | 3868 | 1 |
| 164 | 0 | 905 | 1 | 1646 | 1 | 2387 | 0 | 3128 | 0 | 3869 | 0 |
| 165 | 1 | 906 | 1 | 1647 | 1 | 2388 | 1 | 3129 | 1 | 3870 | 0 |
| 166 | 1 | 907 | 1 | 1648 | 0 | 2389 | 0 | 3130 | 0 | 3871 | 0 |
| 167 | 0 | 908 | 0 | 1649 | 0 | 2390 | 1 | 3131 | 0 | 3872 | 0 |
| 168 | 0 | 909 | 0 | 1650 | 1 | 2391 | 0 | 3132 | 0 | 3873 | 1 |
| 169 | 1 | 910 | 1 | 1651 | 1 | 2392 | 0 | 3133 | 0 | 3874 | 1 |
| 170 | 1 | 911 | 1 | 1652 | 1 | 2393 | 0 | 3134 | 1 | 3875 | 1 |
| 171 | 0 | 912 | 1 | 1653 | 1 | 2394 | 1 | 3135 | 1 | 3876 | 1 |
| 172 | 0 | 913 | 0 | 1654 | 0 | 2395 | 1 | 3136 | 1 | 3877 | 0 |
| 173 | 1 | 914 | 0 | 1655 | 0 | 2396 | 0 | 3137 | 0 | 3878 | 1 |
| 174 | 1 | 915 | 0 | 1656 | 0 | 2397 | 1 | 3138 | 1 | 3879 | 0 |
| 175 | 0 | 916 | 0 | 1657 | 1 | 2398 | 0 | 3139 | 1 | 3880 | 0 |
| 176 | 0 | 917 | 0 | 1658 | 1 | 2399 | 1 | 3140 | 1 | 3881 | 0 |
| 177 | 0 | 918 | 1 | 1659 | 1 | 2400 | 1 | 3141 | 0 | 3882 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 178 | 1 | 919 | 1 | 1660 | 0 | 2401 | 1 | 3142 | 1 | 3883 | 1 |
| 179 | 0 | 920 | 0 | 1661 | 1 | 2402 | 0 | 3143 | 1 | 3884 | 1 |
| 180 | 1 | 921 | 0 | 1662 | 0 | 2403 | 1 | 3144 | 0 | 3885 | 1 |
| 181 | 0 | 922 | 1 | 1663 | 0 | 2404 | 0 | 3145 | 0 | 3886 | 1 |
| 182 | 1 | 923 | 0 | 1664 | 1 | 2405 | 1 | 3146 | 1 | 3887 | 0 |
| 183 | 0 | 924 | 1 | 1665 | 1 | 2406 | 1 | 3147 | 0 | 3888 | 0 |
| 184 | 1 | 925 | 1 | 1666 | 0 | 2407 | 1 | 3148 | 0 | 3889 | 1 |
| 185 | 0 | 926 | 0 | 1667 | 1 | 2408 | 0 | 3149 | 1 | 3890 | 0 |
| 186 | 0 | 927 | 0 | 1668 | 1 | 2409 | 0 | 3150 | 0 | 3891 | 1 |
| 187 | 0 | 928 | 1 | 1669 | 1 | 2410 | 0 | 3151 | 1 | 3892 | 0 |
| 188 | 1 | 929 | 1 | 1670 | 0 | 2411 | 1 | 3152 | 0 | 3893 | 0 |
| 189 | 0 | 930 | 1 | 1671 | 0 | 2412 | 1 | 3153 | 0 | 3894 | 0 |
| 190 | 0 | 931 | 0 | 1672 | 1 | 2413 | 1 | 3154 | 1 | 3895 | 1 |
| 191 | 0 | 932 | 0 | 1673 | 1 | 2414 | 0 | 3155 | 0 | 3896 | 0 |
| 192 | 1 | 933 | 0 | 1674 | 1 | 2415 | 0 | 3156 | 1 | 3897 | 0 |
| 193 | 0 | 934 | 1 | 1675 | 1 | 2416 | 1 | 3157 | 0 | 3898 | 1 |
| 194 | 0 | 935 | 0 | 1676 | 1 | 2417 | 1 | 3158 | 0 | 3899 | 1 |
| 195 | 0 | 936 | 0 | 1677 | 1 | 2418 | 1 | 3159 | 0 | 3900 | 1 |
| 196 | 0 | 937 | 1 | 1678 | 1 | 2419 | 0 | 3160 | 1 | 3901 | 0 |
| 197 | 0 | 938 | 1 | 1679 | 1 | 2420 | 1 | 3161 | 1 | 3902 | 1 |
| 198 | 1 | 939 | 1 | 1680 | 1 | 2421 | 1 | 3162 | 0 | 3903 | 0 |
| 199 | 0 | 940 | 0 | 1681 | 1 | 2422 | 1 | 3163 | 0 | 3904 | 0 |
| 200 | 1 | 941 | 1 | 1682 | 1 | 2423 | 1 | 3164 | 1 | 3905 | 0 |
| 201 | 1 | 942 | 0 | 1683 | 0 | 2424 | 1 | 3165 | 1 | 3906 | 1 |
| 202 | 0 | 943 | 0 | 1684 | 1 | 2425 | 1 | 3166 | 0 | 3907 | 1 |
| 203 | 0 | 944 | 0 | 1685 | 0 | 2426 | 1 | 3167 | 0 | 3908 | 1 |
| 204 | 0 | 945 | 1 | 1686 | 1 | 2427 | 1 | 3168 | 1 | 3909 | 0 |
| 205 | 0 | 946 | 0 | 1687 | 0 | 2428 | 0 | 3169 | 0 | 3910 | 1 |
| 206 | 1 | 947 | 0 | 1688 | 1 | 2429 | 1 | 3170 | 1 | 3911 | 1 |
| 207 | 1 | 948 | 0 | 1689 | 0 | 2430 | 1 | 3171 | 0 | 3912 | 0 |
| 208 | 1 | 949 | 0 | 1690 | 1 | 2431 | 0 | 3172 | 0 | 3913 | 1 |
| 209 | 0 | 950 | 0 | 1691 | 0 | 2432 | 0 | 3173 | 0 | 3914 | 0 |
| 210 | 0 | 951 | 0 | 1692 | 0 | 2433 | 0 | 3174 | 1 | 3915 | 1 |
| 211 | 1 | 952 | 1 | 1693 | 1 | 2434 | 1 | 3175 | 1 | 3916 | 1 |
| 212 | 0 | 953 | 1 | 1694 | 1 | 2435 | 1 | 3176 | 1 | 3917 | 0 |
| 213 | 0 | 954 | 1 | 1695 | 1 | 2436 | 0 | 3177 | 1 | 3918 | 1 |
| 214 | 0 | 955 | 0 | 1696 | 0 | 2437 | 0 | 3178 | 0 | 3919 | 0 |
| 215 | 1 | 956 | 0 | 1697 | 0 | 2438 | 1 | 3179 | 1 | 3920 | 0 |
| 216 | 0 | 957 | 1 | 1698 | 0 | 2439 | 0 | 3180 | 1 | 3921 | 1 |
| 217 | 1 | 958 | 0 | 1699 | 1 | 2440 | 0 | 3181 | 0 | 3922 | 1 |
| 218 | 0 | 959 | 1 | 1700 | 1 | 2441 | 1 | 3182 | 1 | 3923 | 1 |
| 219 | 0 | 960 | 1 | 1701 | 0 | 2442 | 0 | 3183 | 0 | 3924 | 1 |
| 220 | 1 | 961 | 0 | 1702 | 1 | 2443 | 0 | 3184 | 1 | 3925 | 1 |
| 221 | 1 | 962 | 0 | 1703 | 1 | 2444 | 1 | 3185 | 0 | 3926 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 222 | 1 | 963 | 1 | 1704 | 1 | 2445 | 1 | 3186 | 0 | 3927 | 1 |
| 223 | 1 | 964 | 1 | 1705 | 0 | 2446 | 0 | 3187 | 0 | 3928 | 0 |
| 224 | 0 | 965 | 1 | 1706 | 1 | 2447 | 1 | 3188 | 0 | 3929 | 1 |
| 225 | 1 | 966 | 0 | 1707 | 1 | 2448 | 0 | 3189 | 1 | 3930 | 0 |
| 226 | 1 | 967 | 1 | 1708 | 0 | 2449 | 1 | 3190 | 0 | 3931 | 1 |
| 227 | 0 | 968 | 0 | 1709 | 0 | 2450 | 0 | 3191 | 1 | 3932 | 0 |
| 228 | 1 | 969 | 0 | 1710 | 0 | 2451 | 1 | 3192 | 0 | 3933 | 1 |
| 229 | 1 | 970 | 0 | 1711 | 1 | 2452 | 0 | 3193 | 1 | 3934 | 0 |
| 230 | 1 | 971 | 1 | 1712 | 1 | 2453 | 0 | 3194 | 0 | 3935 | 0 |
| 231 | 1 | 972 | 1 | 1713 | 0 | 2454 | 0 | 3195 | 1 | 3936 | 0 |
| 232 | 0 | 973 | 0 | 1714 | 1 | 2455 | 1 | 3196 | 0 | 3937 | 0 |
| 233 | 1 | 974 | 0 | 1715 | 1 | 2456 | 1 | 3197 | 1 | 3938 | 1 |
| 234 | 1 | 975 | 1 | 1716 | 0 | 2457 | 1 | 3198 | 0 | 3939 | 1 |
| 235 | 1 | 976 | 0 | 1717 | 1 | 2458 | 1 | 3199 | 1 | 3940 | 1 |
| 236 | 1 | 977 | 0 | 1718 | 1 | 2459 | 0 | 3200 | 1 | 3941 | 0 |
