# PROOF OF THE CONTINUED FRACTION CONJECTURE FOR $(a,b)=(z^3+1, z^4+z^2+z+1)$

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 $(a,b)=(z^3+1, z^4+z^2+z+1)$.

## 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*: runone at : 30/04/2020 02:13:09 .

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 1.5 hours CPU time used.

**Theorem 1.1.** *When* $(a,b)=(z^3+1, z^4+z^2+z+1)$*, 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* $\mathrm{CF}(a,b)$*,*

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

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

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

## 2. Proof

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

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

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 $0 \le i,j \le 1$ 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 $0 \le i,j \le 1$, $T_{i,j}$ 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 $0 \le i,j \le 1$, 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 $n \ge 0$. If for some $n \ge 0$ 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 $j \ge 0$, $q_1(0) = 1$, 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. □

Define

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

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

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

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

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

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

*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 $u = 2^{2k}$,

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

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

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

which can be rewritten as

$$0 = T[[w]_2] + T[[10w]_2] + T[[11w]_2] + T[[101w]_2] + T[[111w]_2], \tag{2.7}$$
$$0 = T[[1w]_2] + T[[11w]_2] + T[[100w]_2] + T[[110w]_2] + T[[1000w]_2], \tag{2.8}$$
$$0 = T[[w]_2] + T[[11w]_2] + T[[100w]_2] + T[[1001w]_2], \tag{2.9}$$
$$0 = T[[1w]_2] + T[[100w]_2] + T[[101w]_2] + T[[1010w]_2], \tag{2.10}$$
$$0 = T[[w]_2] + T[[10w]_2] + T[[101w]_2] + T[[110w]_2] + T[[1011w]_2], \tag{2.11}$$
$$0 = T[[1w]_2] + T[[10w]_2] + T[[101w]_2] + T[[110w]_2] + T[[1100w]_2], \tag{2.12}$$
$$0 = T[[101w]_2] + T[[110w]_2] + T[[1101w]_2], \tag{2.13}$$

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

$$1 = T[[w]_2] + T[[10w]_2] + T[[11w]_2] + T[[101w]_2] + T[[111w]_2], \tag{2.14}$$
$$0 = T[[1w]_2] + T[[11w]_2] + T[[100w]_2] + T[[110w]_2] + T[[1000w]_2], \tag{2.15}$$
$$1 = T[[w]_2] + T[[11w]_2] + T[[100w]_2] + T[[1001w]_2], \tag{2.16}$$
$$0 = T[[1w]_2] + T[[100w]_2] + T[[101w]_2] + T[[1010w]_2], \tag{2.17}$$
$$0 = T[[w]_2] + T[[10w]_2] + T[[101w]_2] + T[[110w]_2] + T[[1011w]_2], \tag{2.18}$$
$$1 = T[[1w]_2] + T[[10w]_2] + T[[101w]_2] + T[[110w]_2] + T[[1100w]_2], \tag{2.19}$$
$$1 = T[[101w]_2] + T[[110w]_2] + T[[1101w]_2], \tag{2.20}$$

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

First we calculate an 2-automaton that generates $T$ from its minimal polynomial and its first terms. This automaton has 3993 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

$$\begin{aligned} 0 = {} & \tau(A(s,\epsilon)) + \tau(A(s,10)) + \tau(A(s,11)) + \tau(A(s,101)) \\ & + \tau(A(s,111)), \end{aligned} \tag{2.21}$$
$$\begin{aligned} 0 = {} & \tau(A(s,1)) + \tau(A(s,11)) + \tau(A(s,100)) + \tau(A(s,110)) \\ & + \tau(A(s,1000)), \end{aligned} \tag{2.22}$$
$$0 = \tau(A(s,\epsilon)) + \tau(A(s,11)) + \tau(A(s,100)) + \tau(A(s,1001)), \tag{2.23}$$
$$0 = \tau(A(s,1)) + \tau(A(s,100)) + \tau(A(s,101)) + \tau(A(s,1010)), \tag{2.24}$$
$$\begin{aligned} 0 = {} & \tau(A(s,\epsilon)) + \tau(A(s,10)) + \tau(A(s,101)) + \tau(A(s,110)) \\ & + \tau(A(s,1011)), \end{aligned} \tag{2.25}$$
$$\begin{aligned} 0 = {} & \tau(A(s,1)) + \tau(A(s,10)) + \tau(A(s,101)) + \tau(A(s,110)) \\ & + \tau(A(s,1100)), \end{aligned} \tag{2.26}$$
$$0 = \tau(A(s,101)) + \tau(A(s,110)) + \tau(A(s,1101)), \tag{2.27}$$

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

$$\begin{aligned} 1 = {} & \tau(A(s,\epsilon)) + \tau(A(s,10)) + \tau(A(s,11)) + \tau(A(s,101)) \\ & + \tau(A(s,111)), \end{aligned} \tag{2.28}$$

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

for $s = A(i, 0^{2k})$. We find that $(A(i, 0^{38}), E_{38}) = (A(i, 0^{14}), E_{14})$, so that we only have to verify that identities (2.21) through (2.34) hold for $2 \le k \le 19$, which turns out to be true. $\square$

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 $u = 2^{2k-1}$,*

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

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

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

*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

$$\begin{aligned} W_{2k}M_{2k} = \big(&W^e[:7v] + x^{2v}W^e[:5v] + x^{4v}W^e[:3v] + x^{5v}W^e[:2v] + x^{7u}R^e \\ &\big) \times \big(M^e[:7v] + x^{2v}M^e[:5v] + x^{4v}M^e[:3v] + x^{5v}M^e[:2v] + x^{7u}R^e \\ &\big); \qquad (2.35) \end{aligned}$$

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

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

For all $n \leq 14$, 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. $\square$

*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 $0 \leq j, k \leq 1$,

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

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

$$\begin{aligned} q_0(x) &= x^{22} + x^{21} + x^{20} + x^{16} + x^{13} + x^{11} + x^7, \\ q_1(x) &= x^{21} + x^{16} + x^{15} + x^{14} + x^{12} + x^{10} + x^9 + x^7 + x^6 + x^5 + x^4 + x^3, \\ q_2(x) &= x^{22} + x^{14} + x^{10} + x^6 + x^2 + 1, \\ q_3(x) &= x^{21} + x^{16} + x^{15} + x^{14} + x^{12} + x^{10} + x^9 + x^7 + x^6 + x^5 + x^4 + x^3, \\ q_4(x) &= x^{22} + x^{21} + x^{16} + x^{13} + x^{12} + x^{11} + x^{10} + x^7 + x^6. \end{aligned}$$

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

$$\begin{aligned}
p_0(x) &= x^{120} + x^{116} + x^{114} + x^{112} + x^{110} + x^{102} + x^{98} + x^{96} + x^{94} + x^{90} \\
&\quad + x^{86} + x^{84} + x^{82} + x^{72} + x^{70} + x^{66} + x^{64} + x^{60} + x^{54} + x^{52} + x^{48} \\
&\quad + x^{46} + x^{42} + x^{40} + x^{36}, \\
p_3(x) &= x^{118} + x^{114} + x^{112} + x^{104} + x^{102} + x^{98} + x^{94} + x^{86} + x^{82} + x^{80} + x^{76} \\
&\quad + x^{74} + x^{72} + x^{66} + x^{46} + x^{44} + x^{42} + x^{36} + x^{32} + x^{30} + x^{24} + x^{20}, \\
p_6(x) &= x^{118} + x^{116} + x^{114} + x^{110} + x^{104} + x^{102} + x^{98} + x^{96} + x^{92} + x^{88} \\
&\quad + x^{86} + x^{80} + x^{76} + x^{74} + x^{70} + x^{58} + x^{54} + x^{50} + x^{46} + x^{44} + x^{38} \\
&\quad + x^{36} + x^{34} + x^{32} + x^{30} + x^{28} + x^{26} + x^{18} + x^{16} + x^{14} + x^{10} + x^{8} \\
&\quad + x^{2} + 1, \\
p_9(x) &= x^{118} + x^{112} + x^{110} + x^{108} + x^{96} + x^{86} + x^{82} + x^{76} + x^{74} + x^{72} + x^{62} \\
&\quad + x^{60} + x^{58} + x^{56} + x^{46} + x^{44} + x^{42} + x^{40} + x^{28} + x^{26} + x^{20} + x^{16} \\
&\quad + x^{10} + x^{6}, \\
p_{12}(x) &= x^{120} + x^{118} + x^{114} + x^{110} + x^{106} + x^{102} + x^{98} + x^{96} + x^{80} + x^{78} \\
&\quad + x^{74} + x^{70} + x^{66} + x^{64} + x^{56} + x^{54} + x^{50} + x^{48} + x^{40} + x^{38} + x^{34} \\
&\quad + x^{30} + x^{26} + x^{22} + x^{18} + x^{16} + x^{8} + x^{6} + x^{2} + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{117} + x^{116} + x^{114} + x^{111} + x^{107} + x^{105} + x^{102} + x^{101} + x^{100} + x^{98} \\
&\quad + x^{93} + x^{91} + x^{89} + x^{88} + x^{87} + x^{85} + x^{83} + x^{81} + x^{78} + x^{74} + x^{73} \\
&\quad + x^{71} + x^{70} + x^{69} + x^{68} + x^{66} + x^{63} + x^{62} + x^{61} + x^{58} + x^{57} + x^{56} \\
&\quad + x^{55} + x^{49} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39}, \\
p_3(x) &= x^{108} + x^{107} + x^{106} + x^{105} + x^{100} + x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{94} \\
&\quad + x^{93} + x^{92} + x^{91} + x^{90} + x^{89} + x^{88} + x^{87} + x^{84} + x^{83} + x^{76} + x^{75} \\
&\quad + x^{74} + x^{73} + x^{64} + x^{63} + x^{62} + x^{61} + x^{54} + x^{53} + x^{52} + x^{51} + x^{48} \\
&\quad + x^{47} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33} \\
&\quad + x^{32} + x^{31} + x^{28} + x^{27}, \\
p_6(x) &= x^{111} + x^{110} + x^{107} + x^{103} + x^{101} + x^{100} + x^{98} + x^{96} + x^{93} + x^{92}
\end{aligned}$$

$$
\begin{aligned}
&+ x^{88} + x^{87} + x^{86} + x^{82} + x^{81} + x^{80} + x^{76} + x^{75} + x^{74} + x^{70} + x^{69}\\
&+ x^{68} + x^{67} + x^{66} + x^{64} + x^{63} + x^{58} + x^{53} + x^{52} + x^{51} + x^{50} + x^{49}\\
&+ x^{47} + x^{45} + x^{42} + x^{41} + x^{39} + x^{38} + x^{37} + x^{34} + x^{32} + x^{31} + x^{30}\\
&+ x^{26} + x^{25} + x^{24} + x^{23} + x^{22} + x^{20} + x^{18},\\
p_9(x) &= x^{114} + x^{113} + x^{112} + x^{111} + x^{110} + x^{109} + x^{108} + x^{107} + x^{106} + x^{105}\\
&+ x^{100} + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{90} + x^{89} + x^{88} + x^{87} + x^{86}\\
&+ x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{76} + x^{75} + x^{74} + x^{73} + x^{70} + x^{69}\\
&+ x^{66} + x^{65} + x^{58} + x^{57} + x^{52} + x^{51} + x^{50} + x^{49} + x^{48} + x^{47} + x^{46}\\
&+ x^{45} + x^{44} + x^{43} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33} + x^{30} + x^{29}\\
&+ x^{28} + x^{27} + x^{20} + x^{19} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^{9},\\
p_{12}(x) &= x^{117} + x^{116} + x^{112} + x^{101} + x^{100} + x^{97} + x^{93} + x^{89} + x^{84} + x^{69} + x^{68}\\
&+ x^{65} + x^{61} + x^{57} + x^{53} + x^{48} + x^{37} + x^{36} + x^{32} + x^{21} + x^{20} + x^{17}\\
&+ x^{13} + x^{9} + x^{5} + 1,
\end{aligned}
$$

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

$$
\begin{aligned}
p_0(x) &= x^{117} + x^{116} + x^{114} + x^{111} + x^{107} + x^{105} + x^{102} + x^{101} + x^{100} + x^{98}\\
&+ x^{93} + x^{91} + x^{89} + x^{88} + x^{87} + x^{85} + x^{83} + x^{81} + x^{78} + x^{74} + x^{73}\\
&+ x^{71} + x^{70} + x^{69} + x^{68} + x^{66} + x^{63} + x^{62} + x^{61} + x^{58} + x^{57} + x^{56}\\
&+ x^{55} + x^{49} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39},\\
p_3(x) &= x^{108} + x^{107} + x^{106} + x^{105} + x^{100} + x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{94}\\
&+ x^{93} + x^{92} + x^{91} + x^{90} + x^{89} + x^{88} + x^{87} + x^{84} + x^{83} + x^{76} + x^{75}\\
&+ x^{74} + x^{73} + x^{64} + x^{63} + x^{62} + x^{61} + x^{54} + x^{53} + x^{52} + x^{51} + x^{48}\\
&+ x^{47} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33}\\
&+ x^{32} + x^{31} + x^{28} + x^{27},\\
p_6(x) &= x^{111} + x^{110} + x^{107} + x^{103} + x^{101} + x^{100} + x^{98} + x^{96} + x^{93} + x^{92}\\
&+ x^{88} + x^{87} + x^{86} + x^{82} + x^{81} + x^{80} + x^{76} + x^{75} + x^{74} + x^{70} + x^{69}\\
&+ x^{68} + x^{67} + x^{66} + x^{64} + x^{63} + x^{58} + x^{53} + x^{52} + x^{51} + x^{50} + x^{49}\\
&+ x^{47} + x^{45} + x^{42} + x^{41} + x^{39} + x^{38} + x^{37} + x^{34} + x^{32} + x^{31} + x^{30}\\
&+ x^{26} + x^{25} + x^{24} + x^{23} + x^{22} + x^{20} + x^{18},\\
p_9(x) &= x^{114} + x^{113} + x^{112} + x^{111} + x^{110} + x^{109} + x^{108} + x^{107} + x^{106} + x^{105}\\
&+ x^{100} + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{90} + x^{89} + x^{88} + x^{87} + x^{86}\\
&+ x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{76} + x^{75} + x^{74} + x^{73} + x^{70} + x^{69}\\
&+ x^{66} + x^{65} + x^{58} + x^{57} + x^{52} + x^{51} + x^{50} + x^{49} + x^{48} + x^{47} + x^{46}\\
&+ x^{45} + x^{44} + x^{43} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33} + x^{30} + x^{29}\\
&+ x^{28} + x^{27} + x^{20} + x^{19} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^{9},
\end{aligned}
$$

$$\begin{aligned}p_{12}(x) = {} & x^{117} + x^{116} + x^{112} + x^{101} + x^{100} + x^{97} + x^{93} + x^{89} + x^{84} + x^{69} + x^{68} \\ & + x^{65} + x^{61} + x^{57} + x^{53} + x^{48} + x^{37} + x^{36} + x^{32} + x^{21} + x^{20} + x^{17} \\ & + x^{13} + x^{9} + x^{5} + 1,\end{aligned}$$

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

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

$$\begin{aligned}p_0(x) = {} & x^{114} + x^{112} + x^{110} + x^{108} + x^{106} + x^{102} + x^{100} + x^{98} + x^{94} + x^{92} \\ & + x^{90} + x^{88} + x^{76} + x^{70} + x^{68} + x^{66} + x^{60} + x^{58} + x^{56} + x^{54} + x^{48} \\ & + x^{44} + x^{42}, \\ p_3(x) = {} & x^{112} + x^{110} + x^{108} + x^{106} + x^{102} + x^{94} + x^{92} + x^{88} + x^{82} + x^{78} + x^{76} \\ & + x^{72} + x^{70} + x^{66} + x^{62} + x^{54} + x^{52} + x^{44} + x^{40} + x^{38} + x^{36} + x^{34} \\ & + x^{32} + x^{30} + x^{28} + x^{26} + x^{24} + x^{22} + x^{20} + x^{18}, \\ p_6(x) = {} & x^{112} + x^{110} + x^{90} + x^{88} + x^{84} + x^{82} + x^{80} + x^{78} + x^{74} + x^{72} + x^{68} \\ & + x^{66} + x^{60} + x^{56} + x^{52} + x^{48} + x^{46} + x^{44} + x^{36} + x^{34} + x^{32} + x^{28} \\ & + x^{26} + x^{24} + x^{20} + x^{16} + x^{12} + x^{10} + x^{6} + x^{4} + x^{2} + 1, \\ p_9(x) = {} & x^{112} + x^{110} + x^{108} + x^{104} + x^{102} + x^{100} + x^{96} + x^{94} + x^{88} + x^{82} \\ & + x^{80} + x^{78} + x^{72} + x^{70} + x^{68} + x^{66} + x^{64} + x^{58} + x^{54} + x^{48} + x^{44} \\ & + x^{40} + x^{38} + x^{36} + x^{28} + x^{24} + x^{18} + x^{6}, \\ p_{12}(x) = {} & x^{114} + x^{108} + x^{106} + x^{104} + x^{90} + x^{84} + x^{80} + x^{76} + x^{74} + x^{72} + x^{58} \\ & + x^{52} + x^{50} + x^{48} + x^{34} + x^{28} + x^{26} + x^{24} + x^{10} + x^{4} + x^{2} + 1,\end{aligned}$$