| 237 | 0 | 978 | 0 | 1719 | 1 | 2460 | 1 | 3201 | 0 | 3942 | 1 |
| 238 | 0 | 979 | 0 | 1720 | 0 | 2461 | 0 | 3202 | 1 | 3943 | 1 |
| 239 | 1 | 980 | 0 | 1721 | 0 | 2462 | 1 | 3203 | 0 | 3944 | 1 |
| 240 | 1 | 981 | 1 | 1722 | 1 | 2463 | 1 | 3204 | 1 | 3945 | 0 |
| 241 | 1 | 982 | 0 | 1723 | 0 | 2464 | 0 | 3205 | 1 | 3946 | 1 |
| 242 | 1 | 983 | 0 | 1724 | 0 | 2465 | 1 | 3206 | 1 | 3947 | 1 |
| 243 | 1 | 984 | 1 | 1725 | 1 | 2466 | 0 | 3207 | 0 | 3948 | 0 |
| 244 | 1 | 985 | 0 | 1726 | 1 | 2467 | 1 | 3208 | 0 | 3949 | 1 |
| 245 | 0 | 986 | 0 | 1727 | 1 | 2468 | 0 | 3209 | 0 | 3950 | 1 |
| 246 | 1 | 987 | 0 | 1728 | 1 | 2469 | 0 | 3210 | 0 | 3951 | 1 |
| 247 | 0 | 988 | 0 | 1729 | 1 | 2470 | 0 | 3211 | 0 | 3952 | 1 |
| 248 | 1 | 989 | 0 | 1730 | 1 | 2471 | 1 | 3212 | 0 | 3953 | 1 |
| 249 | 0 | 990 | 1 | 1731 | 0 | 2472 | 0 | 3213 | 1 | 3954 | 0 |
| 250 | 0 | 991 | 1 | 1732 | 0 | 2473 | 1 | 3214 | 0 | 3955 | 1 |
| 251 | 0 | 992 | 0 | 1733 | 1 | 2474 | 1 | 3215 | 0 | 3956 | 0 |
| 252 | 0 | 993 | 0 | 1734 | 1 | 2475 | 0 | 3216 | 0 | 3957 | 0 |
| 253 | 1 | 994 | 0 | 1735 | 1 | 2476 | 1 | 3217 | 0 | 3958 | 1 |
| 254 | 1 | 995 | 0 | 1736 | 1 | 2477 | 1 | 3218 | 0 | 3959 | 1 |
| 255 | 1 | 996 | 1 | 1737 | 0 | 2478 | 0 | 3219 | 0 | 3960 | 1 |
| 256 | 0 | 997 | 1 | 1738 | 0 | 2479 | 0 | 3220 | 1 | 3961 | 1 |
| 257 | 0 | 998 | 1 | 1739 | 0 | 2480 | 0 | 3221 | 1 | 3962 | 1 |
| 258 | 1 | 999 | 1 | 1740 | 0 | 2481 | 1 | 3222 | 1 | 3963 | 1 |
| 259 | 1 | 1000 | 0 | 1741 | 0 | 2482 | 0 | 3223 | 1 | 3964 | 1 |
| 260 | 0 | 1001 | 0 | 1742 | 1 | 2483 | 1 | 3224 | 1 | 3965 | 1 |
| 261 | 0 | 1002 | 1 | 1743 | 0 | 2484 | 1 | 3225 | 1 | 3966 | 0 |
| 262 | 1 | 1003 | 1 | 1744 | 1 | 2485 | 0 | 3226 | 0 | 3967 | 0 |
| 263 | 0 | 1004 | 1 | 1745 | 1 | 2486 | 1 | 3227 | 1 | 3968 | 1 |
| 264 | 1 | 1005 | 1 | 1746 | 1 | 2487 | 0 | 3228 | 0 | 3969 | 0 |
| 265 | 0 | 1006 | 0 | 1747 | 1 | 2488 | 1 | 3229 | 0 | 3970 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 266 | 0 | 1007 | 1 | 1748 | 1 | 2489 | 1 | 3230 | 1 | 3971 | 0 |
| 267 | 0 | 1008 | 1 | 1749 | 1 | 2490 | 0 | 3231 | 0 | 3972 | 1 |
| 268 | 0 | 1009 | 1 | 1750 | 0 | 2491 | 0 | 3232 | 0 | 3973 | 1 |
| 269 | 1 | 1010 | 0 | 1751 | 1 | 2492 | 0 | 3233 | 1 | 3974 | 0 |
| 270 | 1 | 1011 | 0 | 1752 | 1 | 2493 | 0 | 3234 | 0 | 3975 | 0 |
| 271 | 0 | 1012 | 1 | 1753 | 1 | 2494 | 0 | 3235 | 1 | 3976 | 1 |
| 272 | 0 | 1013 | 0 | 1754 | 1 | 2495 | 0 | 3236 | 0 | 3977 | 0 |
| 273 | 1 | 1014 | 1 | 1755 | 1 | 2496 | 1 | 3237 | 1 | 3978 | 1 |
| 274 | 0 | 1015 | 1 | 1756 | 1 | 2497 | 0 | 3238 | 1 | 3979 | 1 |
| 275 | 0 | 1016 | 1 | 1757 | 1 | 2498 | 1 | 3239 | 1 | 3980 | 0 |
| 276 | 0 | 1017 | 1 | 1758 | 1 | 2499 | 1 | 3240 | 1 | 3981 | 1 |
| 277 | 0 | 1018 | 1 | 1759 | 1 | 2500 | 1 | 3241 | 0 | 3982 | 0 |
| 278 | 0 | 1019 | 1 | 1760 | 0 | 2501 | 1 | 3242 | 1 | 3983 | 0 |
| 279 | 1 | 1020 | 0 | 1761 | 1 | 2502 | 0 | 3243 | 1 | 3984 | 0 |
| 280 | 0 | 1021 | 1 | 1762 | 0 | 2503 | 0 | 3244 | 0 | 3985 | 1 |
| 281 | 0 | 1022 | 0 | 1763 | 0 | 2504 | 1 | 3245 | 0 | 3986 | 1 |
| 282 | 1 | 1023 | 1 | 1764 | 0 | 2505 | 1 | 3246 | 1 | 3987 | 1 |
| 283 | 1 | 1024 | 1 | 1765 | 1 | 2506 | 1 | 3247 | 1 | 3988 | 0 |
| 284 | 0 | 1025 | 1 | 1766 | 0 | 2507 | 1 | 3248 | 1 | 3989 | 1 |
| 285 | 0 | 1026 | 0 | 1767 | 0 | 2508 | 1 | 3249 | 0 | 3990 | 0 |
| 286 | 0 | 1027 | 1 | 1768 | 0 | 2509 | 1 | 3250 | 0 | 3991 | 0 |
| 287 | 1 | 1028 | 0 | 1769 | 0 | 2510 | 1 | 3251 | 0 | 3992 | 1 |
| 288 | 1 | 1029 | 0 | 1770 | 0 | 2511 | 0 | 3252 | 0 | 3993 | 1 |
| 289 | 0 | 1030 | 1 | 1771 | 0 | 2512 | 0 | 3253 | 1 | 3994 | 1 |
| 290 | 1 | 1031 | 0 | 1772 | 0 | 2513 | 0 | 3254 | 0 | 3995 | 0 |
| 291 | 0 | 1032 | 0 | 1773 | 0 | 2514 | 1 | 3255 | 1 | 3996 | 1 |
| 292 | 1 | 1033 | 1 | 1774 | 0 | 2515 | 0 | 3256 | 1 | 3997 | 1 |
| 293 | 1 | 1034 | 0 | 1775 | 0 | 2516 | 0 | 3257 | 1 | 3998 | 1 |
| 294 | 1 | 1035 | 0 | 1776 | 1 | 2517 | 0 | 3258 | 1 | 3999 | 1 |
| 295 | 1 | 1036 | 1 | 1777 | 0 | 2518 | 0 | 3259 | 1 | 4000 | 1 |
| 296 | 1 | 1037 | 0 | 1778 | 1 | 2519 | 0 | 3260 | 0 | 4001 | 1 |
| 297 | 0 | 1038 | 0 | 1779 | 0 | 2520 | 1 | 3261 | 1 | 4002 | 1 |
| 298 | 1 | 1039 | 1 | 1780 | 1 | 2521 | 1 | 3262 | 0 | 4003 | 1 |
| 299 | 1 | 1040 | 0 | 1781 | 1 | 2522 | 1 | 3263 | 0 | 4004 | 1 |
| 300 | 0 | 1041 | 1 | 1782 | 1 | 2523 | 0 | 3264 | 1 | 4005 | 0 |
| 301 | 0 | 1042 | 1 | 1783 | 0 | 2524 | 1 | 3265 | 0 | 4006 | 1 |
| 302 | 1 | 1043 | 1 | 1784 | 1 | 2525 | 1 | 3266 | 1 | 4007 | 0 |
| 303 | 1 | 1044 | 0 | 1785 | 1 | 2526 | 1 | 3267 | 0 | 4008 | 0 |
| 304 | 1 | 1045 | 0 | 1786 | 0 | 2527 | 1 | 3268 | 1 | 4009 | 1 |
| 305 | 1 | 1046 | 1 | 1787 | 0 | 2528 | 1 | 3269 | 1 | 4010 | 1 |
| 306 | 0 | 1047 | 1 | 1788 | 1 | 2529 | 1 | 3270 | 0 | 4011 | 1 |
| 307 | 1 | 1048 | 0 | 1789 | 1 | 2530 | 0 | 3271 | 0 | 4012 | 1 |
| 308 | 1 | 1049 | 0 | 1790 | 1 | 2531 | 1 | 3272 | 1 | 4013 | 0 |