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

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

$$\begin{aligned}p_0(x) = {} & x^{114} + x^{112} + x^{108} + x^{106} + x^{102} + x^{100} + x^{94} + x^{92} + x^{90} + x^{88} \\ & + x^{80} + x^{72} + x^{70} + x^{68} + x^{62} + x^{60} + x^{56} + x^{52} + x^{50} + x^{48} + x^{46} \\ & + x^{42} + x^{36}, \\ p_3(x) = {} & x^{112} + x^{110} + x^{106} + x^{96} + x^{94} + x^{92} + x^{90} + x^{84} + x^{80} + x^{74} + x^{72} \\ & + x^{68} + x^{66} + x^{64} + x^{58} + x^{54} + x^{52} + x^{40} + x^{36} + x^{34} + x^{30} + x^{20}, \\ p_6(x) = {} & x^{112} + x^{108} + x^{104} + x^{102} + x^{100} + x^{92} + x^{90} + x^{88} + x^{82} + x^{74} + x^{70} \\ & + x^{66} + x^{64} + x^{62} + x^{60} + x^{56} + x^{54} + x^{48} + x^{40} + x^{38} + x^{34} + x^{32} \\ & + x^{30} + x^{28} + x^{26} + x^{16} + x^{14} + x^{10} + x^{6} + x^{4} + x^{2} + 1, \\ p_9(x) = {} & x^{112} + x^{110} + x^{108} + x^{104} + x^{102} + x^{100} + x^{96} + x^{94} + x^{88} + x^{82} \\ & + x^{80} + x^{78} + x^{72} + x^{70} + x^{68} + x^{66} + x^{64} + x^{58} + x^{54} + x^{48} + x^{44} \\ & + x^{40} + x^{38} + x^{36} + x^{28} + x^{24} + x^{18} + x^{6}, \\ p_{12}(x) = {} & x^{114} + x^{108} + x^{106} + x^{104} + x^{90} + x^{84} + x^{80} + x^{76} + x^{74} + x^{72} + x^{58} \\ & + x^{52} + x^{50} + x^{48} + x^{34} + x^{28} + x^{26} + x^{24} + x^{10} + x^{4} + x^{2} + 1,\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{117} + x^{116} + x^{114} + x^{110} + x^{107} + x^{106} + x^{105} + x^{103} + x^{102} + x^{100} \\
&\quad + x^{98} + x^{97} + x^{96} + x^{93} + x^{90} + x^{89} + x^{87} + x^{86} + x^{85} + x^{78} + x^{77} \\
&\quad + x^{76} + x^{73} + x^{72} + x^{68} + x^{67} + x^{66} + x^{63} + x^{62} + x^{61} + x^{60} + x^{59} \\
&\quad + x^{58} + x^{57} + x^{54} + x^{53} + x^{52} + x^{50} + x^{49} + x^{44} + x^{43} + x^{42} + x^{41} \\
&\quad + x^{40} + x^{39}, \\
p_3(x) &= x^{108} + x^{107} + x^{106} + x^{105} + x^{100} + x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{94} \\
&\quad + x^{93} + x^{92} + x^{91} + x^{90} + x^{89} + x^{88} + x^{87} + x^{84} + x^{83} + x^{76} + x^{75} \\
&\quad + x^{74} + x^{73} + x^{64} + x^{63} + x^{62} + x^{61} + x^{54} + x^{53} + x^{52} + x^{51} + x^{48} \\
&\quad + x^{47} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33} \\
&\quad + x^{32} + x^{31} + x^{28} + x^{27}, \\
p_6(x) &= x^{111} + x^{110} + x^{107} + x^{103} + x^{101} + x^{100} + x^{98} + x^{96} + x^{93} + x^{92} \\
&\quad + x^{88} + x^{87} + x^{86} + x^{82} + x^{81} + x^{80} + x^{76} + x^{75} + x^{74} + x^{70} + x^{69} \\
&\quad + x^{68} + x^{67} + x^{66} + x^{64} + x^{63} + x^{58} + x^{53} + x^{52} + x^{51} + x^{50} + x^{49} \\
&\quad + x^{47} + x^{45} + x^{42} + x^{41} + x^{39} + x^{38} + x^{37} + x^{34} + x^{32} + x^{31} + x^{30} \\
&\quad + x^{26} + x^{25} + x^{24} + x^{23} + x^{22} + x^{20} + x^{18}, \\
p_9(x) &= x^{114} + x^{113} + x^{112} + x^{111} + x^{110} + x^{109} + x^{108} + x^{107} + x^{106} + x^{105} \\
&\quad + x^{100} + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{90} + x^{89} + x^{88} + x^{87} + x^{86} \\
&\quad + x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{76} + x^{75} + x^{74} + x^{73} + x^{70} + x^{69} \\
&\quad + x^{66} + x^{65} + x^{58} + x^{57} + x^{52} + x^{51} + x^{50} + x^{49} + x^{48} + x^{47} + x^{46} \\
&\quad + x^{45} + x^{44} + x^{43} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33} + x^{30} + x^{29} \\
&\quad + x^{28} + x^{27} + x^{20} + x^{19} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^{9}, \\
p_{12}(x) &= x^{117} + x^{116} + x^{112} + x^{101} + x^{100} + x^{97} + x^{93} + x^{89} + x^{84} + x^{69} + x^{68} \\
&\quad + x^{65} + x^{61} + x^{57} + x^{53} + x^{48} + x^{37} + x^{36} + x^{32} + x^{21} + x^{20} + x^{17} \\
&\quad + x^{13} + x^{9} + x^{5} + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{117} + x^{116} + x^{114} + x^{110} + x^{107} + x^{106} + x^{105} + x^{103} + x^{102} + x^{100} \\
&\quad + x^{98} + x^{97} + x^{96} + x^{93} + x^{90} + x^{89} + x^{87} + x^{86} + x^{85} + x^{78} + x^{77} \\
&\quad + x^{76} + x^{73} + x^{72} + x^{68} + x^{67} + x^{66} + x^{63} + x^{62} + x^{61} + x^{60} + x^{59} \\
&\quad + x^{58} + x^{57} + x^{54} + x^{53} + x^{52} + x^{50} + x^{49} + x^{44} + x^{43} + x^{42} + x^{41} \\
&\quad + x^{40} + x^{39}, \\
p_3(x) &= x^{108} + x^{107} + x^{106} + x^{105} + x^{100} + x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{94} \\
&\quad + x^{93} + x^{92} + x^{91} + x^{90} + x^{89} + x^{88} + x^{87} + x^{84} + x^{83} + x^{76} + x^{75} \\
&\quad + x^{74} + x^{73} + x^{64} + x^{63} + x^{62} + x^{61} + x^{54} + x^{53} + x^{52} + x^{51} + x^{48}
\end{aligned}$$

$$
\begin{aligned}
&+ x^{47} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33} \\
&+ x^{32} + x^{31} + x^{28} + x^{27}, \\
p_6(x) &= x^{111} + x^{110} + x^{107} + x^{103} + x^{101} + x^{100} + x^{98} + x^{96} + x^{93} + x^{92} \\
&+ x^{88} + x^{87} + x^{86} + x^{82} + x^{81} + x^{80} + x^{76} + x^{75} + x^{74} + x^{70} + x^{69} \\
&+ x^{68} + x^{67} + x^{66} + x^{64} + x^{63} + x^{58} + x^{53} + x^{52} + x^{51} + x^{50} + x^{49} \\
&+ x^{47} + x^{45} + x^{42} + x^{41} + x^{39} + x^{38} + x^{37} + x^{34} + x^{32} + x^{31} + x^{30} \\
&+ x^{26} + x^{25} + x^{24} + x^{23} + x^{22} + x^{20} + x^{18}, \\
p_9(x) &= x^{114} + x^{113} + x^{112} + x^{111} + x^{110} + x^{109} + x^{108} + x^{107} + x^{106} + x^{105} \\
&+ x^{100} + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{90} + x^{89} + x^{88} + x^{87} + x^{86} \\
&+ x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{76} + x^{75} + x^{74} + x^{73} + x^{70} + x^{69} \\
&+ x^{66} + x^{65} + x^{58} + x^{57} + x^{52} + x^{51} + x^{50} + x^{49} + x^{48} + x^{47} + x^{46} \\
&+ x^{45} + x^{44} + x^{43} + x^{38} + x^{37} + x^{36} + x^{35} + x^{34} + x^{33} + x^{30} + x^{29} \\
&+ x^{28} + x^{27} + x^{20} + x^{19} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^{9}, \\
p_{12}(x) &= x^{117} + x^{116} + x^{112} + x^{101} + x^{100} + x^{97} + x^{93} + x^{89} + x^{84} + x^{69} + x^{68} \\
&+ x^{65} + x^{61} + x^{57} + x^{53} + x^{48} + x^{37} + x^{36} + x^{32} + x^{21} + x^{20} + x^{17} \\
&+ x^{13} + x^{9} + x^{5} + 1,
\end{aligned}
$$

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

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

$$
\begin{aligned}
p_0(x) &= x^{120} + x^{112} + x^{110} + x^{106} + x^{104} + x^{86} + x^{82} + x^{80} + x^{76} + x^{74} + x^{72} \\
&+ x^{70} + x^{64} + x^{62} + x^{56} + x^{52} + x^{46} + x^{44} + x^{42}, \\
p_3(x) &= x^{118} + x^{108} + x^{106} + x^{102} + x^{98} + x^{96} + x^{94} + x^{92} + x^{86} + x^{84} + x^{80} \\
&+ x^{72} + x^{68} + x^{60} + x^{58} + x^{52} + x^{50} + x^{46} + x^{34} + x^{32} + x^{30} + x^{28} \\
&+ x^{20} + x^{18}, \\
p_6(x) &= x^{118} + x^{114} + x^{112} + x^{106} + x^{102} + x^{100} + x^{96} + x^{92} + x^{90} + x^{88} \\
&+ x^{84} + x^{76} + x^{74} + x^{72} + x^{70} + x^{64} + x^{58} + x^{56} + x^{54} + x^{50} + x^{48} \\
&+ x^{46} + x^{44} + x^{40} + x^{38} + x^{36} + x^{34} + x^{30} + x^{26} + x^{22} + x^{20} + x^{12} \\
&+ x^{10} + x^{8} + x^{2} + 1, \\
p_9(x) &= x^{118} + x^{112} + x^{110} + x^{108} + x^{96} + x^{86} + x^{82} + x^{76} + x^{74} + x^{72} + x^{62} \\
&+ x^{60} + x^{58} + x^{56} + x^{46} + x^{44} + x^{42} + x^{40} + x^{28} + x^{26} + x^{20} + x^{16} \\
&+ x^{10} + x^{6}, \\
p_{12}(x) &= x^{120} + x^{118} + x^{114} + x^{110} + x^{106} + x^{102} + x^{98} + x^{96} + x^{80} + x^{78} \\
&+ x^{74} + x^{70} + x^{66} + x^{64} + x^{56} + x^{54} + x^{50} + x^{48} + x^{40} + x^{38} + x^{34} \\
&+ x^{30} + x^{26} + x^{22} + x^{18} + x^{16} + x^{8} + x^{6} + x^{2} + 1,
\end{aligned}
$$

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

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

$$\begin{aligned}
p_0(x) = {} & x^{117} + x^{116} + x^{115} + x^{114} + x^{113} + x^{112} + x^{110} + x^{109} + x^{103} + x^{101} \\
& + x^{98} + x^{97} + x^{96} + x^{94} + x^{91} + x^{90} + x^{88} + x^{85} + x^{82} + x^{80} + x^{79} \\
& + x^{76} + x^{75} + x^{71} + x^{70} + x^{67} + x^{57} + x^{56} + x^{52} + x^{51} + x^{50} + x^{49} \\
& + x^{44} + x^{42} + x^{41} + x^{38} + x^{36}, \\
p_3(x) = {} & x^{113} + x^{112} + x^{111} + x^{110} + x^{107} + x^{105} + x^{103} + x^{99} + x^{97} + x^{96} \\
& + x^{95} + x^{93} + x^{90} + x^{89} + x^{86} + x^{82} + x^{79} + x^{78} + x^{77} + x^{75} + x^{73} \\
& + x^{72} + x^{70} + x^{69} + x^{65} + x^{64} + x^{59} + x^{58} + x^{51} + x^{48} + x^{47} + x^{46} \\
& + x^{43} + x^{42} + x^{39} + x^{34} + x^{30} + x^{29} + x^{26} + x^{24}, \\
p_6(x) = {} & x^{115} + x^{114} + x^{113} + x^{110} + x^{109} + x^{105} + x^{92} + x^{90} + x^{88} + x^{87} \\
& + x^{86} + x^{83} + x^{82} + x^{79} + x^{76} + x^{74} + x^{73} + x^{72} + x^{71} + x^{67} + x^{65} \\
& + x^{64} + x^{63} + x^{61} + x^{56} + x^{53} + x^{51} + x^{50} + x^{49} + x^{47} + x^{45} + x^{41} \\
& + x^{39} + x^{36} + x^{35} + x^{34} + x^{27} + x^{25} + x^{22} + x^{16} + x^{14} + x^{13} + x^{12} \\
& + x^{9} + x^{5} + 1, \\
p_9(x) = {} & x^{113} + x^{112} + x^{108} + x^{97} + x^{96} + x^{92} + x^{81} + x^{80} + x^{76} + x^{65} + x^{64} \\
& + x^{60} + x^{33} + x^{32} + x^{28} + x^{17} + x^{16} + x^{12}, \\
p_{12}(x) = {} & x^{117} + x^{116} + x^{113} + x^{108} + x^{101} + x^{100} + x^{96} + x^{93} + x^{92} + x^{89} \\
& + x^{84} + x^{81} + x^{80} + x^{76} + x^{69} + x^{68} + x^{64} + x^{61} + x^{60} + x^{57} + x^{53} \\
& + x^{48} + x^{37} + x^{36} + x^{33} + x^{28} + x^{21} + x^{20} + x^{16} + x^{13} + x^{12} + x^{9} \\
& + x^{5} + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = {} & x^{120} + x^{117} + x^{116} + x^{115} + x^{114} + x^{113} + x^{112} + x^{107} + x^{105} + x^{104} \\
& + x^{103} + x^{100} + x^{98} + x^{97} + x^{96} + x^{95} + x^{92} + x^{89} + x^{87} + x^{86} + x^{84} \\
& + x^{83} + x^{82} + x^{79} + x^{78} + x^{76} + x^{75} + x^{74} + x^{73} + x^{71} + x^{69} + x^{68} \\
& + x^{66} + x^{65} + x^{63} + x^{61} + x^{59} + x^{57} + x^{55} + x^{53} + x^{50} + x^{48} + x^{46} \\
& + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39}, \\
p_3(x) = {} & x^{111} + x^{107} + x^{106} + x^{105} + x^{104} + x^{103} + x^{101} + x^{96} + x^{94} + x^{93} \\
& + x^{92} + x^{91} + x^{89} + x^{87} + x^{84} + x^{83} + x^{79} + x^{75} + x^{74} + x^{73} + x^{72} \\
& + x^{69} + x^{67} + x^{66} + x^{65} + x^{63} + x^{62} + x^{60} + x^{59} + x^{57} + x^{56} + x^{54} \\
& + x^{53} + x^{51} + x^{50} + x^{48} + x^{45} + x^{44} + x^{43} + x^{40} + x^{38} + x^{37} + x^{36} \\
& + x^{35} + x^{33} + x^{31} + x^{28} + x^{27}, \\
p_6(x) = {} & x^{114} + x^{106} + x^{104} + x^{100} + x^{98} + x^{92} + x^{90} + x^{88} + x^{86} + x^{84} + x^{82} \\
& + x^{80} + x^{78} + x^{76} + x^{74} + x^{72} + x^{68} + x^{64} + x^{58} + x^{56} + x^{54} + x^{48} \\
& + x^{44} + x^{40} + x^{38} + x^{32} + x^{30} + x^{28} + x^{24} + x^{22} + x^{20} + x^{18},
\end{aligned}$$

$$
\begin{aligned}
p_9(x) = {} & x^{117} + x^{113} + x^{112} + x^{111} + x^{110} + x^{104} + x^{103} + x^{102} + x^{100} + x^{99} \\
& + x^{98} + x^{93} + x^{92} + x^{91} + x^{90} + x^{89} + x^{85} + x^{81} + x^{80} + x^{79} + x^{78} \\
& + x^{72} + x^{71} + x^{70} + x^{68} + x^{67} + x^{66} + x^{61} + x^{60} + x^{59} + x^{58} + x^{57} \\
& + x^{37} + x^{33} + x^{32} + x^{31} + x^{30} + x^{24} + x^{23} + x^{22} + x^{20} + x^{19} + x^{18} \\
& + x^{13} + x^{12} + x^{11} + x^{10} + x^{9}, \\
p_{12}(x) = {} & x^{120} + x^{108} + x^{104} + x^{100} + x^{80} + x^{76} + x^{72} + x^{68} + x^{56} + x^{48} + x^{40} \\
& + x^{28} + x^{24} + x^{20} + x^{8} + 1,
\end{aligned}
$$