| 309 | 0 | 1050 | 1 | 1791 | 1 | 2532 | 0 | 3273 | 0 | 4014 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 310 | 1 | 1051 | 1 | 1792 | 0 | 2533 | 1 | 3274 | 0 | 4015 | 1 |
| 311 | 1 | 1052 | 1 | 1793 | 0 | 2534 | 0 | 3275 | 1 | 4016 | 1 |
| 312 | 1 | 1053 | 0 | 1794 | 1 | 2535 | 1 | 3276 | 0 | 4017 | 0 |
| 313 | 0 | 1054 | 1 | 1795 | 1 | 2536 | 0 | 3277 | 0 | 4018 | 0 |
| 314 | 0 | 1055 | 1 | 1796 | 0 | 2537 | 1 | 3278 | 1 | 4019 | 0 |
| 315 | 0 | 1056 | 1 | 1797 | 0 | 2538 | 0 | 3279 | 1 | 4020 | 0 |
| 316 | 0 | 1057 | 0 | 1798 | 1 | 2539 | 1 | 3280 | 0 | 4021 | 0 |
| 317 | 1 | 1058 | 0 | 1799 | 1 | 2540 | 1 | 3281 | 0 | 4022 | 1 |
| 318 | 0 | 1059 | 0 | 1800 | 0 | 2541 | 0 | 3282 | 1 | 4023 | 0 |
| 319 | 1 | 1060 | 1 | 1801 | 1 | 2542 | 1 | 3283 | 1 | 4024 | 1 |
| 320 | 1 | 1061 | 1 | 1802 | 1 | 2543 | 0 | 3284 | 1 | 4025 | 1 |
| 321 | 1 | 1062 | 1 | 1803 | 1 | 2544 | 0 | 3285 | 1 | 4026 | 0 |
| 322 | 1 | 1063 | 0 | 1804 | 1 | 2545 | 0 | 3286 | 0 | 4027 | 0 |
| 323 | 0 | 1064 | 1 | 1805 | 0 | 2546 | 0 | 3287 | 1 | 4028 | 0 |
| 324 | 0 | 1065 | 1 | 1806 | 1 | 2547 | 1 | 3288 | 1 | 4029 | 0 |
| 325 | 0 | 1066 | 1 | 1807 | 1 | 2548 | 0 | 3289 | 0 | 4030 | 1 |
| 326 | 0 | 1067 | 0 | 1808 | 1 | 2549 | 1 | 3290 | 0 | 4031 | 0 |
| 327 | 0 | 1068 | 0 | 1809 | 0 | 2550 | 0 | 3291 | 1 | 4032 | 0 |
| 328 | 1 | 1069 | 0 | 1810 | 1 | 2551 | 0 | 3292 | 1 | 4033 | 0 |
| 329 | 0 | 1070 | 0 | 1811 | 0 | 2552 | 0 | 3293 | 0 | 4034 | 0 |
| 330 | 1 | 1071 | 0 | 1812 | 0 | 2553 | 0 | 3294 | 0 | 4035 | 1 |
| 331 | 0 | 1072 | 1 | 1813 | 1 | 2554 | 0 | 3295 | 1 | 4036 | 1 |
| 332 | 0 | 1073 | 1 | 1814 | 1 | 2555 | 0 | 3296 | 1 | 4037 | 1 |
| 333 | 0 | 1074 | 1 | 1815 | 1 | 2556 | 0 | 3297 | 0 | 4038 | 1 |
| 334 | 0 | 1075 | 1 | 1816 | 1 | 2557 | 0 | 3298 | 0 | 4039 | 0 |
| 335 | 1 | 1076 | 0 | 1817 | 1 | 2558 | 1 | 3299 | 0 | 4040 | 0 |
| 336 | 0 | 1077 | 0 | 1818 | 1 | 2559 | 1 | 3300 | 0 | 4041 | 1 |
| 337 | 1 | 1078 | 0 | 1819 | 0 | 2560 | 1 | 3301 | 1 | 4042 | 0 |
| 338 | 1 | 1079 | 1 | 1820 | 0 | 2561 | 0 | 3302 | 1 | 4043 | 1 |
| 339 | 0 | 1080 | 0 | 1821 | 0 | 2562 | 1 | 3303 | 1 | 4044 | 1 |
| 340 | 1 | 1081 | 1 | 1822 | 1 | 2563 | 1 | 3304 | 0 | 4045 | 1 |
| 341 | 0 | 1082 | 0 | 1823 | 1 | 2564 | 1 | 3305 | 0 | 4046 | 0 |
| 342 | 0 | 1083 | 0 | 1824 | 0 | 2565 | 1 | 3306 | 1 | 4047 | 0 |
| 343 | 0 | 1084 | 0 | 1825 | 0 | 2566 | 0 | 3307 | 1 | 4048 | 1 |
| 344 | 1 | 1085 | 1 | 1826 | 0 | 2567 | 1 | 3308 | 1 | 4049 | 1 |
| 345 | 1 | 1086 | 0 | 1827 | 0 | 2568 | 0 | 3309 | 0 | 4050 | 0 |
| 346 | 0 | 1087 | 0 | 1828 | 0 | 2569 | 0 | 3310 | 1 | 4051 | 0 |
| 347 | 0 | 1088 | 1 | 1829 | 0 | 2570 | 0 | 3311 | 1 | 4052 | 0 |
| 348 | 1 | 1089 | 1 | 1830 | 1 | 2571 | 1 | 3312 | 1 | 4053 | 1 |
| 349 | 1 | 1090 | 1 | 1831 | 0 | 2572 | 1 | 3313 | 1 | 4054 | 0 |
| 350 | 1 | 1091 | 1 | 1832 | 0 | 2573 | 1 | 3314 | 0 | 4055 | 1 |
| 351 | 1 | 1092 | 0 | 1833 | 1 | 2574 | 0 | 3315 | 0 | 4056 | 0 |
| 352 | 1 | 1093 | 0 | 1834 | 0 | 2575 | 0 | 3316 | 0 | 4057 | 1 |
| 353 | 0 | 1094 | 1 | 1835 | 0 | 2576 | 1 | 3317 | 1 | 4058 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 354 | 0 | 1095 | 1 | 1836 | 1 | 2577 | 1 | 3318 | 1 | 4059 | 1 |
| 355 | 1 | 1096 | 0 | 1837 | 1 | 2578 | 1 | 3319 | 0 | 4060 | 0 |
| 356 | 1 | 1097 | 1 | 1838 | 1 | 2579 | 1 | 3320 | 1 | 4061 | 1 |
| 357 | 1 | 1098 | 1 | 1839 | 0 | 2580 | 1 | 3321 | 0 | 4062 | 0 |
| 358 | 0 | 1099 | 1 | 1840 | 1 | 2581 | 0 | 3322 | 0 | 4063 | 1 |
| 359 | 1 | 1100 | 0 | 1841 | 0 | 2582 | 1 | 3323 | 0 | 4064 | 0 |
| 360 | 0 | 1101 | 1 | 1842 | 1 | 2583 | 0 | 3324 | 1 | 4065 | 1 |
| 361 | 0 | 1102 | 0 | 1843 | 0 | 2584 | 0 | 3325 | 0 | 4066 | 0 |
| 362 | 0 | 1103 | 0 | 1844 | 0 | 2585 | 1 | 3326 | 1 | 4067 | 0 |
| 363 | 0 | 1104 | 0 | 1845 | 0 | 2586 | 0 | 3327 | 1 | 4068 | 1 |
| 364 | 1 | 1105 | 1 | 1846 | 0 | 2587 | 0 | 3328 | 0 | 4069 | 1 |
| 365 | 1 | 1106 | 0 | 1847 | 0 | 2588 | 0 | 3329 | 1 | 4070 | 0 |
| 366 | 0 | 1107 | 0 | 1848 | 0 | 2589 | 1 | 3330 | 1 | 4071 | 0 |
| 367 | 0 | 1108 | 0 | 1849 | 1 | 2590 | 0 | 3331 | 0 | 4072 | 0 |
| 368 | 0 | 1109 | 0 | 1850 | 1 | 2591 | 1 | 3332 | 1 | 4073 | 1 |
| 369 | 0 | 1110 | 0 | 1851 | 0 | 2592 | 0 | 3333 | 1 | 4074 | 1 |
| 370 | 0 | 1111 | 0 | 1852 | 0 | 2593 | 1 | 3334 | 1 | 4075 | 0 |
| 371 | 0 | 1112 | 0 | 1853 | 0 | 2594 | 1 | 3335 | 1 | 4076 | 1 |
| 372 | 1 | 1113 | 0 | 1854 | 0 | 2595 | 0 | 3336 | 1 | 4077 | 0 |
| 373 | 0 | 1114 | 0 | 1855 | 0 | 2596 | 1 | 3337 | 0 | 4078 | 1 |
| 374 | 0 | 1115 | 1 | 1856 | 0 | 2597 | 1 | 3338 | 1 | 4079 | 0 |
| 375 | 1 | 1116 | 0 | 1857 | 0 | 2598 | 0 | 3339 | 0 | 4080 | 0 |
| 376 | 0 | 1117 | 1 | 1858 | 0 | 2599 | 1 | 3340 | 1 | 4081 | 1 |
| 377 | 0 | 1118 | 1 | 1859 | 0 | 2600 | 0 | 3341 | 1 | 4082 | 1 |
| 378 | 0 | 1119 | 0 | 1860 | 0 | 2601 | 1 | 3342 | 0 | 4083 | 0 |
| 379 | 0 | 1120 | 1 | 1861 | 0 | 2602 | 1 | 3343 | 1 | 4084 | 1 |
| 380 | 0 | 1121 | 1 | 1862 | 1 | 2603 | 1 | 3344 | 1 | 4085 | 0 |
| 381 | 1 | 1122 | 0 | 1863 | 1 | 2604 | 1 | 3345 | 1 | 4086 | 1 |