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

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

$$
\begin{aligned}
p_0(x) = {} & x^{124} + x^{121} + x^{119} + x^{115} + x^{114} + x^{112} + x^{110} + x^{108} + x^{106} + x^{105} \\
& + x^{104} + x^{103} + x^{102} + x^{100} + x^{99} + x^{97} + x^{96} + x^{92} + x^{88} + x^{87} \\
& + x^{84} + x^{83} + x^{82} + x^{81} + x^{79} + x^{75} + x^{74} + x^{73} + x^{72} + x^{71} + x^{68} \\
& + x^{67} + x^{65} + x^{62} + x^{61} + x^{60} + x^{59} + x^{57} + x^{56} + x^{55} + x^{54} + x^{53} \\
& + x^{52} + x^{51} + x^{47} + x^{46} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39}, \\
p_3(x) = {} & x^{115} + x^{110} + x^{109} + x^{108} + x^{107} + x^{106} + x^{104} + x^{103} + x^{102} + x^{97} \\
& + x^{96} + x^{95} + x^{94} + x^{93} + x^{89} + x^{87} + x^{84} + x^{78} + x^{77} + x^{76} + x^{74} \\
& + x^{72} + x^{71} + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{61} + x^{59} + x^{56} + x^{50} \\
& + x^{49} + x^{48} + x^{46} + x^{44} + x^{43} + x^{41} + x^{40} + x^{39} + x^{38} + x^{37} + x^{33} \\
& + x^{31} + x^{28} + x^{27}, \\
p_6(x) = {} & x^{118} + x^{114} + x^{108} + x^{98} + x^{96} + x^{94} + x^{92} + x^{86} + x^{80} + x^{68} + x^{66} \\
& + x^{64} + x^{60} + x^{56} + x^{54} + x^{50} + x^{48} + x^{46} + x^{44} + x^{42} + x^{34} + x^{26} \\
& + x^{24} + x^{22} + x^{20} + x^{18}, \\
p_9(x) = {} & x^{121} + x^{116} + x^{115} + x^{114} + x^{112} + x^{111} + x^{110} + x^{105} + x^{104} + x^{103} \\
& + x^{102} + x^{101} + x^{97} + x^{93} + x^{92} + x^{91} + x^{90} + x^{84} + x^{83} + x^{82} + x^{80} \\
& + x^{79} + x^{78} + x^{73} + x^{72} + x^{71} + x^{70} + x^{69} + x^{65} + x^{61} + x^{60} + x^{59} \\
& + x^{58} + x^{57} + x^{41} + x^{36} + x^{35} + x^{34} + x^{32} + x^{31} + x^{30} + x^{25} + x^{24} \\
& + x^{23} + x^{22} + x^{21} + x^{17} + x^{13} + x^{12} + x^{11} + x^{10} + x^{9}, \\
p_{12}(x) = {} & x^{124} + x^{120} + x^{116} + x^{92} + x^{88} + x^{84} + x^{80} + x^{48} + x^{44} + x^{40} + x^{36} \\
& + 1,
\end{aligned}
$$

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

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

$$
\begin{aligned}
p_0(x) = {} & x^{117} + x^{116} + x^{115} + x^{114} + x^{111} + x^{109} + x^{108} + x^{106} + x^{104} + x^{103} \\
& + x^{101} + x^{98} + x^{97} + x^{94} + x^{93} + x^{89} + x^{87} + x^{85} + x^{84} + x^{83} + x^{81} \\
& + x^{79} + x^{78} + x^{77} + x^{76} + x^{75} + x^{73} + x^{69} + x^{68} + x^{65} + x^{64} + x^{61} \\
& + x^{59} + x^{58} + x^{57} + x^{56} + x^{55} + x^{54} + x^{51} + x^{50} + x^{49} + x^{46} + x^{42},
\end{aligned}
$$

$$\begin{aligned}
p_3(x) &= x^{113}+x^{112}+x^{111}+x^{110}+x^{109}+x^{108}+x^{106}+x^{105}+x^{104}+x^{103}\\
&\quad +x^{102}+x^{101}+x^{100}+x^{98}+x^{96}+x^{91}+x^{90}+x^{85}+x^{82}+x^{80}+x^{79}\\
&\quad +x^{78}+x^{76}+x^{74}+x^{73}+x^{69}+x^{63}+x^{62}+x^{60}+x^{59}+x^{55}+x^{54}\\
&\quad +x^{53}+x^{52}+x^{51}+x^{50}+x^{49}+x^{48}+x^{47}+x^{46}+x^{44}+x^{41}+x^{40}\\
&\quad +x^{37}+x^{35}+x^{34}+x^{33}+x^{26},\\
p_6(x) &= x^{115}+x^{114}+x^{112}+x^{111}+x^{107}+x^{103}+x^{100}+x^{98}+x^{93}+x^{90}\\
&\quad +x^{89}+x^{88}+x^{85}+x^{83}+x^{80}+x^{79}+x^{77}+x^{75}+x^{72}+x^{71}+x^{70}\\
&\quad +x^{69}+x^{66}+x^{64}+x^{58}+x^{52}+x^{42}+x^{41}+x^{40}+x^{38}+x^{37}+x^{35}\\
&\quad +x^{32}+x^{31}+x^{30}+x^{29}+x^{28}+x^{27}+x^{26}+x^{23}+x^{20}+x^{18}+x^{17}\\
&\quad +x^{14}+x^{13}+x^{9}+x^{5}+1,\\
p_9(x) &= x^{113}+x^{112}+x^{108}+x^{97}+x^{96}+x^{92}+x^{81}+x^{80}+x^{76}+x^{65}+x^{64}\\
&\quad +x^{60}+x^{33}+x^{32}+x^{28}+x^{17}+x^{16}+x^{12},\\
p_{12}(x) &= x^{117}+x^{116}+x^{113}+x^{108}+x^{101}+x^{100}+x^{96}+x^{93}+x^{92}+x^{89}\\
&\quad +x^{84}+x^{81}+x^{80}+x^{76}+x^{69}+x^{68}+x^{64}+x^{61}+x^{60}+x^{57}+x^{53}\\
&\quad +x^{48}+x^{37}+x^{36}+x^{33}+x^{28}+x^{21}+x^{20}+x^{16}+x^{13}+x^{12}+x^{9}\\
&\quad +x^{5}+1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{117}+x^{116}+x^{115}+x^{114}+x^{113}+x^{112}+x^{110}+x^{109}+x^{103}+x^{101}\\
&\quad +x^{98}+x^{97}+x^{96}+x^{94}+x^{91}+x^{90}+x^{88}+x^{85}+x^{82}+x^{80}+x^{79}\\
&\quad +x^{76}+x^{75}+x^{71}+x^{70}+x^{67}+x^{57}+x^{56}+x^{52}+x^{51}+x^{50}+x^{49}\\
&\quad +x^{44}+x^{42}+x^{41}+x^{38}+x^{36},\\
p_3(x) &= x^{113}+x^{112}+x^{111}+x^{110}+x^{107}+x^{105}+x^{103}+x^{99}+x^{97}+x^{96}\\
&\quad +x^{95}+x^{93}+x^{90}+x^{89}+x^{86}+x^{82}+x^{79}+x^{78}+x^{77}+x^{75}+x^{73}\\
&\quad +x^{72}+x^{70}+x^{69}+x^{65}+x^{64}+x^{59}+x^{58}+x^{51}+x^{48}+x^{47}+x^{46}\\
&\quad +x^{43}+x^{42}+x^{39}+x^{34}+x^{30}+x^{29}+x^{26}+x^{24},\\
p_6(x) &= x^{115}+x^{114}+x^{113}+x^{110}+x^{109}+x^{105}+x^{92}+x^{90}+x^{88}+x^{87}\\
&\quad +x^{86}+x^{83}+x^{82}+x^{79}+x^{76}+x^{74}+x^{73}+x^{72}+x^{71}+x^{67}+x^{65}\\
&\quad +x^{64}+x^{63}+x^{61}+x^{56}+x^{53}+x^{51}+x^{50}+x^{49}+x^{47}+x^{45}+x^{41}\\
&\quad +x^{39}+x^{36}+x^{35}+x^{34}+x^{27}+x^{25}+x^{22}+x^{16}+x^{14}+x^{13}+x^{12}\\
&\quad +x^{9}+x^{5}+1,\\
p_9(x) &= x^{113}+x^{112}+x^{108}+x^{97}+x^{96}+x^{92}+x^{81}+x^{80}+x^{76}+x^{65}+x^{64}\\
&\quad +x^{60}+x^{33}+x^{32}+x^{28}+x^{17}+x^{16}+x^{12},\\
p_{12}(x) &= x^{117}+x^{116}+x^{113}+x^{108}+x^{101}+x^{100}+x^{96}+x^{93}+x^{92}+x^{89}\\
&\quad +x^{84}+x^{81}+x^{80}+x^{76}+x^{69}+x^{68}+x^{64}+x^{61}+x^{60}+x^{57}+x^{53}
\end{aligned}$$

$$+ x^{48} + x^{37} + x^{36} + x^{33} + x^{28} + x^{21} + x^{20} + x^{16} + x^{13} + x^{12} + x^{9} + x^{5} + 1,$$

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

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

$$\begin{aligned}
p_0(x) &= x^{124} + x^{121} + x^{119} + x^{115} + x^{114} + x^{112} + x^{110} + x^{108} + x^{106} + x^{105}\\
&\quad + x^{104} + x^{103} + x^{102} + x^{100} + x^{99} + x^{97} + x^{96} + x^{92} + x^{88} + x^{87}\\
&\quad + x^{84} + x^{83} + x^{82} + x^{81} + x^{79} + x^{75} + x^{74} + x^{73} + x^{72} + x^{71} + x^{68}\\
&\quad + x^{67} + x^{65} + x^{62} + x^{61} + x^{60} + x^{59} + x^{57} + x^{56} + x^{55} + x^{54} + x^{53}\\
&\quad + x^{52} + x^{51} + x^{47} + x^{46} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39},\\
p_3(x) &= x^{115} + x^{110} + x^{109} + x^{108} + x^{107} + x^{106} + x^{104} + x^{103} + x^{102} + x^{97}\\
&\quad + x^{96} + x^{95} + x^{94} + x^{93} + x^{89} + x^{87} + x^{84} + x^{78} + x^{77} + x^{76} + x^{74}\\
&\quad + x^{72} + x^{71} + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{61} + x^{59} + x^{56} + x^{50}\\
&\quad + x^{49} + x^{48} + x^{46} + x^{44} + x^{43} + x^{41} + x^{40} + x^{39} + x^{38} + x^{37} + x^{33}\\
&\quad + x^{31} + x^{28} + x^{27},\\
p_6(x) &= x^{118} + x^{114} + x^{108} + x^{98} + x^{96} + x^{94} + x^{92} + x^{86} + x^{80} + x^{68} + x^{66}\\
&\quad + x^{64} + x^{60} + x^{56} + x^{54} + x^{50} + x^{48} + x^{46} + x^{44} + x^{42} + x^{34} + x^{26}\\
&\quad + x^{24} + x^{22} + x^{20} + x^{18},\\
p_9(x) &= x^{121} + x^{116} + x^{115} + x^{114} + x^{112} + x^{111} + x^{110} + x^{105} + x^{104} + x^{103}\\
&\quad + x^{102} + x^{101} + x^{97} + x^{93} + x^{92} + x^{91} + x^{90} + x^{84} + x^{83} + x^{82} + x^{80}\\
&\quad + x^{79} + x^{78} + x^{73} + x^{72} + x^{71} + x^{70} + x^{69} + x^{65} + x^{61} + x^{60} + x^{59}\\
&\quad + x^{58} + x^{57} + x^{41} + x^{36} + x^{35} + x^{34} + x^{32} + x^{31} + x^{30} + x^{25} + x^{24}\\
&\quad + x^{23} + x^{22} + x^{21} + x^{17} + x^{13} + x^{12} + x^{11} + x^{10} + x^{9},\\
p_{12}(x) &= x^{124} + x^{120} + x^{116} + x^{92} + x^{88} + x^{84} + x^{80} + x^{48} + x^{44} + x^{40} + x^{36}\\
&\quad + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{120} + x^{117} + x^{116} + x^{115} + x^{114} + x^{113} + x^{112} + x^{107} + x^{105} + x^{104}\\
&\quad + x^{103} + x^{100} + x^{98} + x^{97} + x^{96} + x^{95} + x^{92} + x^{89} + x^{87} + x^{86} + x^{84}\\
&\quad + x^{83} + x^{82} + x^{79} + x^{78} + x^{76} + x^{75} + x^{74} + x^{73} + x^{71} + x^{69} + x^{68}\\
&\quad + x^{66} + x^{65} + x^{63} + x^{61} + x^{59} + x^{57} + x^{55} + x^{53} + x^{50} + x^{48} + x^{46}\\
&\quad + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39},\\
p_3(x) &= x^{111} + x^{107} + x^{106} + x^{105} + x^{104} + x^{103} + x^{101} + x^{96} + x^{94} + x^{93}\\
&\quad + x^{92} + x^{91} + x^{89} + x^{87} + x^{84} + x^{83} + x^{79} + x^{75} + x^{74} + x^{73} + x^{72}\\
&\quad + x^{69} + x^{67} + x^{66} + x^{65} + x^{63} + x^{62} + x^{60} + x^{59} + x^{57} + x^{56} + x^{54}\\
&\quad + x^{53} + x^{51} + x^{50} + x^{48} + x^{45} + x^{44} + x^{43} + x^{40} + x^{38} + x^{37} + x^{36}
\end{aligned}$$

$$
\begin{aligned}
&+ x^{35} + x^{33} + x^{31} + x^{28} + x^{27},\\
p_6(x) &= x^{114} + x^{106} + x^{104} + x^{100} + x^{98} + x^{92} + x^{90} + x^{88} + x^{86} + x^{84} + x^{82}\\
&+ x^{80} + x^{78} + x^{76} + x^{74} + x^{72} + x^{68} + x^{64} + x^{58} + x^{56} + x^{54} + x^{48}\\
&+ x^{44} + x^{40} + x^{38} + x^{32} + x^{30} + x^{28} + x^{24} + x^{22} + x^{20} + x^{18},\\
p_9(x) &= x^{117} + x^{113} + x^{112} + x^{111} + x^{110} + x^{104} + x^{103} + x^{102} + x^{100} + x^{99}\\
&+ x^{98} + x^{93} + x^{92} + x^{91} + x^{90} + x^{89} + x^{85} + x^{81} + x^{80} + x^{79} + x^{78}\\
&+ x^{72} + x^{71} + x^{70} + x^{68} + x^{67} + x^{66} + x^{61} + x^{60} + x^{59} + x^{58} + x^{57}\\
&+ x^{37} + x^{33} + x^{32} + x^{31} + x^{30} + x^{24} + x^{23} + x^{22} + x^{20} + x^{19} + x^{18}\\
&+ x^{13} + x^{12} + x^{11} + x^{10} + x^{9},\\
p_{12}(x) &= x^{120} + x^{108} + x^{104} + x^{100} + x^{80} + x^{76} + x^{72} + x^{68} + x^{56} + x^{48} + x^{40}\\
&+ x^{28} + x^{24} + x^{20} + x^{8} + 1,
\end{aligned}
$$