| 382 | 0 | 1123 | 1 | 1864 | 1 | 2605 | 0 | 3346 | 1 | 4087 | 1 |
| 383 | 1 | 1124 | 1 | 1865 | 0 | 2606 | 1 | 3347 | 1 | 4088 | 1 |
| 384 | 1 | 1125 | 0 | 1866 | 1 | 2607 | 1 | 3348 | 0 | 4089 | 1 |
| 385 | 0 | 1126 | 1 | 1867 | 1 | 2608 | 1 | 3349 | 0 | 4090 | 1 |
| 386 | 0 | 1127 | 0 | 1868 | 1 | 2609 | 1 | 3350 | 0 | 4091 | 0 |
| 387 | 1 | 1128 | 0 | 1869 | 1 | 2610 | 1 | 3351 | 0 | 4092 | 1 |
| 388 | 1 | 1129 | 0 | 1870 | 0 | 2611 | 0 | 3352 | 0 | 4093 | 0 |
| 389 | 1 | 1130 | 0 | 1871 | 0 | 2612 | 0 | 3353 | 1 | 4094 | 1 |
| 390 | 1 | 1131 | 1 | 1872 | 0 | 2613 | 0 | 3354 | 1 | 4095 | 0 |
| 391 | 0 | 1132 | 1 | 1873 | 1 | 2614 | 1 | 3355 | 0 | 4096 | 0 |
| 392 | 1 | 1133 | 0 | 1874 | 1 | 2615 | 0 | 3356 | 0 | 4097 | 1 |
| 393 | 0 | 1134 | 1 | 1875 | 1 | 2616 | 0 | 3357 | 0 | 4098 | 1 |
| 394 | 1 | 1135 | 0 | 1876 | 0 | 2617 | 0 | 3358 | 1 | 4099 | 1 |
| 395 | 0 | 1136 | 0 | 1877 | 1 | 2618 | 1 | 3359 | 0 | 4100 | 0 |
| 396 | 1 | 1137 | 1 | 1878 | 0 | 2619 | 0 | 3360 | 0 | 4101 | 1 |
| 397 | 0 | 1138 | 1 | 1879 | 0 | 2620 | 0 | 3361 | 0 | 4102 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 398 | 1 | 1139 | 0 | 1880 | 0 | 2621 | 1 | 3362 | 1 | 4103 | 1 |
| 399 | 1 | 1140 | 1 | 1881 | 0 | 2622 | 1 | 3363 | 1 | 4104 | 0 |
| 400 | 1 | 1141 | 0 | 1882 | 0 | 2623 | 0 | 3364 | 0 | 4105 | 1 |
| 401 | 1 | 1142 | 0 | 1883 | 1 | 2624 | 0 | 3365 | 1 | 4106 | 0 |
| 402 | 1 | 1143 | 0 | 1884 | 1 | 2625 | 0 | 3366 | 0 | 4107 | 1 |
| 403 | 1 | 1144 | 0 | 1885 | 0 | 2626 | 1 | 3367 | 1 | 4108 | 0 |
| 404 | 1 | 1145 | 1 | 1886 | 0 | 2627 | 0 | 3368 | 1 | 4109 | 0 |
| 405 | 0 | 1146 | 0 | 1887 | 0 | 2628 | 1 | 3369 | 0 | 4110 | 0 |
| 406 | 0 | 1147 | 1 | 1888 | 1 | 2629 | 0 | 3370 | 0 | 4111 | 1 |
| 407 | 0 | 1148 | 0 | 1889 | 1 | 2630 | 1 | 3371 | 0 | 4112 | 1 |
| 408 | 0 | 1149 | 1 | 1890 | 1 | 2631 | 0 | 3372 | 0 | 4113 | 0 |
| 409 | 1 | 1150 | 0 | 1891 | 0 | 2632 | 1 | 3373 | 1 | 4114 | 0 |
| 410 | 0 | 1151 | 0 | 1892 | 1 | 2633 | 1 | 3374 | 0 | 4115 | 0 |
| 411 | 0 | 1152 | 1 | 1893 | 0 | 2634 | 1 | 3375 | 0 | 4116 | 1 |
| 412 | 0 | 1153 | 0 | 1894 | 0 | 2635 | 0 | 3376 | 0 | 4117 | 1 |
| 413 | 0 | 1154 | 0 | 1895 | 1 | 2636 | 1 | 3377 | 1 | 4118 | 0 |
| 414 | 1 | 1155 | 1 | 1896 | 1 | 2637 | 1 | 3378 | 1 | 4119 | 1 |
| 415 | 0 | 1156 | 1 | 1897 | 1 | 2638 | 0 | 3379 | 1 | 4120 | 0 |
| 416 | 0 | 1157 | 1 | 1898 | 0 | 2639 | 0 | 3380 | 1 | 4121 | 1 |
| 417 | 1 | 1158 | 1 | 1899 | 1 | 2640 | 0 | 3381 | 0 | 4122 | 1 |
| 418 | 0 | 1159 | 1 | 1900 | 1 | 2641 | 1 | 3382 | 0 | 4123 | 0 |
| 419 | 0 | 1160 | 1 | 1901 | 1 | 2642 | 0 | 3383 | 0 | 4124 | 1 |
| 420 | 0 | 1161 | 1 | 1902 | 0 | 2643 | 1 | 3384 | 0 | 4125 | 0 |
| 421 | 1 | 1162 | 0 | 1903 | 0 | 2644 | 0 | 3385 | 1 | 4126 | 1 |
| 422 | 1 | 1163 | 0 | 1904 | 0 | 2645 | 0 | 3386 | 0 | 4127 | 1 |
| 423 | 0 | 1164 | 1 | 1905 | 0 | 2646 | 0 | 3387 | 0 | 4128 | 1 |
| 424 | 1 | 1165 | 1 | 1906 | 0 | 2647 | 0 | 3388 | 0 | 4129 | 1 |
| 425 | 0 | 1166 | 1 | 1907 | 0 | 2648 | 0 | 3389 | 0 | 4130 | 0 |
| 426 | 0 | 1167 | 0 | 1908 | 0 | 2649 | 1 | 3390 | 0 | 4131 | 0 |
| 427 | 1 | 1168 | 0 | 1909 | 0 | 2650 | 1 | 3391 | 0 | 4132 | 1 |
| 428 | 0 | 1169 | 0 | 1910 | 1 | 2651 | 0 | 3392 | 1 | 4133 | 0 |
| 429 | 1 | 1170 | 0 | 1911 | 1 | 2652 | 0 | 3393 | 0 | 4134 | 1 |
| 430 | 1 | 1171 | 0 | 1912 | 1 | 2653 | 0 | 3394 | 0 | 4135 | 0 |
| 431 | 1 | 1172 | 0 | 1913 | 1 | 2654 | 1 | 3395 | 1 | 4136 | 1 |
| 432 | 1 | 1173 | 1 | 1914 | 0 | 2655 | 0 | 3396 | 0 | 4137 | 1 |
| 433 | 1 | 1174 | 1 | 1915 | 1 | 2656 | 0 | 3397 | 0 | 4138 | 1 |
| 434 | 0 | 1175 | 1 | 1916 | 0 | 2657 | 0 | 3398 | 0 | 4139 | 1 |
| 435 | 1 | 1176 | 1 | 1917 | 1 | 2658 | 1 | 3399 | 1 | 4140 | 0 |
| 436 | 1 | 1177 | 0 | 1918 | 1 | 2659 | 0 | 3400 | 0 | 4141 | 0 |
| 437 | 1 | 1178 | 0 | 1919 | 0 | 2660 | 0 | 3401 | 0 | 4142 | 1 |
| 438 | 1 | 1179 | 1 | 1920 | 1 | 2661 | 1 | 3402 | 0 | 4143 | 0 |
| 439 | 0 | 1180 | 1 | 1921 | 0 | 2662 | 0 | 3403 | 0 | 4144 | 0 |
| 440 | 0 | 1181 | 0 | 1922 | 0 | 2663 | 1 | 3404 | 0 | 4145 | 1 |
| 441 | 0 | 1182 | 1 | 1923 | 0 | 2664 | 0 | 3405 | 1 | 4146 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 442 | 1 | 1183 | 0 | 1924 | 1 | 2665 | 1 | 3406 | 1 | 4147 | 0 |
| 443 | 0 | 1184 | 1 | 1925 | 0 | 2666 | 1 | 3407 | 1 | 4148 | 1 |
| 444 | 1 | 1185 | 1 | 1926 | 0 | 2667 | 0 | 3408 | 0 | 4149 | 0 |
| 445 | 0 | 1186 | 0 | 1927 | 0 | 2668 | 0 | 3409 | 1 | 4150 | 0 |
| 446 | 0 | 1187 | 0 | 1928 | 1 | 2669 | 0 | 3410 | 1 | 4151 | 0 |
| 447 | 1 | 1188 | 0 | 1929 | 0 | 2670 | 1 | 3411 | 0 | 4152 | 0 |
| 448 | 0 | 1189 | 1 | 1930 | 0 | 2671 | 1 | 3412 | 1 | 4153 | 1 |
| 449 | 0 | 1190 | 0 | 1931 | 1 | 2672 | 1 | 3413 | 0 | 4154 | 0 |
| 450 | 0 | 1191 | 1 | 1932 | 1 | 2673 | 0 | 3414 | 1 | 4155 | 1 |
| 451 | 1 | 1192 | 0 | 1933 | 1 | 2674 | 1 | 3415 | 0 | 4156 | 0 |
| 452 | 1 | 1193 | 0 | 1934 | 1 | 2675 | 0 | 3416 | 0 | 4157 | 0 |
| 453 | 1 | 1194 | 0 | 1935 | 1 | 2676 | 0 | 3417 | 0 | 4158 | 1 |
| 454 | 1 | 1195 | 1 | 1936 | 1 | 2677 | 0 | 3418 | 0 | 4159 | 1 |
| 455 | 0 | 1196 | 0 | 1937 | 0 | 2678 | 0 | 3419 | 0 | 4160 | 1 |
| 456 | 1 | 1197 | 1 | 1938 | 1 | 2679 | 0 | 3420 | 0 | 4161 | 0 |
| 457 | 1 | 1198 | 0 | 1939 | 0 | 2680 | 0 | 3421 | 1 | 4162 | 1 |
| 458 | 0 | 1199 | 0 | 1940 | 1 | 2681 | 0 | 3422 | 0 | 4163 | 1 |
| 459 | 1 | 1200 | 0 | 1941 | 1 | 2682 | 1 | 3423 | 1 | 4164 | 1 |
| 460 | 0 | 1201 | 1 | 1942 | 0 | 2683 | 1 | 3424 | 1 | 4165 | 1 |
| 461 | 1 | 1202 | 0 | 1943 | 0 | 2684 | 1 | 3425 | 1 | 4166 | 0 |
| 462 | 0 | 1203 | 0 | 1944 | 1 | 2685 | 1 | 3426 | 0 | 4167 | 0 |
| 463 | 1 | 1204 | 0 | 1945 | 1 | 2686 | 0 | 3427 | 0 | 4168 | 1 |
| 464 | 1 | 1205 | 1 | 1946 | 0 | 2687 | 0 | 3428 | 0 | 4169 | 0 |
| 465 | 1 | 1206 | 0 | 1947 | 1 | 2688 | 0 | 3429 | 1 | 4170 | 1 |
| 466 | 0 | 1207 | 0 | 1948 | 1 | 2689 | 0 | 3430 | 1 | 4171 | 0 |
| 467 | 1 | 1208 | 1 | 1949 | 0 | 2690 | 0 | 3431 | 1 | 4172 | 1 |
| 468 | 0 | 1209 | 1 | 1950 | 0 | 2691 | 0 | 3432 | 0 | 4173 | 1 |
| 469 | 1 | 1210 | 0 | 1951 | 1 | 2692 | 1 | 3433 | 1 | 4174 | 1 |
| 470 | 1 | 1211 | 0 | 1952 | 0 | 2693 | 1 | 3434 | 0 | 4175 | 1 |
| 471 | 1 | 1212 | 1 | 1953 | 0 | 2694 | 0 | 3435 | 1 | 4176 | 1 |
| 472 | 0 | 1213 | 1 | 1954 | 0 | 2695 | 0 | 3436 | 1 | 4177 | 0 |
| 473 | 0 | 1214 | 1 | 1955 | 1 | 2696 | 1 | 3437 | 0 | 4178 | 1 |
| 474 | 1 | 1215 | 0 | 1956 | 0 | 2697 | 1 | 3438 | 1 | 4179 | 1 |
| 475 | 1 | 1216 | 1 | 1957 | 0 | 2698 | 0 | 3439 | 1 | 4180 | 0 |
| 476 | 1 | 1217 | 0 | 1958 | 0 | 2699 | 0 | 3440 | 1 | 4181 | 1 |
| 477 | 0 | 1218 | 0 | 1959 | 0 | 2700 | 1 | 3441 | 0 | 4182 | 1 |
| 478 | 1 | 1219 | 1 | 1960 | 1 | 2701 | 1 | 3442 | 0 | 4183 | 1 |
| 479 | 1 | 1220 | 1 | 1961 | 1 | 2702 | 0 | 3443 | 1 | 4184 | 1 |
| 480 | 1 | 1221 | 1 | 1962 | 0 | 2703 | 0 | 3444 | 1 | 4185 | 0 |
| 481 | 0 | 1222 | 1 | 1963 | 1 | 2704 | 0 | 3445 | 1 | 4186 | 0 |
| 482 | 0 | 1223 | 0 | 1964 | 0 | 2705 | 0 | 3446 | 1 | 4187 | 1 |
| 483 | 1 | 1224 | 0 | 1965 | 1 | 2706 | 1 | 3447 | 1 | 4188 | 0 |
| 484 | 0 | 1225 | 0 | 1966 | 1 | 2707 | 1 | 3448 | 1 | 4189 | 0 |
| 485 | 1 | 1226 | 1 | 1967 | 1 | 2708 | 0 | 3449 | 1 | 4190 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 486 | 0 | 1227 | 0 | 1968 | 1 | 2709 | 0 | 3450 | 1 | 4191 | 0 |
| 487 | 0 | 1228 | 0 | 1969 | 1 | 2710 | 0 | 3451 | 0 | 4192 | 1 |
| 488 | 1 | 1229 | 0 | 1970 | 0 | 2711 | 0 | 3452 | 1 | 4193 | 0 |
| 489 | 1 | 1230 | 1 | 1971 | 1 | 2712 | 0 | 3453 | 0 | 4194 | 1 |
| 490 | 1 | 1231 | 1 | 1972 | 0 | 2713 | 0 | 3454 | 0 | 4195 | 1 |
| 491 | 0 | 1232 | 1 | 1973 | 1 | 2714 | 0 | 3455 | 0 | 4196 | 0 |
| 492 | 0 | 1233 | 0 | 1974 | 0 | 2715 | 0 | 3456 | 1 | 4197 | 1 |
| 493 | 0 | 1234 | 0 | 1975 | 0 | 2716 | 0 | 3457 | 0 | 4198 | 0 |
| 494 | 0 | 1235 | 0 | 1976 | 0 | 2717 | 0 | 3458 | 1 | 4199 | 0 |
| 495 | 0 | 1236 | 0 | 1977 | 0 | 2718 | 1 | 3459 | 0 | 4200 | 1 |
| 496 | 1 | 1237 | 0 | 1978 | 0 | 2719 | 0 | 3460 | 1 | 4201 | 1 |
| 497 | 1 | 1238 | 0 | 1979 | 1 | 2720 | 0 | 3461 | 1 | 4202 | 1 |
| 498 | 1 | 1239 | 0 | 1980 | 0 | 2721 | 0 | 3462 | 1 | 4203 | 0 |
| 499 | 0 | 1240 | 1 | 1981 | 0 | 2722 | 1 | 3463 | 1 | 4204 | 0 |
| 500 | 1 | 1241 | 0 | 1982 | 0 | 2723 | 0 | 3464 | 0 | 4205 | 1 |
| 501 | 0 | 1242 | 1 | 1983 | 0 | 2724 | 0 | 3465 | 0 | 4206 | 0 |
| 502 | 1 | 1243 | 0 | 1984 | 0 | 2725 | 0 | 3466 | 0 | 4207 | 1 |
| 503 | 1 | 1244 | 0 | 1985 | 1 | 2726 | 1 | 3467 | 0 | 4208 | 1 |
| 504 | 0 | 1245 | 1 | 1986 | 0 | 2727 | 0 | 3468 | 1 | 4209 | 0 |
| 505 | 0 | 1246 | 0 | 1987 | 0 | 2728 | 0 | 3469 | 0 | 4210 | 0 |
| 506 | 1 | 1247 | 1 | 1988 | 0 | 2729 | 1 | 3470 | 0 | 4211 | 1 |
| 507 | 1 | 1248 | 0 | 1989 | 0 | 2730 | 1 | 3471 | 0 | 4212 | 0 |
| 508 | 0 | 1249 | 0 | 1990 | 0 | 2731 | 0 | 3472 | 0 | 4213 | 0 |
| 509 | 0 | 1250 | 1 | 1991 | 0 | 2732 | 1 | 3473 | 1 | 4214 | 0 |
| 510 | 1 | 1251 | 1 | 1992 | 0 | 2733 | 1 | 3474 | 0 | 4215 | 0 |
| 511 | 0 | 1252 | 0 | 1993 | 0 | 2734 | 1 | 3475 | 0 | 4216 | 1 |
| 512 | 1 | 1253 | 1 | 1994 | 0 | 2735 | 1 | 3476 | 0 | 4217 | 1 |
| 513 | 0 | 1254 | 0 | 1995 | 0 | 2736 | 0 | 3477 | 1 | 4218 | 1 |
| 514 | 0 | 1255 | 0 | 1996 | 1 | 2737 | 1 | 3478 | 0 | 4219 | 0 |
| 515 | 0 | 1256 | 1 | 1997 | 1 | 2738 | 1 | 3479 | 1 | 4220 | 1 |
| 516 | 1 | 1257 | 0 | 1998 | 0 | 2739 | 1 | 3480 | 1 | 4221 | 0 |
| 517 | 1 | 1258 | 1 | 1999 | 1 | 2740 | 0 | 3481 | 1 | 4222 | 0 |
| 518 | 1 | 1259 | 0 | 2000 | 1 | 2741 | 0 | 3482 | 1 | 4223 | 0 |
| 519 | 0 | 1260 | 0 | 2001 | 1 | 2742 | 1 | 3483 | 0 | 4224 | 1 |
| 520 | 0 | 1261 | 1 | 2002 | 0 | 2743 | 1 | 3484 | 0 | 4225 | 1 |
| 521 | 0 | 1262 | 0 | 2003 | 1 | 2744 | 0 | 3485 | 0 | 4226 | 0 |
| 522 | 0 | 1263 | 1 | 2004 | 0 | 2745 | 0 | 3486 | 0 | 4227 | 1 |
| 523 | 0 | 1264 | 0 | 2005 | 1 | 2746 | 1 | 3487 | 1 | 4228 | 1 |
| 524 | 1 | 1265 | 0 | 2006 | 1 | 2747 | 0 | 3488 | 1 | 4229 | 1 |
| 525 | 1 | 1266 | 1 | 2007 | 0 | 2748 | 1 | 3489 | 0 | 4230 | 0 |
| 526 | 0 | 1267 | 1 | 2008 | 0 | 2749 | 0 | 3490 | 0 | 4231 | 0 |