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

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

$$
\begin{aligned}
p_0(x) &= x^{117} + x^{116} + x^{115} + x^{114} + x^{111} + x^{109} + x^{108} + x^{106} + x^{104} + x^{103}\\
&+ x^{101} + x^{98} + x^{97} + x^{94} + x^{93} + x^{89} + x^{87} + x^{85} + x^{84} + x^{83} + x^{81}\\
&+ x^{79} + x^{78} + x^{77} + x^{76} + x^{75} + x^{73} + x^{69} + x^{68} + x^{65} + x^{64} + x^{61}\\
&+ x^{59} + x^{58} + x^{57} + x^{56} + x^{55} + x^{54} + x^{51} + x^{50} + x^{49} + x^{46} + x^{42},\\
p_3(x) &= x^{113} + x^{112} + x^{111} + x^{110} + x^{109} + x^{108} + x^{106} + x^{105} + x^{104} + x^{103}\\
&+ x^{102} + x^{101} + x^{100} + x^{98} + x^{96} + x^{91} + x^{90} + x^{85} + x^{82} + x^{80} + x^{79}\\
&+ x^{78} + x^{76} + x^{74} + x^{73} + x^{69} + x^{63} + x^{62} + x^{60} + x^{59} + x^{55} + x^{54}\\
&+ x^{53} + x^{52} + x^{51} + x^{50} + x^{49} + x^{48} + x^{47} + x^{46} + x^{44} + x^{41} + x^{40}\\
&+ x^{37} + x^{35} + x^{34} + x^{33} + x^{26},\\
p_6(x) &= x^{115} + x^{114} + x^{112} + x^{111} + x^{107} + x^{103} + x^{100} + x^{98} + x^{93} + x^{90}\\
&+ x^{89} + x^{88} + x^{85} + x^{83} + x^{80} + x^{79} + x^{77} + x^{75} + x^{72} + x^{71} + x^{70}\\
&+ x^{69} + x^{66} + x^{64} + x^{58} + x^{52} + x^{42} + x^{41} + x^{40} + x^{38} + x^{37} + x^{35}\\
&+ x^{32} + x^{31} + x^{30} + x^{29} + x^{28} + x^{27} + x^{26} + x^{23} + x^{20} + x^{18} + x^{17}\\
&+ x^{14} + x^{13} + x^{9} + x^{5} + 1,\\
p_9(x) &= x^{113} + x^{112} + x^{108} + x^{97} + x^{96} + x^{92} + x^{81} + x^{80} + x^{76} + x^{65} + x^{64}\\
&+ x^{60} + x^{33} + x^{32} + x^{28} + x^{17} + x^{16} + x^{12},\\
p_{12}(x) &= x^{117} + x^{116} + x^{113} + x^{108} + x^{101} + x^{100} + x^{96} + x^{93} + x^{92} + x^{89}\\
&+ x^{84} + x^{81} + x^{80} + x^{76} + x^{69} + x^{68} + x^{64} + x^{61} + x^{60} + x^{57} + x^{53}\\
&+ x^{48} + x^{37} + x^{36} + x^{33} + x^{28} + x^{21} + x^{20} + x^{16} + x^{13} + x^{12} + x^{9}\\
&+ x^{5} + 1,
\end{aligned}
$$

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

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] | 999 | [1704, 1705] | 1998 | [287, 1030] | 2997 | [3746, 3276] |
| 1 | [3, 4] | 1000 | [1706, 526] | 1999 | [2965, 2863] | 2998 | [1938, 1619] |
| 2 | [5, 6] | 1001 | [1707, 1708] | 2000 | [2966, 2967] | 2999 | [1939, 1949] |
| 3 | [7, 8] | 1002 | [1709, 834] | 2001 | [1494, 1349] | 3000 | [3711, 2283] |
| 4 | [9, 10] | 1003 | [1710, 1711] | 2002 | [2968, 2969] | 3001 | [2232, 1529] |
| 5 | [11, 12] | 1004 | [198, 1712] | 2003 | [2970, 2464] | 3002 | [1774, 2363] |
| 6 | [13, 14] | 1005 | [634, 1713] | 2004 | [1351, 2971] | 3003 | [3512, 3352] |
| 7 | [15, 16] | 1006 | [877, 1714] | 2005 | [2910, 2972] | 3004 | [671, 2233] |
| 8 | [17, 18] | 1007 | [1715, 1716] | 2006 | [1274, 899] | 3005 | [3376, 3747] |
| 9 | [19, 20] | 1008 | [1717, 1718] | 2007 | [2973, 1011] | 3006 | [3478, 3476] |
| 10 | [21, 22] | 1009 | [1719, 822] | 2008 | [942, 2974] | 3007 | [3748, 3304] |
| 11 | [23, 24] | 1010 | [1720, 1721] | 2009 | [2975, 2899] | 3008 | [3749, 3647] |
| 12 | [25, 26] | 1011 | [1722, 1723] | 2010 | [2976, 2977] | 3009 | [3750, 1606] |
| 13 | [27, 28] | 1012 | [1724, 1725] | 2011 | [2978, 2926] | 3010 | [3409, 820] |
| 14 | [29, 30] | 1013 | [1726, 1727] | 2012 | [2979, 2980] | 3011 | [1984, 162] |
| 15 | [31, 32] | 1014 | [1728, 1729] | 2013 | [2594, 996] | 3012 | [3439, 3751] |
| 16 | [33, 34] | 1015 | [1723, 1730] | 2014 | [2981, 2573] | 3013 | [3455, 3551] |
| 17 | [35, 36] | 1016 | [1731, 729] | 2015 | [1432, 369] | 3014 | [3603, 3752] |
| 18 | [37, 38] | 1017 | [586, 1732] | 2016 | [72, 2982] | 3015 | [2205, 177] |
| 19 | [39, 40] | 1018 | [1733, 1734] | 2017 | [2983, 2491] | 3016 | [2189, 736] |
| 20 | [41, 42] | 1019 | [1735, 132] | 2018 | [1378, 2984] | 3017 | [3740, 3753] |
| 21 | [43, 44] | 1020 | [1736, 1737] | 2019 | [24, 2985] | 3018 | [3520, 2281] |
| 22 | [45, 46] | 1021 | [1738, 1739] | 2020 | [26, 2986] | 3019 | [3754, 1710] |
| 23 | [47, 48] | 1022 | [1740, 1741] | 2021 | [2987, 1138] | 3020 | [227, 1533] |
| 24 | [49, 50] | 1023 | [1742, 1642] | 2022 | [280, 2904] | 3021 | [2309, 3624] |
| 25 | [51, 52] | 1024 | [1743, 1744] | 2023 | [2850, 2949] | 3022 | [1748, 1781] |
| 26 | [53, 54] | 1025 | [1745, 228] | 2024 | [2503, 2988] | 3023 | [3396, 3755] |
| 27 | [55, 56] | 1026 | [1675, 1746] | 2025 | [2881, 2584] | 3024 | [1574, 172] |
| 28 | [57, 58] | 1027 | [1747, 1748] | 2026 | [2989, 1461] | 3025 | [871, 3756] |
| 29 | [59, 60] | 1028 | [1749, 1750] | 2027 | [2549, 2966] | 3026 | [1902, 3731] |
| 30 | [61, 62] | 1029 | [1751, 1752] | 2028 | [2990, 2685] | 3027 | [3757, 3758] |
| 31 | [63, 64] | 1030 | [1753, 1754] | 2029 | [2991, 2992] | 3028 | [2212, 3759] |
| 32 | [65, 66] | 1031 | [1755, 1667] | 2030 | [2993, 375] | 3029 | [2316, 3760] |
| 33 | [67, 68] | 1032 | [1756, 1757] | 2031 | [2442, 2994] | 3030 | [746, 166] |
| 34 | [69, 70] | 1033 | [1758, 1759] | 2032 | [936, 2995] | 3031 | [2135, 1755] |
| 35 | [71, 72] | 1034 | [1760, 1761] | 2033 | [2996, 2997] | 3032 | [3462, 3699] |
| 36 | [73, 74] | 1035 | [1762, 1763] | 2034 | [2998, 2999] | 3033 | [478, 3729] |
| 37 | [75, 76] | 1036 | [638, 1764] | 2035 | [3000, 1435] | 3034 | [3612, 2318] |
| 38 | [77, 78] | 1037 | [1765, 1766] | 2036 | [3001, 2894] | 3035 | [3386, 3291] |
| 39 | [79, 80] | 1038 | [1767, 1516] | 2037 | [3002, 3003] | 3036 | [3761, 2356] |
| 40 | [81, 82] | 1039 | [1768, 1769] | 2038 | [3004, 3005] | 3037 | [3762, 3668] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 41 | [83, 84] | 1040 | [1770, 1771] | 2039 | [3006, 3007] | 3038 | [705, 2005] |
| 42 | [85, 86] | 1041 | [1540, 777] | 2040 | [3008, 2937] | 3039 | [3763, 146] |
| 43 | [87, 81] | 1042 | [1772, 633] | 2041 | [274, 3009] | 3040 | [2117, 529] |
| 44 | [88, 89] | 1043 | [1773, 1774] | 2042 | [2519, 3010] | 3041 | [2225, 476] |
| 45 | [90, 91] | 1044 | [1775, 1776] | 2043 | [2610, 2520] | 3042 | [2376, 3662] |
| 46 | [92, 93] | 1045 | [1777, 218] | 2044 | [1060, 2518] | 3043 | [3443, 3339] |
| 47 | [94, 95] | 1046 | [163, 1778] | 2045 | [2679, 436] | 3044 | [829, 1986] |
| 48 | [96, 97] | 1047 | [1779, 1780] | 2046 | [1400, 3011] | 3045 | [1713, 3764] |
| 49 | [98, 99] | 1048 | [1781, 1782] | 2047 | [2547, 3012] | 3046 | [1644, 3303] |
| 50 | [100, 101] | 1049 | [1783, 1784] | 2048 | [2557, 1373] | 3047 | [3765, 3665] |
| 51 | [102, 103] | 1050 | [658, 1785] | 2049 | [989, 1248] | 3048 | [752, 3447] |
| 52 | [104, 105] | 1051 | [1786, 1787] | 2050 | [1481, 2647] | 3049 | [3631, 2244] |
| 53 | [106, 107] | 1052 | [1788, 1789] | 2051 | [285, 3013] | 3050 | [3581, 2131] |
| 54 | [108, 109] | 1053 | [1790, 1791] | 2052 | [3014, 2534] | 3051 | [795, 3766] |
| 55 | [110, 111] | 1054 | [1792, 1793] | 2053 | [2984, 3015] | 3052 | [3470, 3690] |
| 56 | [112, 113] | 1055 | [1794, 1795] | 2054 | [2719, 2846] | 3053 | [3640, 1826] |
| 57 | [114, 115] | 1056 | [1796, 1797] | 2055 | [3016, 3017] | 3054 | [2223, 653] |
| 58 | [116, 117] | 1057 | [1721, 1798] | 2056 | [2626, 3018] | 3055 | [3767, 3768] |
| 59 | [118, 119] | 1058 | [1799, 1775] | 2057 | [1024, 2453] | 3056 | [3743, 1923] |
| 60 | [120, 121] | 1059 | [1800, 1801] | 2058 | [3019, 3020] | 3057 | [3661, 41] |
| 61 | [122, 123] | 1060 | [1802, 1803] | 2059 | [3021, 2878] | 3058 | [2324, 3696] |
| 62 | [124, 125] | 1061 | [1804, 1805] | 2060 | [3022, 2834] | 3059 | [732, 1684] |
| 63 | [126, 127] | 1062 | [1806, 1807] | 2061 | [2988, 3023] | 3060 | [3353, 3613] |
| 64 | [128, 129] | 1063 | [1808, 1809] | 2062 | [2590, 3024] | 3061 | [3769, 2359] |
| 65 | [130, 131] | 1064 | [578, 1810] | 2063 | [472, 3025] | 3062 | [3770, 3343] |
| 66 | [132, 133] | 1065 | [580, 1811] | 2064 | [2639, 1356] | 3063 | [3771, 836] |
| 67 | [134, 135] | 1066 | [1716, 1812] | 2065 | [3026, 3027] | 3064 | [3772, 3578] |
| 68 | [136, 137] | 1067 | [1813, 1722] | 2066 | [3028, 3029] | 3065 | [503, 3746] |
| 69 | [138, 139] | 1068 | [1814, 1815] | 2067 | [398, 3030] | 3066 | [3773, 1969] |
| 70 | [140, 141] | 1069 | [1816, 1817] | 2068 | [3031, 2874] | 3067 | [2103, 3420] |
| 71 | [142, 143] | 1070 | [1797, 1818] | 2069 | [2631, 3032] | 3068 | [3716, 629] |
| 72 | [144, 145] | 1071 | [1819, 1820] | 2070 | [2855, 3033] | 3069 | [3630, 3695] |
| 73 | [146, 147] | 1072 | [1821, 1783] | 2071 | [2746, 3034] | 3070 | [3616, 1851] |
| 74 | [148, 149] | 1073 | [1750, 583] | 2072 | [3035, 3036] | 3071 | [2194, 3510] |
| 75 | [150, 151] | 1074 | [1822, 1823] | 2073 | [3037, 2843] | 3072 | [3774, 2096] |
| 76 | [152, 153] | 1075 | [1824, 1825] | 2074 | [3038, 2818] | 3073 | [3528, 3586] |
| 77 | [154, 155] | 1076 | [1826, 57] | 2075 | [3039, 3040] | 3074 | [2264, 197] |
| 78 | [156, 157] | 1077 | [62, 45] | 2076 | [3041, 3014] | 3075 | [2193, 3378] |
| 79 | [158, 159] | 1078 | [1539, 1827] | 2077 | [1388, 1407] | 3076 | [3484, 3694] |
| 80 | [160, 161] | 1079 | [1636, 1828] | 2078 | [3018, 1480] | 3077 | [2349, 3480] |
| 81 | [162, 163] | 1080 | [1829, 1830] | 2079 | [3042, 3043] | 3078 | [2039, 3775] |
| 82 | [164, 165] | 1081 | [686, 1831] | 2080 | [3044, 3045] | 3079 | [1517, 1632] |
| 83 | [166, 167] | 1082 | [1832, 1833] | 2081 | [2832, 3046] | 3080 | [3776, 3363] |
| 84 | [168, 169] | 1083 | [1834, 1835] | 2082 | [3047, 2970] | 3081 | [2246, 3739] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 85 | [170, 171] | 1084 | [1761, 1836] | 2083 | [2760, 3048] | 3082 | [2195, 641] |
| 86 | [172, 173] | 1085 | [1837, 1838] | 2084 | [3049, 3050] | 3083 | [3777, 3761] |
| 87 | [174, 175] | 1086 | [1839, 1720] | 2085 | [458, 2536] | 3084 | [841, 3754] |
| 88 | [176, 174] | 1087 | [1840, 668] | 2086 | [3051, 2452] | 3085 | [2230, 3724] |
| 89 | [177, 178] | 1088 | [1841, 1842] | 2087 | [2418, 3052] | 3086 | [3758, 3332] |
| 90 | [179, 180] | 1089 | [1843, 1844] | 2088 | [3053, 3054] | 3087 | [215, 1736] |
| 91 | [181, 182] | 1090 | [1845, 1846] | 2089 | [3055, 3022] | 3088 | [3778, 202] |
| 92 | [183, 184] | 1091 | [550, 1847] | 2090 | [1479, 3056] | 3089 | [875, 3748] |
| 93 | [185, 130] | 1092 | [1848, 1849] | 2091 | [977, 3057] | 3090 | [229, 1932] |
| 94 | [34, 186] | 1093 | [1850, 789] | 2092 | [1225, 3058] | 3091 | [827, 852] |
| 95 | [187, 188] | 1094 | [1851, 1852] | 2093 | [3059, 3060] | 3092 | [1649, 3361] |
| 96 | [189, 190] | 1095 | [1853, 1854] | 2094 | [2860, 2721] | 3093 | [1873, 700] |
| 97 | [191, 192] | 1096 | [1855, 1856] | 2095 | [3061, 2493] | 3094 | [541, 3779] |
| 98 | [193, 194] | 1097 | [1857, 1794] | 2096 | [3062, 2761] | 3095 | [1967, 818] |
| 99 | [195, 196] | 1098 | [1858, 1859] | 2097 | [3063, 2983] | 3096 | [576, 605] |
| 100 | [197, 198] | 1099 | [1670, 1860] | 2098 | [3064, 3065] | 3097 | [574, 504] |
| 101 | [199, 148] | 1100 | [1861, 212] | 2099 | [3050, 2649] | 3098 | [3593, 3780] |
| 102 | [200, 201] | 1101 | [1862, 1863] | 2100 | [2871, 950] | 3099 | [717, 3278] |
| 103 | [202, 203] | 1102 | [1864, 1865] | 2101 | [3066, 2531] | 3100 | [240, 2139] |
| 104 | [204, 205] | 1103 | [1866, 1867] | 2102 | [3067, 1496] | 3101 | [3379, 3781] |
| 105 | [206, 207] | 1104 | [1868, 791] | 2103 | [3068, 339] | 3102 | [3321, 1988] |
| 106 | [208, 209] | 1105 | [1869, 8] | 2104 | [3069, 2897] | 3103 | [2027, 3531] |
| 107 | [210, 211] | 1106 | [1870, 1871] | 2105 | [2950, 3070] | 3104 | [3605, 3782] |
| 108 | [212, 213] | 1107 | [1872, 1873] | 2106 | [3071, 3072] | 3105 | [3703, 2297] |
| 109 | [214, 215] | 1108 | [1522, 739] | 2107 | [3073, 3074] | 3106 | [3604, 3737] |
| 110 | [216, 217] | 1109 | [1607, 1874] | 2108 | [3075, 2637] | 3107 | [3683, 838] |
| 111 | [218, 219] | 1110 | [1546, 1875] | 2109 | [3076, 3069] | 3108 | [3533, 1876] |
| 112 | [220, 221] | 1111 | [1876, 1877] | 2110 | [3040, 1268] | 3109 | [2030, 3676] |
| 113 | [222, 223] | 1112 | [1878, 1879] | 2111 | [2813, 1385] | 3110 | [3756, 3570] |
| 114 | [224, 225] | 1113 | [1880, 1881] | 2112 | [3077, 2931] | 3111 | [2282, 3282] |
| 115 | [226, 227] | 1114 | [1577, 1882] | 2113 | [3078, 1184] | 3112 | [521, 2169] |
| 116 | [228, 229] | 1115 | [1883, 1884] | 2114 | [2481, 3068] | 3113 | [1831, 3783] |
| 117 | [230, 13] | 1116 | [1885, 1756] | 2115 | [3079, 3080] | 3114 | [808, 1804] |
| 118 | [231, 232] | 1117 | [1886, 51] | 2116 | [2484, 3081] | 3115 | [2122, 3784] |
| 119 | [233, 234] | 1118 | [1807, 1887] | 2117 | [1358, 1087] | 3116 | [2013, 2286] |
| 120 | [235, 236] | 1119 | [1888, 1889] | 2118 | [2823, 2714] | 3117 | [2, 3785] |
| 121 | [237, 238] | 1120 | [1890, 1891] | 2119 | [3082, 1134] | 3118 | [3299, 144] |
| 122 | [239, 240] | 1121 | [1664, 1892] | 2120 | [1118, 3083] | 3119 | [157, 3750] |
| 123 | [241, 242] | 1122 | [1893, 1894] | 2121 | [3084, 3047] | 3120 | [3293, 3786] |
| 124 | [243, 244] | 1123 | [1895, 1819] | 2122 | [3085, 2696] | 3121 | [141, 1653] |
| 125 | [245, 246] | 1124 | [1896, 1686] | 2123 | [2604, 3086] | 3122 | [1993, 3787] |
| 126 | [247, 248] | 1125 | [1897, 1898] | 2124 | [3087, 3088] | 3123 | [3781, 3375] |
| 127 | [249, 250] | 1126 | [50, 1899] | 2125 | [3024, 3089] | 3124 | [3788, 2121] |
| 128 | [251, 252] | 1127 | [1900, 1901] | 2126 | [3090, 1022] | 3125 | [3789, 3790] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 129 | [253, 254] | 1128 | [695, 598] | 2127 | [3091, 2601] | 3126 | [3744, 3791] |
| 130 | [255, 256] | 1129 | [495, 1688] | 2128 | [2384, 1491] | 3127 | [3486, 3425] |
| 131 | [257, 258] | 1130 | [1852, 1902] | 2129 | [1236, 3092] | 3128 | [3792, 3358] |
| 132 | [259, 260] | 1131 | [1903, 1904] | 2130 | [2440, 434] | 3129 | [3790, 1582] |
| 133 | [261, 262] | 1132 | [1782, 1905] | 2131 | [3010, 438] | 3130 | [2314, 876] |
| 134 | [263, 264] | 1133 | [1906, 1907] | 2132 | [1084, 2738] | 3131 | [3622, 1743] |
| 135 | [265, 266] | 1134 | [1568, 1908] | 2133 | [3093, 1263] | 3132 | [12, 2019] |
| 136 | [267, 268] | 1135 | [1909, 1910] | 2134 | [20, 2680] | 3133 | [3634, 3415] |
| 137 | [269, 270] | 1136 | [1817, 1911] | 2135 | [1078, 3094] | 3134 | [3793, 1975] |
| 138 | [271, 272] | 1137 | [1912, 1913] | 2136 | [3095, 3096] | 3135 | [3489, 1983] |
| 139 | [273, 274] | 1138 | [1914, 1915] | 2137 | [2705, 1451] | 3136 | [3412, 2015] |
| 140 | [275, 276] | 1139 | [1916, 1917] | 2138 | [368, 1127] | 3137 | [1752, 3794] |
| 141 | [277, 278] | 1140 | [756, 1832] | 2139 | [2767, 3097] | 3138 | [1589, 2270] |
| 142 | [279, 280] | 1141 | [1918, 631] | 2140 | [2727, 3098] | 3139 | [3787, 3795] |
| 143 | [281, 21] | 1142 | [1699, 1919] | 2141 | [2919, 322] | 3140 | [184, 765] |
| 144 | [282, 283] | 1143 | [1920, 1921] | 2142 | [3099, 2445] | 3141 | [3552, 3599] |
| 145 | [284, 285] | 1144 | [1922, 775] | 2143 | [2579, 2446] | 3142 | [3780, 3461] |
| 146 | [286, 287] | 1145 | [1923, 193] | 2144 | [1171, 2867] | 3143 | [1732, 1978] |
| 147 | [288, 289] | 1146 | [1924, 1925] | 2145 | [2671, 335] | 3144 | [2279, 3540] |
| 148 | [290, 291] | 1147 | [1926, 1806] | 2146 | [3100, 3101] | 3145 | [1979, 3559] |
| 149 | [292, 293] | 1148 | [745, 1927] | 2147 | [2674, 3102] | 3146 | [1948, 3796] |