| 527 | 0 | 1268 | 1 | 2009 | 0 | 2750 | 1 | 3491 | 0 | 4232 | 1 |
| 528 | 1 | 1269 | 1 | 2010 | 1 | 2751 | 1 | 3492 | 0 | 4233 | 1 |
| 529 | 0 | 1270 | 0 | 2011 | 1 | 2752 | 1 | 3493 | 0 | 4234 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 530 | 1 | 1271 | 1 | 2012 | 0 | 2753 | 1 | 3494 | 0 | 4235 | 0 |
| 531 | 0 | 1272 | 0 | 2013 | 1 | 2754 | 0 | 3495 | 1 | 4236 | 0 |
| 532 | 0 | 1273 | 1 | 2014 | 1 | 2755 | 1 | 3496 | 0 | 4237 | 1 |
| 533 | 0 | 1274 | 1 | 2015 | 1 | 2756 | 0 | 3497 | 1 | 4238 | 0 |
| 534 | 1 | 1275 | 0 | 2016 | 1 | 2757 | 0 | 3498 | 1 | 4239 | 1 |
| 535 | 0 | 1276 | 1 | 2017 | 1 | 2758 | 1 | 3499 | 0 | 4240 | 1 |
| 536 | 1 | 1277 | 0 | 2018 | 1 | 2759 | 1 | 3500 | 1 | 4241 | 0 |
| 537 | 0 | 1278 | 0 | 2019 | 0 | 2760 | 1 | 3501 | 0 | 4242 | 1 |
| 538 | 0 | 1279 | 0 | 2020 | 1 | 2761 | 0 | 3502 | 0 | 4243 | 1 |
| 539 | 1 | 1280 | 0 | 2021 | 1 | 2762 | 1 | 3503 | 1 | 4244 | 0 |
| 540 | 0 | 1281 | 0 | 2022 | 0 | 2763 | 0 | 3504 | 1 | 4245 | 1 |
| 541 | 1 | 1282 | 1 | 2023 | 0 | 2764 | 1 | 3505 | 1 | 4246 | 1 |
| 542 | 0 | 1283 | 1 | 2024 | 0 | 2765 | 1 | 3506 | 1 | 4247 | 0 |
| 543 | 0 | 1284 | 1 | 2025 | 0 | 2766 | 0 | 3507 | 1 | 4248 | 0 |
| 544 | 1 | 1285 | 1 | 2026 | 0 | 2767 | 0 | 3508 | 0 | 4249 | 1 |
| 545 | 0 | 1286 | 1 | 2027 | 0 | 2768 | 1 | 3509 | 0 | 4250 | 0 |
| 546 | 0 | 1287 | 0 | 2028 | 1 | 2769 | 1 | 3510 | 0 | 4251 | 1 |
| 547 | 1 | 1288 | 1 | 2029 | 0 | 2770 | 1 | 3511 | 1 | 4252 | 1 |
| 548 | 1 | 1289 | 0 | 2030 | 1 | 2771 | 0 | 3512 | 1 | 4253 | 1 |
| 549 | 0 | 1290 | 1 | 2031 | 0 | 2772 | 1 | 3513 | 1 | 4254 | 1 |
| 550 | 1 | 1291 | 1 | 2032 | 1 | 2773 | 1 | 3514 | 1 | 4255 | 1 |
| 551 | 1 | 1292 | 0 | 2033 | 1 | 2774 | 0 | 3515 | 1 | 4256 | 0 |
| 552 | 0 | 1293 | 0 | 2034 | 0 | 2775 | 0 | 3516 | 1 | 4257 | 1 |
| 553 | 1 | 1294 | 1 | 2035 | 1 | 2776 | 0 | 3517 | 0 | 4258 | 0 |
| 554 | 1 | 1295 | 1 | 2036 | 0 | 2777 | 1 | 3518 | 1 | 4259 | 0 |
| 555 | 0 | 1296 | 1 | 2037 | 0 | 2778 | 0 | 3519 | 0 | 4260 | 1 |
| 556 | 0 | 1297 | 1 | 2038 | 0 | 2779 | 1 | 3520 | 1 | 4261 | 0 |
| 557 | 0 | 1298 | 0 | 2039 | 0 | 2780 | 0 | 3521 | 0 | 4262 | 1 |
| 558 | 1 | 1299 | 0 | 2040 | 0 | 2781 | 1 | 3522 | 0 | 4263 | 1 |
| 559 | 1 | 1300 | 1 | 2041 | 0 | 2782 | 0 | 3523 | 0 | 4264 | 1 |
| 560 | 1 | 1301 | 1 | 2042 | 1 | 2783 | 1 | 3524 | 0 | 4265 | 0 |
| 561 | 1 | 1302 | 1 | 2043 | 1 | 2784 | 0 | 3525 | 1 | 4266 | 0 |
| 562 | 1 | 1303 | 1 | 2044 | 1 | 2785 | 1 | 3526 | 1 | 4267 | 0 |
| 563 | 1 | 1304 | 0 | 2045 | 0 | 2786 | 0 | 3527 | 1 | 4268 | 0 |
| 564 | 1 | 1305 | 0 | 2046 | 0 | 2787 | 0 | 3528 | 1 | 4269 | 1 |
| 565 | 0 | 1306 | 1 | 2047 | 0 | 2788 | 0 | 3529 | 1 | 4270 | 0 |
| 566 | 0 | 1307 | 0 | 2048 | 1 | 2789 | 1 | 3530 | 1 | 4271 | 0 |
| 567 | 1 | 1308 | 1 | 2049 | 0 | 2790 | 1 | 3531 | 0 | 4272 | 1 |
| 568 | 0 | 1309 | 1 | 2050 | 0 | 2791 | 1 | 3532 | 0 | 4273 | 1 |
| 569 | 1 | 1310 | 1 | 2051 | 0 | 2792 | 0 | 3533 | 1 | 4274 | 0 |
| 570 | 0 | 1311 | 0 | 2052 | 1 | 2793 | 1 | 3534 | 0 | 4275 | 0 |
| 571 | 0 | 1312 | 0 | 2053 | 0 | 2794 | 1 | 3535 | 1 | 4276 | 1 |
| 572 | 0 | 1313 | 1 | 2054 | 1 | 2795 | 1 | 3536 | 0 | 4277 | 0 |
| 573 | 1 | 1314 | 0 | 2055 | 0 | 2796 | 1 | 3537 | 0 | 4278 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 574 | 1 | 1315 | 0 | 2056 | 1 | 2797 | 0 | 3538 | 1 | 4279 | 1 |
| 575 | 0 | 1316 | 1 | 2057 | 0 | 2798 | 1 | 3539 | 0 | 4280 | 0 |
| 576 | 1 | 1317 | 1 | 2058 | 0 | 2799 | 1 | 3540 | 0 | 4281 | 1 |
| 577 | 0 | 1318 | 0 | 2059 | 0 | 2800 | 0 | 3541 | 0 | 4282 | 1 |
| 578 | 1 | 1319 | 0 | 2060 | 0 | 2801 | 1 | 3542 | 1 | 4283 | 1 |
| 579 | 0 | 1320 | 1 | 2061 | 1 | 2802 | 0 | 3543 | 0 | 4284 | 1 |
| 580 | 1 | 1321 | 1 | 2062 | 0 | 2803 | 0 | 3544 | 1 | 4285 | 0 |
| 581 | 0 | 1322 | 0 | 2063 | 0 | 2804 | 0 | 3545 | 0 | 4286 | 1 |
| 582 | 0 | 1323 | 0 | 2064 | 1 | 2805 | 0 | 3546 | 1 | 4287 | 0 |
| 583 | 1 | 1324 | 1 | 2065 | 1 | 2806 | 0 | 3547 | 1 | 4288 | 0 |
| 584 | 0 | 1325 | 1 | 2066 | 1 | 2807 | 1 | 3548 | 0 | 4289 | 0 |
| 585 | 1 | 1326 | 0 | 2067 | 0 | 2808 | 1 | 3549 | 1 | 4290 | 1 |
| 586 | 0 | 1327 | 0 | 2068 | 1 | 2809 | 1 | 3550 | 0 | 4291 | 1 |
| 587 | 0 | 1328 | 1 | 2069 | 1 | 2810 | 0 | 3551 | 0 | 4292 | 0 |
| 588 | 0 | 1329 | 1 | 2070 | 0 | 2811 | 0 | 3552 | 1 | 4293 | 0 |
| 589 | 1 | 1330 | 1 | 2071 | 0 | 2812 | 0 | 3553 | 0 | 4294 | 0 |
| 590 | 1 | 1331 | 0 | 2072 | 1 | 2813 | 0 | 3554 | 1 | 4295 | 1 |
| 591 | 1 | 1332 | 0 | 2073 | 0 | 2814 | 0 | 3555 | 1 | 4296 | 1 |
| 592 | 0 | 1333 | 0 | 2074 | 0 | 2815 | 0 | 3556 | 1 | 4297 | 0 |
| 593 | 0 | 1334 | 1 | 2075 | 0 | 2816 | 1 | 3557 | 1 | 4298 | 0 |
| 594 | 0 | 1335 | 0 | 2076 | 1 | 2817 | 0 | 3558 | 1 | 4299 | 1 |
| 595 | 1 | 1336 | 0 | 2077 | 0 | 2818 | 0 | 3559 | 1 | 4300 | 1 |
| 596 | 0 | 1337 | 0 | 2078 | 1 | 2819 | 1 | 3560 | 1 | 4301 | 1 |
| 597 | 1 | 1338 | 1 | 2079 | 0 | 2820 | 0 | 3561 | 1 | 4302 | 0 |
| 598 | 0 | 1339 | 0 | 2080 | 1 | 2821 | 0 | 3562 | 0 | 4303 | 0 |
| 599 | 1 | 1340 | 0 | 2081 | 1 | 2822 | 0 | 3563 | 1 | 4304 | 0 |
| 600 | 1 | 1341 | 0 | 2082 | 1 | 2823 | 1 | 3564 | 1 | 4305 | 1 |
| 601 | 0 | 1342 | 1 | 2083 | 1 | 2824 | 1 | 3565 | 1 | 4306 | 1 |
| 602 | 0 | 1343 | 1 | 2084 | 0 | 2825 | 1 | 3566 | 1 | 4307 | 0 |
| 603 | 1 | 1344 | 0 | 2085 | 1 | 2826 | 0 | 3567 | 0 | 4308 | 0 |
| 604 | 1 | 1345 | 0 | 2086 | 1 | 2827 | 0 | 3568 | 1 | 4309 | 0 |
| 605 | 1 | 1346 | 0 | 2087 | 1 | 2828 | 1 | 3569 | 0 | 4310 | 1 |
| 606 | 1 | 1347 | 1 | 2088 | 1 | 2829 | 1 | 3570 | 0 | 4311 | 0 |
| 607 | 1 | 1348 | 1 | 2089 | 1 | 2830 | 0 | 3571 | 0 | 4312 | 1 |
| 608 | 0 | 1349 | 0 | 2090 | 1 | 2831 | 0 | 3572 | 1 | 4313 | 0 |
| 609 | 1 | 1350 | 1 | 2091 | 1 | 2832 | 1 | 3573 | 0 | 4314 | 0 |
| 610 | 0 | 1351 | 1 | 2092 | 1 | 2833 | 0 | 3574 | 0 | 4315 | 1 |
| 611 | 0 | 1352 | 0 | 2093 | 0 | 2834 | 0 | 3575 | 0 | 4316 | 0 |
| 612 | 0 | 1353 | 1 | 2094 | 1 | 2835 | 1 | 3576 | 0 | 4317 | 1 |
| 613 | 0 | 1354 | 0 | 2095 | 1 | 2836 | 1 | 3577 | 1 | 4318 | 1 |
| 614 | 0 | 1355 | 1 | 2096 | 1 | 2837 | 1 | 3578 | 1 | 4319 | 0 |
| 615 | 0 | 1356 | 1 | 2097 | 0 | 2838 | 1 | 3579 | 0 | 4320 | 1 |
| 616 | 1 | 1357 | 0 | 2098 | 0 | 2839 | 1 | 3580 | 0 | 4321 | 1 |
| 617 | 1 | 1358 | 1 | 2099 | 1 | 2840 | 0 | 3581 | 0 | 4322 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 618 | 1 | 1359 | 1 | 2100 | 0 | 2841 | 1 | 3582 | 0 | 4323 | 1 |
| 619 | 0 | 1360 | 0 | 2101 | 0 | 2842 | 1 | 3583 | 0 | 4324 | 0 |
| 620 | 1 | 1361 | 0 | 2102 | 0 | 2843 | 0 | 3584 | 0 | 4325 | 0 |
| 621 | 1 | 1362 | 1 | 2103 | 0 | 2844 | 0 | 3585 | 1 | 4326 | 0 |
| 622 | 0 | 1363 | 1 | 2104 | 0 | 2845 | 1 | 3586 | 0 | 4327 | 0 |
| 623 | 0 | 1364 | 1 | 2105 | 0 | 2846 | 0 | 3587 | 0 | 4328 | 1 |
| 624 | 0 | 1365 | 1 | 2106 | 1 | 2847 | 1 | 3588 | 0 | 4329 | 0 |
| 625 | 0 | 1366 | 0 | 2107 | 0 | 2848 | 0 | 3589 | 1 | 4330 | 1 |
| 626 | 1 | 1367 | 0 | 2108 | 0 | 2849 | 1 | 3590 | 1 | 4331 | 1 |
| 627 | 0 | 1368 | 1 | 2109 | 1 | 2850 | 1 | 3591 | 0 | 4332 | 1 |
| 628 | 0 | 1369 | 1 | 2110 | 1 | 2851 | 1 | 3592 | 1 | 4333 | 0 |
| 629 | 0 | 1370 | 0 | 2111 | 0 | 2852 | 1 | 3593 | 0 | 4334 | 1 |
| 630 | 1 | 1371 | 1 | 2112 | 1 | 2853 | 1 | 3594 | 1 | 4335 | 1 |
| 631 | 0 | 1372 | 1 | 2113 | 1 | 2854 | 1 | 3595 | 0 | 4336 | 0 |
| 632 | 0 | 1373 | 0 | 2114 | 0 | 2855 | 1 | 3596 | 1 | 4337 | 1 |
| 633 | 0 | 1374 | 1 | 2115 | 0 | 2856 | 0 | 3597 | 1 | 4338 | 0 |
| 634 | 1 | 1375 | 0 | 2116 | 1 | 2857 | 0 | 3598 | 1 | 4339 | 1 |
| 635 | 1 | 1376 | 1 | 2117 | 0 | 2858 | 1 | 3599 | 0 | 4340 | 0 |
| 636 | 1 | 1377 | 0 | 2118 | 1 | 2859 | 0 | 3600 | 0 | 4341 | 1 |
| 637 | 0 | 1378 | 1 | 2119 | 0 | 2860 | 1 | 3601 | 0 | 4342 | 0 |
| 638 | 0 | 1379 | 0 | 2120 | 1 | 2861 | 1 | 3602 | 0 | 4343 | 1 |
| 639 | 1 | 1380 | 1 | 2121 | 1 | 2862 | 1 | 3603 | 0 | 4344 | 1 |
| 640 | 0 | 1381 | 1 | 2122 | 0 | 2863 | 0 | 3604 | 0 | 4345 | 0 |
| 641 | 1 | 1382 | 0 | 2123 | 0 | 2864 | 0 | 3605 | 1 | 4346 | 1 |
| 642 | 0 | 1383 | 1 | 2124 | 1 | 2865 | 0 | 3606 | 0 | 4347 | 0 |
| 643 | 1 | 1384 | 0 | 2125 | 1 | 2866 | 1 | 3607 | 0 | 4348 | 1 |
| 644 | 1 | 1385 | 0 | 2126 | 0 | 2867 | 1 | 3608 | 1 | 4349 | 1 |
| 645 | 0 | 1386 | 1 | 2127 | 0 | 2868 | 1 | 3609 | 1 | 4350 | 1 |
| 646 | 1 | 1387 | 0 | 2128 | 0 | 2869 | 1 | 3610 | 0 | 4351 | 0 |
| 647 | 1 | 1388 | 1 | 2129 | 0 | 2870 | 0 | 3611 | 1 | 4352 | 1 |
| 648 | 0 | 1389 | 1 | 2130 | 1 | 2871 | 1 | 3612 | 1 | 4353 | 0 |
| 649 | 0 | 1390 | 0 | 2131 | 1 | 2872 | 0 | 3613 | 1 | 4354 | 0 |
| 650 | 0 | 1391 | 0 | 2132 | 1 | 2873 | 1 | 3614 | 1 | 4355 | 0 |
| 651 | 1 | 1392 | 1 | 2133 | 1 | 2874 | 1 | 3615 | 1 | 4356 | 1 |
| 652 | 1 | 1393 | 0 | 2134 | 1 | 2875 | 0 | 3616 | 1 | 4357 | 1 |
| 653 | 1 | 1394 | 1 | 2135 | 1 | 2876 | 0 | 3617 | 1 | 4358 | 0 |
| 654 | 0 | 1395 | 1 | 2136 | 0 | 2877 | 0 | 3618 | 1 | 4359 | 0 |
| 655 | 1 | 1396 | 1 | 2137 | 1 | 2878 | 1 | 3619 | 1 | 4360 | 0 |
| 656 | 0 | 1397 | 0 | 2138 | 0 | 2879 | 0 | 3620 | 1 | 4361 | 0 |
| 657 | 0 | 1398 | 1 | 2139 | 0 | 2880 | 1 | 3621 | 1 | 4362 | 1 |
| 658 | 1 | 1399 | 0 | 2140 | 1 | 2881 | 0 | 3622 | 0 | 4363 | 0 |
| 659 | 0 | 1400 | 0 | 2141 | 1 | 2882 | 1 | 3623 | 1 | 4364 | 1 |
| 660 | 0 | 1401 | 0 | 2142 | 1 | 2883 | 0 | 3624 | 1 | 4365 | 0 |
| 661 | 0 | 1402 | 0 | 2143 | 1 | 2884 | 1 | 3625 | 0 | 4366 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 662 | 1 | 1403 | 1 | 2144 | 0 | 2885 | 0 | 3626 | 1 | 4367 | 0 |
| 663 | 0 | 1404 | 0 | 2145 | 1 | 2886 | 1 | 3627 | 1 | 4368 | 1 |
| 664 | 1 | 1405 | 1 | 2146 | 0 | 2887 | 1 | 3628 | 1 | 4369 | 1 |
| 665 | 1 | 1406 | 1 | 2147 | 0 | 2888 | 0 | 3629 | 1 | 4370 | 1 |
| 666 | 0 | 1407 | 1 | 2148 | 0 | 2889 | 1 | 3630 | 0 | 4371 | 0 |
| 667 | 1 | 1408 | 0 | 2149 | 0 | 2890 | 1 | 3631 | 0 | 4372 | 0 |
| 668 | 1 | 1409 | 1 | 2150 | 0 | 2891 | 1 | 3632 | 1 | 4373 | 1 |
| 669 | 0 | 1410 | 0 | 2151 | 0 | 2892 | 1 | 3633 | 0 | 4374 | 1 |
| 670 | 1 | 1411 | 0 | 2152 | 1 | 2893 | 1 | 3634 | 1 | 4375 | 0 |
| 671 | 0 | 1412 | 0 | 2153 | 0 | 2894 | 1 | 3635 | 0 | 4376 | 0 |