| 150 | [294, 295] | 1149 | [1928, 1929] | 2148 | [2469, 3103] | 3147 | [484, 3797] |
| 151 | [296, 297] | 1150 | [1930, 1931] | 2149 | [84, 2770] | 3148 | [3519, 32] |
| 152 | [298, 299] | 1151 | [1932, 1933] | 2150 | [2766, 3104] | 3149 | [2248, 3710] |
| 153 | [300, 301] | 1152 | [1934, 1625] | 2151 | [1141, 1082] | 3150 | [3441, 3788] |
| 154 | [302, 303] | 1153 | [1935, 1936] | 2152 | [3105, 1447] | 3151 | [501, 2274] |
| 155 | [304, 305] | 1154 | [1937, 1938] | 2153 | [3106, 2976] | 3152 | [1754, 1627] |
| 156 | [306, 307] | 1155 | [689, 1939] | 2154 | [2847, 1102] | 3153 | [2120, 3481] |
| 157 | [308, 309] | 1156 | [1940, 1941] | 2155 | [2448, 2856] | 3154 | [3329, 675] |
| 158 | [310, 311] | 1157 | [1942, 773] | 2156 | [3107, 3108] | 3155 | [1542, 3669] |
| 159 | [312, 313] | 1158 | [1601, 1943] | 2157 | [262, 1337] | 3156 | [3723, 3727] |
| 160 | [314, 315] | 1159 | [1944, 39] | 2158 | [3109, 2421] | 3157 | [799, 3580] |
| 161 | [316, 317] | 1160 | [1945, 1946] | 2159 | [1492, 1352] | 3158 | [3660, 1592] |
| 162 | [318, 319] | 1161 | [1947, 1948] | 2160 | [2435, 3110] | 3159 | [3373, 3769] |
| 163 | [320, 321] | 1162 | [1949, 1604] | 2161 | [2656, 1467] | 3160 | [3798, 3402] |
| 164 | [322, 323] | 1163 | [1950, 1951] | 2162 | [1387, 2787] | 3161 | [760, 3383] |
| 165 | [324, 325] | 1164 | [854, 1952] | 2163 | [3111, 2591] | 3162 | [3511, 55] |
| 166 | [326, 327] | 1165 | [866, 1953] | 2164 | [906, 2978] | 3163 | [1657, 3440] |
| 167 | [328, 329] | 1166 | [1954, 1654] | 2165 | [2673, 2657] | 3164 | [801, 1707] |
| 168 | [330, 312] | 1167 | [1955, 1956] | 2166 | [3112, 3113] | 3165 | [3430, 3799] |
| 169 | [331, 332] | 1168 | [1957, 874] | 2167 | [340, 3114] | 3166 | [3315, 3800] |
| 170 | [333, 334] | 1169 | [1958, 1959] | 2168 | [3115, 2694] | 3167 | [3648, 2152] |
| 171 | [335, 336] | 1170 | [1907, 753] | 2169 | [961, 2659] | 3168 | [3427, 1728] |
| 172 | [337, 338] | 1171 | [1960, 1961] | 2170 | [1364, 2560] | 3169 | [2333, 3801] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 173 | [339, 340] | 1172 | [1846, 1839] | 2171 | [2829, 1090] | 3170 | [3745, 3472] |
| 174 | [341, 342] | 1173 | [213, 1940] | 2172 | [3074, 3116] | 3171 | [2265, 230] |
| 175 | [343, 344] | 1174 | [1882, 1872] | 2173 | [3117, 3118] | 3172 | [3532, 2305] |
| 176 | [345, 346] | 1175 | [1962, 500] | 2174 | [3119, 3120] | 3173 | [703, 2332] |
| 177 | [347, 348] | 1176 | [754, 1770] | 2175 | [3121, 3122] | 3174 | [3691, 759] |
| 178 | [349, 350] | 1177 | [1963, 1964] | 2176 | [3123, 473] | 3175 | [566, 3802] |
| 179 | [351, 352] | 1178 | [1887, 1751] | 2177 | [2967, 2879] | 3176 | [219, 1661] |
| 180 | [353, 354] | 1179 | [1965, 1845] | 2178 | [115, 3019] | 3177 | [2313, 3319] |
| 181 | [355, 356] | 1180 | [1966, 1967] | 2179 | [3027, 1282] | 3178 | [2187, 3387] |
| 182 | [357, 347] | 1181 | [1968, 672] | 2180 | [3124, 1304] | 3179 | [3663, 1982] |
| 183 | [358, 359] | 1182 | [1969, 1970] | 2181 | [2722, 3125] | 3180 | [2269, 531] |
| 184 | [360, 361] | 1183 | [1801, 1971] | 2182 | [3126, 3084] | 3181 | [3733, 3803] |
| 185 | [362, 363] | 1184 | [1859, 1538] | 2183 | [3127, 3128] | 3182 | [1911, 3763] |
| 186 | [68, 364] | 1185 | [1972, 1742] | 2184 | [3129, 3130] | 3183 | [1708, 751] |
| 187 | [365, 366] | 1186 | [1973, 1974] | 2185 | [2801, 3131] | 3184 | [2221, 3804] |
| 188 | [367, 368] | 1187 | [1975, 1976] | 2186 | [1221, 2703] | 3185 | [2141, 3312] |
| 189 | [369, 370] | 1188 | [1877, 1977] | 2187 | [1228, 2496] | 3186 | [517, 3701] |
| 190 | [371, 372] | 1189 | [1977, 1569] | 2188 | [6, 3132] | 3187 | [3786, 2215] |
| 191 | [248, 257] | 1190 | [1978, 1979] | 2189 | [3133, 3134] | 3188 | [2137, 830] |
| 192 | [373, 374] | 1191 | [1980, 181] | 2190 | [1428, 2751] | 3189 | [839, 200] |
| 193 | [375, 376] | 1192 | [1981, 189] | 2191 | [1096, 2455] | 3190 | [1576, 3805] |
| 194 | [377, 378] | 1193 | [1982, 1660] | 2192 | [3135, 360] | 3191 | [2235, 3274] |
| 195 | [379, 380] | 1194 | [1983, 1984] | 2193 | [2731, 981] | 3192 | [1763, 2127] |
| 196 | [381, 382] | 1195 | [784, 1985] | 2194 | [3136, 976] | 3193 | [1520, 3522] |
| 197 | [383, 384] | 1196 | [1986, 1987] | 2195 | [3137, 1088] | 3194 | [3503, 3615] |
| 198 | [385, 386] | 1197 | [1931, 1557] | 2196 | [3138, 365] | 3195 | [766, 2352] |
| 199 | [323, 292] | 1198 | [1988, 694] | 2197 | [3139, 1509] | 3196 | [1881, 2374] |
| 200 | [387, 388] | 1199 | [1989, 604] | 2198 | [3140, 407] | 3197 | [3806, 870] |
| 201 | [389, 390] | 1200 | [1990, 581] | 2199 | [3141, 972] | 3198 | [186, 3776] |
| 202 | [391, 392] | 1201 | [1991, 1841] | 2200 | [3142, 1069] | 3199 | [2343, 683] |
| 203 | [393, 394] | 1202 | [1992, 1993] | 2201 | [3143, 1189] | 3200 | [1591, 1541] |
| 204 | [395, 396] | 1203 | [1994, 549] | 2202 | [2771, 3144] | 3201 | [3491, 2164] |
| 205 | [397, 398] | 1204 | [1673, 1630] | 2203 | [346, 3145] | 3202 | [3783, 3269] |
| 206 | [399, 400] | 1205 | [1995, 1996] | 2204 | [3146, 3147] | 3203 | [2081, 2310] |
| 207 | [401, 402] | 1206 | [606, 615] | 2205 | [3148, 3149] | 3204 | [1927, 3778] |
| 208 | [403, 404] | 1207 | [1997, 1998] | 2206 | [2816, 3150] | 3205 | [3807, 3350] |
| 209 | [405, 406] | 1208 | [1827, 1999] | 2207 | [1135, 3123] | 3206 | [3646, 2354] |
| 210 | [407, 408] | 1209 | [2000, 2001] | 2208 | [321, 467] | 3207 | [3803, 2065] |
| 211 | [409, 410] | 1210 | [2002, 2003] | 2209 | [2441, 2934] | 3208 | [1812, 3399] |
| 212 | [411, 412] | 1211 | [810, 2004] | 2210 | [3151, 3152] | 3209 | [173, 1717] |
| 213 | [413, 414] | 1212 | [2005, 2006] | 2211 | [3025, 3153] | 3210 | [2151, 591] |
| 214 | [415, 416] | 1213 | [2007, 544] | 2212 | [3154, 3155] | 3211 | [3356, 3666] |
| 215 | [417, 418] | 1214 | [1838, 2008] | 2213 | [3156, 3157] | 3212 | [2198, 3808] |
| 216 | [419, 420] | 1215 | [2009, 2010] | 2214 | [2543, 2690] | 3213 | [3796, 811] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 217 | [421, 422] | 1216 | [2011, 1947] | 2215 | [3158, 3159] | 3214 | [1620, 595] |
| 218 | [125, 423] | 1217 | [2012, 2013] | 2216 | [3160, 939] | 3215 | [2311, 2330] |
| 219 | [424, 253] | 1218 | [2014, 1648] | 2217 | [2654, 2578] | 3216 | [3809, 3810] |
| 220 | [425, 426] | 1219 | [2015, 1981] | 2218 | [3161, 2395] | 3217 | [3395, 3626] |
| 221 | [427, 428] | 1220 | [744, 2016] | 2219 | [3162, 909] | 3218 | [1929, 3708] |
| 222 | [429, 430] | 1221 | [2017, 2018] | 2220 | [272, 900] | 3219 | [3296, 3548] |
| 223 | [18, 431] | 1222 | [768, 846] | 2221 | [3163, 3042] | 3220 | [3384, 3568] |
| 224 | [432, 433] | 1223 | [2019, 2020] | 2222 | [3164, 3165] | 3221 | [2261, 3298] |
| 225 | [434, 435] | 1224 | [2021, 43] | 2223 | [3166, 1100] | 3222 | [1778, 2146] |
| 226 | [436, 437] | 1225 | [2022, 2012] | 2224 | [2545, 880] | 3223 | [3464, 3811] |
| 227 | [438, 439] | 1226 | [2023, 1840] | 2225 | [3046, 1368] | 3224 | [1663, 1924] |
| 228 | [440, 441] | 1227 | [2024, 2025] | 2226 | [3167, 3087] | 3225 | [3305, 3635] |
| 229 | [442, 443] | 1228 | [2026, 2027] | 2227 | [2537, 3168] | 3226 | [3667, 3812] |
| 230 | [444, 445] | 1229 | [2028, 1733] | 2228 | [1313, 1001] | 3227 | [2008, 3681] |
| 231 | [446, 27] | 1230 | [2029, 2030] | 2229 | [3169, 2397] | 3228 | [1905, 3741] |
| 232 | [254, 447] | 1231 | [2031, 1957] | 2230 | [3170, 2404] | 3229 | [3813, 3494] |
| 233 | [448, 449] | 1232 | [2032, 2033] | 2231 | [3171, 2645] | 3230 | [3802, 3642] |
| 234 | [450, 451] | 1233 | [2034, 2035] | 2232 | [3172, 64] | 3231 | [159, 3813] |
| 235 | [452, 453] | 1234 | [1913, 2036] | 2233 | [464, 2968] | 3232 | [3814, 3815] |
| 236 | [454, 120] | 1235 | [2037, 243] | 2234 | [2896, 3173] | 3233 | [867, 3654] |
| 237 | [455, 456] | 1236 | [2038, 2039] | 2235 | [3174, 3172] | 3234 | [2060, 3458] |
| 238 | [457, 458] | 1237 | [2040, 2041] | 2236 | [3086, 3175] | 3235 | [3433, 3774] |
| 239 | [459, 460] | 1238 | [2042, 2043] | 2237 | [3176, 2728] | 3236 | [715, 3419] |
| 240 | [461, 462] | 1239 | [2044, 2045] | 2238 | [3089, 3160] | 3237 | [3784, 3645] |
| 241 | [463, 464] | 1240 | [1809, 216] | 2239 | [3056, 985] | 3238 | [2370, 2163] |
| 242 | [465, 466] | 1241 | [2046, 2047] | 2240 | [1459, 3177] | 3239 | [3566, 3770] |
| 243 | [467, 468] | 1242 | [2048, 1922] | 2241 | [910, 2747] | 3240 | [2348, 2113] |
| 244 | [469, 470] | 1243 | [507, 2032] | 2242 | [1503, 1322] | 3241 | [3816, 755] |
| 245 | [471, 472] | 1244 | [1570, 761] | 2243 | [2699, 92] | 3242 | [3734, 2031] |
| 246 | [473, 474] | 1245 | [2049, 2050] | 2244 | [3178, 993] | 3243 | [3536, 3721] |
| 247 | [475, 476] | 1246 | [2051, 2052] | 2245 | [2906, 3179] | 3244 | [2219, 2329] |
| 248 | [477, 478] | 1247 | [2053, 2054] | 2246 | [1066, 3117] | 3245 | [1847, 706] |
| 249 | [479, 480] | 1248 | [540, 2055] | 2247 | [3180, 2735] | 3246 | [3495, 3687] |
| 250 | [481, 482] | 1249 | [1690, 2056] | 2248 | [3181, 3182] | 3247 | [3736, 3732] |
| 251 | [483, 484] | 1250 | [2057, 2058] | 2249 | [3183, 448] | 3248 | [1875, 3434] |
| 252 | [485, 486] | 1251 | [2059, 2060] | 2250 | [2606, 2475] | 3249 | [2331, 3327] |
| 253 | [487, 488] | 1252 | [2025, 2061] | 2251 | [2507, 2873] | 3250 | [3817, 3818] |
| 254 | [489, 490] | 1253 | [2062, 828] | 2252 | [1391, 3184] | 3251 | [2180, 2090] |
| 255 | [491, 492] | 1254 | [2063, 2064] | 2253 | [3101, 2437] | 3252 | [2306, 3391] |
| 256 | [493, 494] | 1255 | [2065, 1656] | 2254 | [1149, 279] | 3253 | [3726, 2307] |
| 257 | [476, 495] | 1256 | [1637, 1610] | 2255 | [3185, 3186] | 3254 | [3795, 2271] |
| 258 | [496, 497] | 1257 | [1987, 787] | 2256 | [3020, 3187] | 3255 | [3819, 3394] |
| 259 | [498, 499] | 1258 | [133, 1745] | 2257 | [3188, 444] | 3256 | [3380, 2364] |
| 260 | [500, 501] | 1259 | [2066, 2067] | 2258 | [1510, 3189] | 3257 | [2360, 208] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 261 | [502, 503] | 1260 | [2068, 733] | 2259 | [3190, 3139] | 3258 | [3820, 1715] |
| 262 | [504, 505] | 1261 | [44, 651] | 2260 | [3191, 3192] | 3259 | [3357, 3706] |
| 263 | [506, 507] | 1262 | [2069, 2070] | 2261 | [2908, 3193] | 3260 | [3709, 3621] |
| 264 | [508, 509] | 1263 | [555, 872] | 2262 | [2624, 2932] | 3261 | [3775, 3749] |
| 265 | [510, 511] | 1264 | [2071, 2072] | 2263 | [3194, 446] | 3262 | [3359, 489] |
| 266 | [512, 513] | 1265 | [2073, 1864] | 2264 | [1126, 2955] | 3263 | [3742, 3639] |
| 267 | [514, 515] | 1266 | [2074, 2023] | 2265 | [121, 3195] | 3264 | [2353, 2089] |
| 268 | [516, 517] | 1267 | [2075, 2053] | 2266 | [315, 328] | 3265 | [833, 3649] |
| 269 | [518, 519] | 1268 | [2076, 2077] | 2267 | [2406, 3178] | 3266 | [3805, 780] |
| 270 | [520, 521] | 1269 | [2078, 2079] | 2268 | [2407, 3196] | 3267 | [3821, 3037] |
| 271 | [522, 523] | 1270 | [788, 2080] | 2269 | [2662, 3197] | 3268 | [3083, 3035] |
| 272 | [524, 525] | 1271 | [1789, 2081] | 2270 | [3072, 2928] | 3269 | [3822, 3129] |
| 273 | [526, 527] | 1272 | [1595, 2082] | 2271 | [903, 2655] | 3270 | [3823, 1144] |
| 274 | [528, 510] | 1273 | [519, 1551] | 2272 | [95, 3198] | 3271 | [3824, 1020] |
| 275 | [529, 530] | 1274 | [859, 646] | 2273 | [97, 2803] | 3272 | [3825, 3826] |
| 276 | [531, 532] | 1275 | [196, 2083] | 2274 | [3199, 2805] | 3273 | [2952, 3827] |
| 277 | [533, 534] | 1276 | [2084, 1695] | 2275 | [3200, 893] | 3274 | [3173, 2580] |
| 278 | [535, 536] | 1277 | [2085, 2086] | 2276 | [3201, 5] | 3275 | [2764, 988] |
| 279 | [537, 538] | 1278 | [2087, 2088] | 2277 | [3202, 2381] | 3276 | [1195, 3828] |
| 280 | [539, 540] | 1279 | [2089, 1861] | 2278 | [1469, 3203] | 3277 | [1394, 3041] |
| 281 | [536, 541] | 1280 | [2090, 725] | 2279 | [2569, 3204] | 3278 | [2889, 116] |
| 282 | [542, 543] | 1281 | [2033, 2091] | 2280 | [3186, 2416] | 3279 | [1294, 2724] |
| 283 | [544, 545] | 1282 | [582, 757] | 2281 | [3057, 1204] | 3280 | [3829, 2634] |
| 284 | [546, 547] | 1283 | [2092, 2093] | 2282 | [1131, 2494] | 3281 | [2837, 79] |
| 285 | [161, 548] | 1284 | [2094, 1762] | 2283 | [3205, 3206] | 3282 | [2386, 83] |
| 286 | [549, 550] | 1285 | [855, 1731] | 2284 | [3207, 3039] | 3283 | [1438, 3830] |
| 287 | [551, 552] | 1286 | [2095, 1594] | 2285 | [2550, 1152] | 3284 | [2841, 108] |
| 288 | [552, 553] | 1287 | [1530, 1571] | 2286 | [2565, 2911] | 3285 | [2422, 3831] |
| 289 | [554, 555] | 1288 | [778, 2011] | 2287 | [2684, 1119] | 3286 | [2501, 1457] |
| 290 | [556, 557] | 1289 | [2096, 2002] | 2288 | [3208, 3209] | 3287 | [3832, 3833] |
| 291 | [558, 559] | 1290 | [786, 2097] | 2289 | [3210, 308] | 3288 | [2851, 3834] |
| 292 | [560, 561] | 1291 | [559, 2098] | 2290 | [1052, 3211] | 3289 | [3835, 2415] |
| 293 | [562, 563] | 1292 | [2099, 1596] | 2291 | [2458, 3212] | 3290 | [1010, 1165] |
| 294 | [42, 564] | 1293 | [2100, 2101] | 2292 | [1301, 2617] | 3291 | [3836, 2605] |
| 295 | [565, 566] | 1294 | [2102, 2103] | 2293 | [317, 2486] | 3292 | [3192, 455] |
| 296 | [567, 568] | 1295 | [2104, 2105] | 2294 | [3198, 3079] | 3293 | [3837, 3838] |
| 297 | [244, 569] | 1296 | [2106, 2107] | 2295 | [1485, 2827] | 3294 | [2600, 3001] |
| 298 | [169, 570] | 1297 | [2108, 2109] | 2296 | [995, 2753] | 3295 | [2912, 3105] |
| 299 | [571, 572] | 1298 | [2110, 2111] | 2297 | [3147, 3213] | 3296 | [3012, 3208] |
| 300 | [573, 574] | 1299 | [2112, 1954] | 2298 | [3214, 3176] | 3297 | [3150, 2935] |
| 301 | [575, 576] | 1300 | [2113, 1989] | 2299 | [3215, 3216] | 3298 | [2482, 1112] |
| 302 | [577, 578] | 1301 | [2114, 2115] | 2300 | [1420, 3217] | 3299 | [1299, 3839] |
| 303 | [579, 580] | 1302 | [2116, 2117] | 2301 | [1477, 3008] | 3300 | [3834, 1397] |
| 304 | [581, 582] | 1303 | [2118, 2119] | 2302 | [3218, 907] | 3301 | [3840, 1224] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 305 | [583, 584] | 1304 | [656, 2120] | 2303 | [1296, 2824] | 3302 | [2689, 3841] |
| 306 | [585, 586] | 1305 | [2121, 2122] | 2304 | [2982, 1398] | 3303 | [2980, 3028] |
| 307 | [587, 588] | 1306 | [2123, 2124] | 2305 | [2994, 3219] | 3304 | [453, 2815] |
| 308 | [589, 590] | 1307 | [724, 2125] | 2306 | [3216, 3194] | 3305 | [3842, 3843] |
| 309 | [591, 592] | 1308 | [2126, 554] | 2307 | [2661, 3220] | 3306 | [2581, 2793] |
| 310 | [593, 594] | 1309 | [2127, 1992] | 2308 | [3221, 2775] | 3307 | [3120, 2623] |
| 311 | [595, 179] | 1310 | [2128, 2129] | 2309 | [107, 2831] | 3308 | [3193, 3055] |
| 312 | [596, 597] | 1311 | [2130, 224] | 2310 | [380, 3111] | 3309 | [1108, 3093] |
| 313 | [598, 599] | 1312 | [2131, 226] | 2311 | [3222, 3002] | 3310 | [2511, 1402] |
| 314 | [600, 601] | 1313 | [2132, 2133] | 2312 | [3223, 3224] | 3311 | [372, 3844] |
| 315 | [165, 535] | 1314 | [10, 2134] | 2313 | [3030, 3225] | 3312 | [3098, 1063] |
| 316 | [602, 603] | 1315 | [1921, 2135] | 2314 | [1426, 3180] | 3313 | [2887, 282] |
| 317 | [604, 496] | 1316 | [2136, 2137] | 2315 | [3226, 2498] | 3314 | [3092, 3078] |
| 318 | [605, 606] | 1317 | [2138, 620] | 2316 | [3017, 3227] | 3315 | [2806, 3146] |
| 319 | [607, 608] | 1318 | [2139, 861] | 2317 | [3228, 3115] | 3316 | [382, 2880] |
| 320 | [505, 609] | 1319 | [2140, 2141] | 2318 | [3229, 2599] | 3317 | [2893, 3266] |
| 321 | [610, 611] | 1320 | [2142, 2143] | 2319 | [3230, 3185] | 3318 | [3845, 3126] |
| 322 | [612, 613] | 1321 | [1618, 2144] | 2320 | [1227, 1331] | 3319 | [3224, 3846] |
| 323 | [614, 562] | 1322 | [225, 704] | 2321 | [80, 3231] | 3320 | [3043, 3847] |
| 324 | [615, 616] | 1323 | [1974, 1850] | 2322 | [3114, 3232] | 3321 | [3060, 3848] |
| 325 | [617, 618] | 1324 | [127, 191] | 2323 | [2561, 2901] | 3322 | [2810, 2413] |
| 326 | [619, 204] | 1325 | [2145, 170] | 2324 | [2778, 1317] | 3323 | [2812, 3849] |
| 327 | [620, 621] | 1326 | [2146, 2092] | 2325 | [3233, 2651] | 3324 | [3850, 3824] |
| 328 | [622, 623] | 1327 | [1727, 2147] | 2326 | [3234, 3235] | 3325 | [3220, 3063] |
| 329 | [56, 624] | 1328 | [1725, 2145] | 2327 | [2382, 3236] | 3326 | [3165, 3851] |
| 330 | [625, 626] | 1329 | [2148, 2149] | 2328 | [2712, 1338] | 3327 | [2964, 2940] |
| 331 | [627, 628] | 1330 | [2150, 2151] | 2329 | [2628, 3156] | 3328 | [3852, 2749] |
| 332 | [629, 630] | 1331 | [2152, 2062] | 2330 | [3237, 3238] | 3329 | [3132, 1222] |
| 333 | [631, 632] | 1332 | [797, 1719] | 2331 | [1305, 2807] | 3330 | [3853, 941] |
| 334 | [633, 634] | 1333 | [2153, 2009] | 2332 | [1151, 3239] | 3331 | [3854, 3855] |
| 335 | [635, 636] | 1334 | [1871, 2154] | 2333 | [3240, 3241] | 3332 | [2985, 1427] |
| 336 | [637, 638] | 1335 | [2155, 2156] | 2334 | [2541, 3234] | 3333 | [2618, 1326] |
| 337 | [639, 640] | 1336 | [2157, 1671] | 2335 | [1354, 2734] | 3334 | [2828, 1150] |
| 338 | [641, 642] | 1337 | [2158, 2159] | 2336 | [1258, 379] | 3335 | [3856, 1363] |
| 339 | [643, 59] | 1338 | [2160, 2161] | 2337 | [3242, 3243] | 3336 | [3830, 1365] |
| 340 | [644, 645] | 1339 | [2041, 805] | 2338 | [1137, 1371] | 3337 | [363, 3857] |
| 341 | [646, 647] | 1340 | [2162, 1668] | 2339 | [3244, 3245] | 3338 | [2804, 1320] |
| 342 | [648, 649] | 1341 | [2163, 128] | 2340 | [2602, 3246] | 3339 | [2539, 3164] |
| 343 | [650, 241] | 1342 | [2164, 2017] | 2341 | [2977, 3247] | 3340 | [2412, 1460] |
| 344 | [651, 565] | 1343 | [2165, 2166] | 2342 | [3248, 3249] | 3341 | [3858, 3859] |
| 345 | [652, 239] | 1344 | [856, 1878] | 2343 | [3250, 2989] | 3342 | [3131, 2611] |
| 346 | [653, 654] | 1345 | [2167, 2168] | 2344 | [1286, 924] | 3343 | [3219, 3226] |
| 347 | [655, 656] | 1346 | [2169, 2170] | 2345 | [3251, 1279] | 3344 | [3209, 3853] |
| 348 | [657, 658] | 1347 | [205, 2066] | 2346 | [2394, 2782] | 3345 | [3052, 2411] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 349 | [659, 522] | 1348 | [2171, 1944] | 2347 | [2403, 3252] | 3346 | [2698, 2811] |
| 350 | [660, 661] | 1349 | [764, 2172] | 2348 | [2487, 3253] | 3347 | [3860, 1026] |
| 351 | [662, 663] | 1350 | [1631, 2046] | 2349 | [2972, 2471] | 3348 | [3212, 3861] |
| 352 | [664, 665] | 1351 | [2173, 2174] | 2350 | [2499, 1343] | 3349 | [1272, 3862] |
| 353 | [666, 667] | 1352 | [2175, 2176] | 2351 | [1284, 1121] | 3350 | [3839, 2822] |
| 354 | [668, 669] | 1353 | [2072, 1545] | 2352 | [3254, 2942] | 3351 | [3863, 3161] |
| 355 | [670, 671] | 1354 | [2177, 662] | 2353 | [3211, 2839] | 3352 | [1128, 2819] |
| 356 | [672, 673] | 1355 | [2178, 2057] | 2354 | [3255, 3256] | 3353 | [2702, 3864] |
| 357 | [674, 657] | 1356 | [234, 512] | 2355 | [3257, 85] | 3354 | [3847, 3064] |
| 358 | [675, 676] | 1357 | [2179, 2180] | 2356 | [3258, 1038] | 3355 | [3865, 2924] |
| 359 | [677, 678] | 1358 | [2181, 2182] | 2357 | [3259, 3154] | 3356 | [3206, 3067] |
| 360 | [679, 680] | 1359 | [2183, 2184] | 2358 | [1169, 2627] | 3357 | [3866, 3076] |
| 361 | [681, 682] | 1360 | [2185, 2155] | 2359 | [3152, 3260] | 3358 | [3867, 3221] |
| 362 | [683, 684] | 1361 | [676, 2186] | 2360 | [3261, 3075] | 3359 | [3868, 3202] |
| 363 | [685, 686] | 1362 | [680, 2187] | 2361 | [3262, 1382] | 3360 | [2474, 3869] |
| 364 | [135, 687] | 1363 | [821, 2099] | 2362 | [2902, 1033] | 3361 | [1157, 3870] |
| 365 | [688, 689] | 1364 | [2188, 2189] | 2363 | [912, 2480] | 3362 | [1487, 2993] |
| 366 | [690, 691] | 1365 | [2190, 735] | 2364 | [2925, 2960] | 3363 | [364, 2558] |
| 367 | [692, 693] | 1366 | [2191, 2192] | 2365 | [3015, 3263] | 3364 | [1403, 2410] |
| 368 | [694, 695] | 1367 | [1771, 2193] | 2366 | [3264, 3251] | 3365 | [1155, 2998] |
| 369 | [696, 697] | 1368 | [2115, 2194] | 2367 | [2781, 3082] | 3366 | [2572, 399] |
| 370 | [698, 699] | 1369 | [1552, 1694] | 2368 | [2875, 3107] | 3367 | [3871, 2729] |
| 371 | [700, 701] | 1370 | [153, 2195] | 2369 | [1253, 3237] | 3368 | [426, 3051] |
| 372 | [702, 703] | 1371 | [1560, 2196] | 2370 | [2830, 251] | 3369 | [433, 277] |
| 373 | [704, 705] | 1372 | [2197, 2198] | 2371 | [2930, 3240] | 3370 | [3857, 1347] |
| 374 | [706, 707] | 1373 | [642, 2199] | 2372 | [3265, 2632] | 3371 | [1251, 3872] |
| 375 | [708, 709] | 1374 | [2200, 2201] | 2373 | [2479, 3222] | 3372 | [2808, 2443] |
| 376 | [616, 710] | 1375 | [2202, 2203] | 2374 | [2857, 2660] | 3373 | [3833, 1025] |
| 377 | [711, 528] | 1376 | [509, 1765] | 2375 | [2477, 2991] | 3374 | [3872, 1287] |
| 378 | [712, 713] | 1377 | [707, 2204] | 2376 | [2509, 1502] | 3375 | [992, 2864] |
| 379 | [714, 715] | 1378 | [182, 2205] | 2377 | [3102, 3141] | 3376 | [3838, 3138] |
| 380 | [716, 717] | 1379 | [2206, 533] | 2378 | [3266, 2709] | 3377 | [404, 3188] |
| 381 | [718, 719] | 1380 | [2207, 2208] | 2379 | [3267, 147] | 3378 | [2733, 3873] |
| 382 | [720, 49] | 1381 | [815, 800] | 2380 | [3268, 2071] | 3379 | [3197, 3016] |
| 383 | [721, 722] | 1382 | [2055, 2209] | 2381 | [2107, 2116] | 3380 | [1098, 2468] |
| 384 | [723, 724] | 1383 | [2210, 558] | 2382 | [3269, 3270] | 3381 | [946, 1273] |
| 385 | [725, 726] | 1384 | [2211, 2212] | 2383 | [2170, 612] | 3382 | [3245, 3874] |
| 386 | [727, 728] | 1385 | [2213, 2214] | 2384 | [3271, 3272] | 3383 | [3128, 2476] |
| 387 | [729, 730] | 1386 | [2215, 1855] | 2385 | [2339, 3273] | 3384 | [3875, 3876] |
| 388 | [731, 732] | 1387 | [2216, 2217] | 2386 | [3274, 1955] | 3385 | [1298, 3877] |
| 389 | [733, 734] | 1388 | [2218, 2219] | 2387 | [621, 3275] | 3386 | [2614, 440] |
| 390 | [735, 560] | 1389 | [139, 2220] | 2388 | [3276, 1972] | 3387 | [1230, 1018] |
| 391 | [736, 737] | 1390 | [46, 2221] | 2389 | [790, 3277] | 3388 | [1333, 1214] |
| 392 | [738, 11] | 1391 | [2082, 1790] | 2390 | [3278, 3279] | 3389 | [431, 16] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 393 | [739, 740] | 1392 | [2222, 2223] | 2391 | [3280, 2190] | 3390 | [2615, 1336] |
| 394 | [741, 742] | 1393 | [2224, 2225] | 2392 | [3281, 596] | 3391 | [3878, 3244] |
| 395 | [743, 744] | 1394 | [2226, 1747] | 2393 | [3282, 3283] | 3392 | [1081, 3112] |
| 396 | [647, 745] | 1395 | [2227, 2228] | 2394 | [693, 3284] | 3393 | [412, 98] |
| 397 | [734, 746] | 1396 | [2168, 2229] | 2395 | [3285, 2241] | 3394 | [276, 3840] |
| 398 | [613, 747] | 1397 | [1614, 2230] | 2396 | [1593, 2347] | 3395 | [3869, 3879] |
| 399 | [748, 711] | 1398 | [2231, 2232] | 2397 | [2337, 3286] | 3396 | [1353, 3880] |
| 400 | [749, 750] | 1399 | [2233, 639] | 2398 | [3287, 643] | 3397 | [2974, 3881] |
| 401 | [751, 752] | 1400 | [2234, 2235] | 2399 | [3284, 3288] | 3398 | [2663, 2723] |
| 402 | [753, 754] | 1401 | [32, 771] | 2400 | [3289, 3290] | 3399 | [3080, 1417] |
| 403 | [755, 756] | 1402 | [2236, 2237] | 2401 | [3291, 2157] | 3400 | [1360, 2586] |
| 404 | [757, 758] | 1403 | [2238, 1580] | 2402 | [3292, 3293] | 3401 | [350, 271] |
| 405 | [759, 760] | 1404 | [2239, 2240] | 2403 | [180, 3294] | 3402 | [2648, 2585] |
| 406 | [761, 762] | 1405 | [2241, 2242] | 2404 | [3295, 3296] | 3403 | [3882, 3883] |
| 407 | [763, 764] | 1406 | [1820, 2243] | 2405 | [2240, 3297] | 3404 | [3013, 3854] |
| 408 | [765, 766] | 1407 | [2244, 2138] | 2406 | [3298, 3299] | 3405 | [1037, 1285] |
| 409 | [767, 768] | 1408 | [2245, 2246] | 2407 | [3300, 3301] | 3406 | [3884, 1146] |
| 410 | [678, 589] | 1409 | [2247, 2248] | 2408 | [3302, 1602] | 3407 | [1319, 3230] |
| 411 | [769, 770] | 1410 | [2249, 2250] | 2409 | [3303, 1758] | 3408 | [2820, 2891] |
| 412 | [771, 772] | 1411 | [1603, 2251] | 2410 | [3304, 3305] | 3409 | [3116, 1437] |
| 413 | [773, 774] | 1412 | [2097, 2252] | 2411 | [3306, 3307] | 3410 | [1450, 1384] |
| 414 | [775, 776] | 1413 | [2253, 2254] | 2412 | [722, 3308] | 3411 | [2956, 1422] |
| 415 | [777, 778] | 1414 | [608, 2255] | 2413 | [3309, 2280] | 3412 | [3885, 1194] |
| 416 | [779, 220] | 1415 | [2256, 2257] | 2414 | [3310, 222] | 3413 | [2523, 3886] |
| 417 | [780, 781] | 1416 | [2258, 1868] | 2415 | [3311, 2136] | 3414 | [449, 2522] |
| 418 | [782, 783] | 1417 | [2259, 481] | 2416 | [3312, 164] | 3415 | [3874, 2913] |
| 419 | [525, 784] | 1418 | [2260, 245] | 2417 | [3313, 610] | 3416 | [1288, 2772] |
| 420 | [785, 786] | 1419 | [1587, 2261] | 2418 | [3314, 3315] | 3417 | [3149, 3865] |
| 421 | [787, 788] | 1420 | [2262, 2263] | 2419 | [3316, 237] | 3418 | [1027, 3061] |
| 422 | [789, 790] | 1421 | [1795, 2264] | 2420 | [3317, 2171] | 3419 | [3887, 3888] |
| 423 | [791, 792] | 1422 | [2257, 2265] | 2421 | [3318, 1772] | 3420 | [1383, 3889] |
| 424 | [14, 793] | 1423 | [747, 2266] | 2422 | [1701, 3300] | 3421 | [2465, 1318] |
| 425 | [794, 795] | 1424 | [2267, 2268] | 2423 | [3319, 1870] | 3422 | [3827, 3254] |
| 426 | [796, 797] | 1425 | [151, 2269] | 2424 | [188, 1903] | 3423 | [3122, 3190] |
| 427 | [798, 799] | 1426 | [2270, 2000] | 2425 | [2375, 2167] | 3424 | [3153, 2797] |
| 428 | [800, 801] | 1427 | [2271, 2226] | 2426 | [1550, 3320] | 3425 | [3249, 1193] |
| 429 | [802, 803] | 1428 | [2272, 2273] | 2427 | [862, 2234] | 3426 | [3890, 2483] |
| 430 | [804, 571] | 1429 | [1810, 1853] | 2428 | [1915, 3321] | 3427 | [3891, 2678] |
| 431 | [805, 806] | 1430 | [2274, 2275] | 2429 | [3322, 3323] | 3428 | [103, 2675] |
| 432 | [807, 808] | 1431 | [2276, 2277] | 2430 | [3324, 2312] | 3429 | [3889, 2461] |
| 433 | [809, 810] | 1432 | [2133, 698] | 2431 | [3325, 493] | 3430 | [2836, 943] |
| 434 | [811, 622] | 1433 | [2278, 2279] | 2432 | [3307, 2342] | 3431 | [1321, 3892] |
| 435 | [812, 813] | 1434 | [2280, 1994] | 2433 | [1586, 3326] | 3432 | [2999, 3893] |
| 436 | [814, 815] | 1435 | [2281, 2282] | 2434 | [3327, 1963] | 3433 | [2635, 3062] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 437 | [816, 817] | 1436 | [2283, 2284] | 2435 | [1655, 3306] | 3434 | [2948, 3021] |
| 438 | [818, 819] | 1437 | [2285, 1724] | 2436 | [3328, 3329] | 3435 | [1255, 411] |
| 439 | [820, 821] | 1438 | [2286, 542] | 2437 | [2373, 2224] | 3436 | [348, 3894] |
| 440 | [822, 823] | 1439 | [2287, 150] | 2438 | [1908, 2262] | 3437 | [422, 2388] |
| 441 | [824, 825] | 1440 | [2144, 2288] | 2439 | [3330, 3331] | 3438 | [3227, 3895] |
| 442 | [826, 827] | 1441 | [684, 2289] | 2440 | [3332, 812] | 3439 | [3896, 2546] |
| 443 | [828, 829] | 1442 | [2290, 2291] | 2441 | [2064, 3333] | 3440 | [3196, 3004] |
| 444 | [131, 573] | 1443 | [611, 2292] | 2442 | [3334, 2181] | 3441 | [3256, 2737] |
| 445 | [830, 831] | 1444 | [2293, 2294] | 2443 | [3335, 3336] | 3442 | [3118, 3856] |
| 446 | [832, 833] | 1445 | [851, 1960] | 2444 | [1583, 1640] | 3443 | [2583, 2920] |
| 447 | [488, 824] | 1446 | [1611, 2295] | 2445 | [192, 3337] | 3444 | [2642, 2706] |