| 672 | 1 | 1413 | 1 | 2154 | 1 | 2895 | 1 | 3636 | 0 | 4377 | 0 |
| 673 | 0 | 1414 | 1 | 2155 | 0 | 2896 | 1 | 3637 | 1 | 4378 | 1 |
| 674 | 1 | 1415 | 0 | 2156 | 1 | 2897 | 1 | 3638 | 1 | 4379 | 0 |
| 675 | 0 | 1416 | 0 | 2157 | 0 | 2898 | 0 | 3639 | 1 | 4380 | 0 |
| 676 | 0 | 1417 | 1 | 2158 | 1 | 2899 | 1 | 3640 | 0 | 4381 | 0 |
| 677 | 1 | 1418 | 1 | 2159 | 0 | 2900 | 1 | 3641 | 1 | 4382 | 0 |
| 678 | 1 | 1419 | 1 | 2160 | 1 | 2901 | 0 | 3642 | 0 | 4383 | 0 |
| 679 | 1 | 1420 | 1 | 2161 | 1 | 2902 | 1 | 3643 | 0 | 4384 | 0 |
| 680 | 0 | 1421 | 0 | 2162 | 1 | 2903 | 0 | 3644 | 0 | 4385 | 0 |
| 681 | 0 | 1422 | 0 | 2163 | 0 | 2904 | 1 | 3645 | 0 | 4386 | 0 |
| 682 | 0 | 1423 | 1 | 2164 | 0 | 2905 | 1 | 3646 | 1 | 4387 | 1 |
| 683 | 0 | 1424 | 1 | 2165 | 0 | 2906 | 1 | 3647 | 1 | 4388 | 1 |
| 684 | 1 | 1425 | 0 | 2166 | 0 | 2907 | 1 | 3648 | 0 | 4389 | 1 |
| 685 | 0 | 1426 | 0 | 2167 | 1 | 2908 | 1 | 3649 | 0 | 4390 | 0 |
| 686 | 0 | 1427 | 0 | 2168 | 0 | 2909 | 0 | 3650 | 0 | 4391 | 1 |
| 687 | 0 | 1428 | 0 | 2169 | 0 | 2910 | 0 | 3651 | 1 | 4392 | 0 |
| 688 | 0 | 1429 | 1 | 2170 | 1 | 2911 | 1 | 3652 | 0 | 4393 | 0 |
| 689 | 0 | 1430 | 1 | 2171 | 0 | 2912 | 1 | 3653 | 0 | 4394 | 0 |
| 690 | 0 | 1431 | 1 | 2172 | 1 | 2913 | 1 | 3654 | 1 | 4395 | 0 |
| 691 | 1 | 1432 | 0 | 2173 | 1 | 2914 | 0 | 3655 | 0 | 4396 | 0 |
| 692 | 1 | 1433 | 1 | 2174 | 0 | 2915 | 1 | 3656 | 1 | 4397 | 1 |
| 693 | 0 | 1434 | 0 | 2175 | 0 | 2916 | 0 | 3657 | 1 | 4398 | 0 |
| 694 | 0 | 1435 | 0 | 2176 | 1 | 2917 | 0 | 3658 | 1 | 4399 | 0 |
| 695 | 0 | 1436 | 1 | 2177 | 1 | 2918 | 1 | 3659 | 0 | 4400 | 1 |
| 696 | 0 | 1437 | 1 | 2178 | 1 | 2919 | 0 | 3660 | 1 | 4401 | 0 |
| 697 | 1 | 1438 | 0 | 2179 | 0 | 2920 | 1 | 3661 | 1 | 4402 | 0 |
| 698 | 0 | 1439 | 1 | 2180 | 1 | 2921 | 1 | 3662 | 1 | 4403 | 1 |
| 699 | 0 | 1440 | 1 | 2181 | 1 | 2922 | 0 | 3663 | 1 | 4404 | 0 |
| 700 | 1 | 1441 | 0 | 2182 | 1 | 2923 | 0 | 3664 | 1 | 4405 | 0 |
| 701 | 0 | 1442 | 1 | 2183 | 0 | 2924 | 0 | 3665 | 0 | 4406 | 0 |
| 702 | 0 | 1443 | 0 | 2184 | 0 | 2925 | 1 | 3666 | 1 | 4407 | 0 |
| 703 | 1 | 1444 | 1 | 2185 | 0 | 2926 | 0 | 3667 | 0 | 4408 | 0 |
| 704 | 0 | 1445 | 0 | 2186 | 1 | 2927 | 1 | 3668 | 1 | 4409 | 1 |
| 705 | 0 | 1446 | 1 | 2187 | 1 | 2928 | 0 | 3669 | 1 | 4410 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 706 | 0 | 1447 | 1 | 2188 | 0 | 2929 | 1 | 3670 | 0 | 4411 | 1 |
| 707 | 1 | 1448 | 0 | 2189 | 0 | 2930 | 1 | 3671 | 1 | 4412 | 0 |
| 708 | 1 | 1449 | 1 | 2190 | 1 | 2931 | 0 | 3672 | 1 | 4413 | 0 |
| 709 | 0 | 1450 | 1 | 2191 | 1 | 2932 | 0 | 3673 | 0 | 4414 | 1 |
| 710 | 0 | 1451 | 0 | 2192 | 0 | 2933 | 0 | 3674 | 1 | 4415 | 0 |
| 711 | 1 | 1452 | 0 | 2193 | 1 | 2934 | 1 | 3675 | 0 | 4416 | 0 |
| 712 | 0 | 1453 | 0 | 2194 | 0 | 2935 | 0 | 3676 | 1 | 4417 | 1 |
| 713 | 1 | 1454 | 0 | 2195 | 1 | 2936 | 1 | 3677 | 0 | 4418 | 0 |
| 714 | 0 | 1455 | 0 | 2196 | 0 | 2937 | 0 | 3678 | 0 | 4419 | 0 |
| 715 | 0 | 1456 | 0 | 2197 | 1 | 2938 | 0 | 3679 | 1 | 4420 | 0 |
| 716 | 0 | 1457 | 1 | 2198 | 0 | 2939 | 0 | 3680 | 1 | 4421 | 0 |
| 717 | 1 | 1458 | 0 | 2199 | 1 | 2940 | 0 | 3681 | 0 | 4422 | 0 |
| 718 | 1 | 1459 | 1 | 2200 | 1 | 2941 | 1 | 3682 | 1 | 4423 | 0 |
| 719 | 1 | 1460 | 0 | 2201 | 0 | 2942 | 0 | 3683 | 1 | 4424 | 1 |
| 720 | 1 | 1461 | 1 | 2202 | 1 | 2943 | 0 | 3684 | 0 | 4425 | 0 |
| 721 | 1 | 1462 | 0 | 2203 | 1 | 2944 | 0 | 3685 | 1 | 4426 | 0 |
| 722 | 0 | 1463 | 1 | 2204 | 1 | 2945 | 1 | 3686 | 1 | 4427 | 0 |
| 723 | 1 | 1464 | 1 | 2205 | 0 | 2946 | 0 | 3687 | 0 | 4428 | 1 |
| 724 | 0 | 1465 | 0 | 2206 | 0 | 2947 | 0 | 3688 | 0 | 4429 | 1 |
| 725 | 1 | 1466 | 1 | 2207 | 1 | 2948 | 0 | 3689 | 0 | 4430 | 0 |
| 726 | 1 | 1467 | 0 | 2208 | 0 | 2949 | 0 | 3690 | 0 | 4431 | 1 |
| 727 | 0 | 1468 | 0 | 2209 | 0 | 2950 | 0 | 3691 | 1 | 4432 | 0 |
| 728 | 1 | 1469 | 1 | 2210 | 0 | 2951 | 1 | 3692 | 1 | 4433 | 1 |
| 729 | 1 | 1470 | 1 | 2211 | 0 | 2952 | 0 | 3693 | 1 | 4434 | 1 |
| 730 | 0 | 1471 | 1 | 2212 | 0 | 2953 | 1 | 3694 | 0 | 4435 | 1 |
| 731 | 0 | 1472 | 1 | 2213 | 1 | 2954 | 0 | 3695 | 1 | 4436 | 1 |
| 732 | 1 | 1473 | 1 | 2214 | 1 | 2955 | 1 | 3696 | 1 | 4437 | 1 |
| 733 | 1 | 1474 | 0 | 2215 | 0 | 2956 | 0 | 3697 | 0 | 4438 | 1 |
| 734 | 0 | 1475 | 1 | 2216 | 1 | 2957 | 1 | 3698 | 1 | 4439 | 1 |
| 735 | 1 | 1476 | 1 | 2217 | 0 | 2958 | 1 | 3699 | 0 | 4440 | 1 |
| 736 | 0 | 1477 | 1 | 2218 | 1 | 2959 | 0 | 3700 | 1 | 4441 | 1 |
| 737 | 1 | 1478 | 1 | 2219 | 0 | 2960 | 1 | 3701 | 1 | | |
| 738 | 0 | 1479 | 1 | 2220 | 1 | 2961 | 0 | 3702 | 0 | | |
| 739 | 1 | 1480 | 0 | 2221 | 0 | 2962 | 0 | 3703 | 0 | | |
| 740 | 0 | 1481 | 0 | 2222 | 0 | 2963 | 0 | 3704 | 0 | | |

Université de Strasbourg, CNRS, IRMA UMR 7501, F-67000 Strasbourg, France
*Email address*: guoniu.han@unistra.fr

School of Mathematics and Statistics, Huazhong University of Science and Technology, Wuhan, PR China
*Email address*: huyining@hust.edu.cn