| 448 | [834, 835] | 1447 | [601, 2296] | 2446 | [2080, 1837] | 3445 | [3897, 2743] |
| 449 | [836, 837] | 1448 | [2297, 2298] | 2447 | [3338, 3328] | 3446 | [3898, 3899] |
| 450 | [838, 839] | 1449 | [682, 868] | 2448 | [3339, 3340] | 3447 | [2687, 2917] |
| 451 | [840, 841] | 1450 | [2299, 2038] | 2449 | [3341, 3342] | 3448 | [3849, 3106] |
| 452 | [842, 843] | 1451 | [2300, 832] | 2450 | [835, 2239] | 3449 | [3900, 3901] |
| 453 | [844, 845] | 1452 | [2301, 2302] | 2451 | [3343, 3344] | 3450 | [3902, 3903] |
| 454 | [846, 847] | 1453 | [2303, 2304] | 2452 | [1692, 1523] | 3451 | [3904, 922] |
| 455 | [848, 849] | 1454 | [2305, 2306] | 2453 | [3345, 2325] | 3452 | [460, 3095] |
| 456 | [850, 851] | 1455 | [2307, 2308] | 2454 | [1744, 3346] | 3453 | [1188, 3143] |
| 457 | [852, 602] | 1456 | [569, 2309] | 2455 | [2182, 1773] | 3454 | [268, 2799] |
| 458 | [853, 748] | 1457 | [2310, 2311] | 2456 | [3347, 1821] | 3455 | [975, 432] |
| 459 | [482, 854] | 1458 | [2312, 2313] | 2457 | [2292, 3348] | 3456 | [3905, 2861] |
| 460 | [175, 855] | 1459 | [813, 2314] | 2458 | [3349, 3295] | 3457 | [1464, 1159] |
| 461 | [699, 856] | 1460 | [2315, 2316] | 2459 | [3350, 2260] | 3458 | [99, 3906] |
| 462 | [857, 619] | 1461 | [547, 2317] | 2460 | [2061, 2126] | 3459 | [3907, 3066] |
| 463 | [858, 859] | 1462 | [2318, 1665] | 2461 | [563, 3351] | 3460 | [2532, 3908] |
| 464 | [847, 860] | 1463 | [2319, 2068] | 2462 | [3352, 1834] | 3461 | [3909, 3910] |
| 465 | [486, 176] | 1464 | [2320, 743] | 2463 | [2242, 3353] | 3462 | [2504, 3911] |
| 466 | [861, 862] | 1465 | [2321, 2185] | 2464 | [3331, 3354] | 3463 | [969, 3223] |
| 467 | [863, 864] | 1466 | [2322, 2323] | 2465 | [3355, 3356] | 3464 | [430, 298] |
| 468 | [865, 866] | 1467 | [497, 1829] | 2466 | [3337, 3357] | 3465 | [3912, 2774] |
| 469 | [781, 867] | 1468 | [663, 2324] | 2467 | [3358, 3359] | 3466 | [3184, 928] |
| 470 | [868, 869] | 1469 | [129, 231] | 2468 | [1581, 3360] | 3467 | [1439, 3884] |
| 471 | [870, 871] | 1470 | [2325, 816] | 2469 | [3361, 1900] | 3468 | [3007, 2866] |
| 472 | [872, 873] | 1471 | [2326, 865] | 2470 | [147, 2073] | 3469 | [2794, 3262] |
| 473 | [874, 875] | 1472 | [2327, 2014] | 2471 | [2317, 3362] | 3470 | [3054, 1076] |
| 474 | [876, 877] | 1473 | [2328, 2249] | 2472 | [3363, 3364] | 3471 | [2515, 3891] |
| 475 | [878, 879] | 1474 | [2329, 487] | 2473 | [3365, 3366] | 3472 | [3913, 2905] |
| 476 | [880, 881] | 1475 | [2330, 2331] | 2474 | [2263, 3367] | 3473 | [1211, 3852] |
| 477 | [882, 883] | 1476 | [2332, 2333] | 2475 | [3368, 3369] | 3474 | [2995, 3845] |
| 478 | [884, 885] | 1477 | [2334, 2335] | 2476 | [511, 3370] | 3475 | [979, 1493] |
| 479 | [886, 887] | 1478 | [2336, 2337] | 2477 | [783, 1575] | 3476 | [3914, 3866] |
| 480 | [86, 888] | 1479 | [1889, 235] | 2478 | [3371, 727] | 3477 | [2802, 2987] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 481 | [889, 890] | 1480 | [2338, 2140] | 2479 | [1737, 3302] | 3478 | [2525, 2947] |
| 482 | [891, 892] | 1481 | [1860, 2339] | 2480 | [3372, 3373] | 3479 | [3232, 1500] |
| 483 | [893, 894] | 1482 | [1874, 2074] | 2481 | [599, 2290] | 3480 | [2438, 3915] |
| 484 | [895, 896] | 1483 | [1669, 2340] | 2482 | [3374, 1843] | 3481 | [74, 3897] |
| 485 | [897, 898] | 1484 | [2341, 1995] | 2483 | [3375, 3376] | 3482 | [2744, 3898] |
| 486 | [899, 341] | 1485 | [2342, 2343] | 2484 | [3377, 183] | 3483 | [2636, 2838] |
| 487 | [900, 901] | 1486 | [2344, 1962] | 2485 | [3378, 3379] | 3484 | [2821, 3916] |
| 488 | [902, 903] | 1487 | [2345, 708] | 2486 | [603, 3380] | 3485 | [2854, 1235] |
| 489 | [904, 905] | 1488 | [2346, 2300] | 2487 | [209, 3381] | 3486 | [2460, 3167] |
| 490 | [888, 906] | 1489 | [2347, 2348] | 2488 | [1849, 3317] | 3487 | [2865, 3215] |
| 491 | [907, 908] | 1490 | [2229, 763] | 2489 | [3382, 2216] | 3488 | [470, 3917] |
| 492 | [909, 910] | 1491 | [649, 2349] | 2490 | [3383, 3384] | 3489 | [890, 3918] |
| 493 | [911, 912] | 1492 | [1741, 1638] | 2491 | [1891, 2108] | 3490 | [908, 1003] |
| 494 | [913, 914] | 1493 | [1674, 2350] | 2492 | [3385, 3386] | 3491 | [3241, 3919] |
| 495 | [879, 915] | 1494 | [223, 2351] | 2493 | [3387, 556] | 3492 | [2783, 3920] |
| 496 | [916, 917] | 1495 | [2352, 2353] | 2494 | [1628, 3335] | 3493 | [3873, 3259] |
| 497 | [918, 919] | 1496 | [2354, 2355] | 2495 | [3388, 3389] | 3494 | [313, 952] |
| 498 | [920, 921] | 1497 | [2356, 848] | 2496 | [1681, 3390] | 3495 | [3921, 1308] |
| 499 | [922, 923] | 1498 | [2357, 2358] | 2497 | [3391, 3313] | 3496 | [1396, 3850] |
| 500 | [924, 925] | 1499 | [2359, 2360] | 2498 | [3392, 2165] | 3497 | [1278, 3922] |
| 501 | [926, 927] | 1500 | [1729, 2044] | 2499 | [2209, 577] | 3498 | [3195, 1392] |
| 502 | [928, 929] | 1501 | [2361, 2362] | 2500 | [3273, 233] | 3499 | [3923, 2473] |
| 503 | [930, 931] | 1502 | [2363, 2026] | 2501 | [3393, 2259] | 3500 | [3023, 450] |
| 504 | [932, 933] | 1503 | [2364, 2162] | 2502 | [3394, 3395] | 3501 | [3924, 3210] |
| 505 | [934, 935] | 1504 | [2365, 731] | 2503 | [2184, 3396] | 3502 | [2888, 2408] |
| 506 | [329, 936] | 1505 | [2366, 2367] | 2504 | [3397, 3398] | 3503 | [3861, 3925] |
| 507 | [937, 938] | 1506 | [1898, 2368] | 2505 | [3399, 3400] | 3504 | [1243, 249] |
| 508 | [939, 940] | 1507 | [2304, 714] | 2506 | [1600, 195] | 3505 | [3926, 1261] |
| 509 | [941, 942] | 1508 | [2369, 2370] | 2507 | [3401, 2087] | 3506 | [1125, 3927] |
| 510 | [943, 944] | 1509 | [1757, 1800] | 2508 | [3402, 3403] | 3507 | [2389, 3837] |
| 511 | [945, 946] | 1510 | [2371, 2372] | 2509 | [2302, 2040] | 3508 | [1419, 3867] |
| 512 | [947, 381] | 1511 | [793, 2373] | 2510 | [2052, 3404] | 3509 | [3928, 3265] |
| 513 | [948, 949] | 1512 | [2374, 2375] | 2511 | [2054, 2365] | 3510 | [2658, 3924] |
| 514 | [950, 951] | 1513 | [1879, 2376] | 2512 | [167, 3405] | 3511 | [3081, 2981] |
| 515 | [952, 953] | 1514 | [2377, 2378] | 2513 | [1759, 3406] | 3512 | [3929, 2852] |
| 516 | [954, 955] | 1515 | [2379, 2380] | 2514 | [1791, 3407] | 3513 | [3930, 3885] |
| 517 | [956, 957] | 1516 | [2381, 2382] | 2515 | [1865, 3388] | 3514 | [3189, 3121] |
| 518 | [342, 19] | 1517 | [2383, 2384] | 2516 | [1842, 3408] | 3515 | [1209, 3931] |
| 519 | [958, 959] | 1518 | [2385, 2386] | 2517 | [1844, 2118] | 3516 | [3901, 3142] |
| 520 | [960, 961] | 1519 | [2387, 409] | 2518 | [2035, 3409] | 3517 | [2958, 999] |
| 521 | [919, 962] | 1520 | [2388, 2389] | 2519 | [2355, 3410] | 3518 | [2884, 351] |
| 522 | [963, 964] | 1521 | [2390, 2391] | 2520 | [3411, 3412] | 3519 | [1004, 2405] |
| 523 | [965, 966] | 1522 | [30, 2392] | 2521 | [1616, 3413] | 3520 | [2997, 3170] |
| 524 | [967, 29] | 1523 | [2393, 2394] | 2522 | [2098, 3414] | 3521 | [2587, 2666] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 525 | [968, 969] | 1524 | [2395, 2396] | 2523 | [3415, 3416] | 3522 | [3932, 2916] |
| 526 | [970, 971] | 1525 | [2397, 2398] | 2524 | [3417, 3418] | 3523 | [3877, 3933] |
| 527 | [972, 973] | 1526 | [2399, 2400] | 2525 | [3419, 1893] | 3524 | [3934, 1341] |
| 528 | [974, 975] | 1527 | [1177, 2401] | 2526 | [3420, 3421] | 3525 | [3935, 1508] |
| 529 | [976, 977] | 1528 | [2402, 2403] | 2527 | [3422, 1617] | 3526 | [291, 3935] |
| 530 | [978, 979] | 1529 | [2404, 2385] | 2528 | [3275, 802] | 3527 | [3936, 2796] |
| 531 | [297, 980] | 1530 | [2405, 2399] | 2529 | [211, 539] | 3528 | [2992, 401] |
| 532 | [981, 982] | 1531 | [1362, 2406] | 2530 | [594, 2132] | 3529 | [2915, 1377] |
| 533 | [983, 984] | 1532 | [1113, 2407] | 2531 | [3423, 3393] | 3530 | [1474, 3937] |
| 534 | [985, 248] | 1533 | [437, 1381] | 2532 | [1971, 2202] | 3531 | [3938, 3053] |
| 535 | [986, 987] | 1534 | [2408, 2409] | 2533 | [1626, 3424] | 3532 | [2527, 3006] |
| 536 | [988, 989] | 1535 | [2410, 1246] | 2534 | [1683, 2211] | 3533 | [2848, 2809] |
| 537 | [990, 87] | 1536 | [2411, 2412] | 2535 | [3425, 3426] | 3534 | [3881, 2566] |
| 538 | [991, 956] | 1537 | [2413, 2414] | 2536 | [742, 3427] | 3535 | [3239, 2488] |
| 539 | [420, 992] | 1538 | [2415, 4] | 2537 | [3428, 1726] | 3536 | [3253, 1470] |
| 540 | [993, 994] | 1539 | [2416, 459] | 2538 | [3429, 1525] | 3537 | [3939, 17] |
| 541 | [987, 995] | 1540 | [66, 337] | 2539 | [543, 3430] | 3538 | [2779, 3836] |
| 542 | [996, 997] | 1541 | [2417, 2418] | 2540 | [737, 3431] | 3539 | [2785, 1291] |
| 543 | [443, 998] | 1542 | [2419, 2420] | 2541 | [3432, 3433] | 3540 | [3203, 118] |
| 544 | [999, 1000] | 1543 | [2421, 2422] | 2542 | [3434, 3435] | 3541 | [3925, 265] |
| 545 | [1001, 1002] | 1544 | [1075, 2423] | 2543 | [2149, 3436] | 3542 | [3113, 3822] |
| 546 | [1003, 1004] | 1545 | [2424, 2425] | 2544 | [1613, 2042] | 3543 | [3940, 1406] |
| 547 | [1005, 23] | 1546 | [2426, 1393] | 2545 | [3437, 1519] | 3544 | [3941, 2876] |
| 548 | [1006, 960] | 1547 | [2427, 2428] | 2546 | [3438, 3439] | 3545 | [2676, 2921] |
| 549 | [1007, 1008] | 1548 | [2429, 2430] | 2547 | [3360, 1906] | 3546 | [2691, 3162] |
| 550 | [1009, 1010] | 1549 | [2431, 2432] | 2548 | [3440, 2197] | 3547 | [2945, 1276] |
| 551 | [1011, 1012] | 1550 | [2391, 2433] | 2549 | [831, 3441] | 3548 | [3942, 2990] |
| 552 | [1013, 1014] | 1551 | [2434, 1176] | 2550 | [3442, 3443] | 3549 | [2528, 419] |
| 553 | [1012, 1015] | 1552 | [964, 2435] | 2551 | [1705, 3444] | 3550 | [3910, 1156] |
| 554 | [1016, 1017] | 1553 | [929, 110] | 2552 | [3445, 3446] | 3551 | [2773, 3943] |
| 555 | [1018, 1019] | 1554 | [1101, 2436] | 2553 | [3447, 600] | 3552 | [2409, 2424] |
| 556 | [1020, 1021] | 1555 | [2437, 2438] | 2554 | [3448, 3449] | 3553 | [388, 2789] |
| 557 | [1022, 1023] | 1556 | [2439, 2440] | 2555 | [3450, 3451] | 3554 | [392, 2540] |
| 558 | [447, 1024] | 1557 | [982, 2441] | 2556 | [3452, 2344] | 3555 | [2669, 2720] |
| 559 | [1025, 947] | 1558 | [250, 2442] | 2557 | [3453, 2200] | 3556 | [1290, 1429] |
| 560 | [1026, 1027] | 1559 | [1065, 391] | 2558 | [137, 3454] | 3557 | [3944, 275] |
| 561 | [1028, 1029] | 1560 | [2443, 2444] | 2559 | [762, 2051] | 3558 | [3864, 3945] |
| 562 | [1030, 288] | 1561 | [2445, 2390] | 2560 | [1959, 3455] | 3559 | [3908, 3946] |
| 563 | [1031, 1032] | 1562 | [2446, 2447] | 2561 | [1856, 1909] | 3560 | [3070, 3832] |
| 564 | [1033, 1034] | 1563 | [1213, 2448] | 2562 | [2077, 53] | 3561 | [2844, 2668] |
| 565 | [1035, 1036] | 1564 | [2449, 1181] | 2563 | [3456, 1883] | 3562 | [935, 2607] |
| 566 | [301, 1037] | 1565 | [2450, 2451] | 2564 | [1769, 3457] | 3563 | [1423, 3171] |
| 567 | [1038, 1039] | 1566 | [2452, 403] | 2565 | [3458, 2210] | 3564 | [2971, 2929] |
| 568 | [1040, 1041] | 1567 | [2453, 2454] | 2566 | [3459, 1672] | 3565 | [2708, 2944] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 569 | [1042, 1043] | 1568 | [2455, 2456] | 2567 | [3460, 1704] | 3566 | [3879, 3878] |
| 570 | [1044, 1045] | 1569 | [2457, 2458] | 2568 | [3461, 537] | 3567 | [3065, 2711] |
| 571 | [1046, 1047] | 1570 | [2459, 2431] | 2569 | [1943, 3462] | 3568 | [3947, 3948] |
| 572 | [1048, 1049] | 1571 | [914, 2460] | 2570 | [3463, 3324] | 3569 | [3946, 3949] |
| 573 | [1050, 1051] | 1572 | [2461, 2462] | 2571 | [713, 3464] | 3570 | [3831, 1445] |
| 574 | [915, 1052] | 1573 | [2463, 1379] | 2572 | [3465, 3466] | 3571 | [2898, 3926] |
| 575 | [1053, 1054] | 1574 | [2464, 2465] | 2573 | [3467, 1914] | 3572 | [3225, 2784] |
| 576 | [1055, 1056] | 1575 | [2466, 2467] | 2574 | [3468, 3463] | 3573 | [3892, 3218] |
| 577 | [1057, 1058] | 1576 | [2468, 2469] | 2575 | [3469, 3470] | 3574 | [2826, 3059] |
| 578 | [1059, 1060] | 1577 | [2380, 2470] | 2576 | [3471, 1965] | 3575 | [344, 3907] |
| 579 | [1061, 1062] | 1578 | [451, 1059] | 2577 | [3472, 206] | 3576 | [3246, 3875] |
| 580 | [1063, 345] | 1579 | [2471, 2472] | 2578 | [480, 2276] | 3577 | [1497, 1357] |
| 581 | [1064, 1065] | 1580 | [2473, 2474] | 2579 | [3473, 3338] | 3578 | [3247, 2434] |
| 582 | [955, 1066] | 1581 | [2475, 1475] | 2580 | [3474, 3475] | 3579 | [3950, 2869] |
| 583 | [1067, 1068] | 1582 | [2476, 2477] | 2581 | [3476, 1802] | 3580 | [1410, 2862] |
| 584 | [1069, 1070] | 1583 | [2478, 1115] | 2582 | [3477, 1563] | 3581 | [1408, 2524] |
| 585 | [1071, 1072] | 1584 | [1021, 2479] | 2583 | [3413, 3478] | 3582 | [3104, 3951] |
| 586 | [1029, 1073] | 1585 | [2436, 1182] | 2584 | [3479, 33] | 3583 | [1507, 2962] |
| 587 | [1074, 1075] | 1586 | [2480, 2481] | 2585 | [3480, 2238] | 3584 | [3927, 1506] |
| 588 | [1076, 902] | 1587 | [1344, 2482] | 2586 | [3481, 3482] | 3585 | [3263, 2427] |
| 589 | [1077, 1078] | 1588 | [2483, 2484] | 2587 | [1970, 3483] | 3586 | [2650, 2907] |
| 590 | [1079, 1080] | 1589 | [2485, 2402] | 2588 | [3408, 3484] | 3587 | [949, 3242] |
| 591 | [270, 1081] | 1590 | [2486, 2487] | 2589 | [3485, 3486] | 3588 | [3952, 1079] |
| 592 | [1082, 333] | 1591 | [2488, 2419] | 2590 | [246, 2063] | 3589 | [3848, 1329] |
| 593 | [1083, 1084] | 1592 | [2489, 273] | 2591 | [2056, 3487] | 3590 | [3236, 1511] |
| 594 | [1085, 1086] | 1593 | [2490, 2417] | 2592 | [54, 3488] | 3591 | [3088, 102] |
| 595 | [1087, 353] | 1594 | [2491, 2492] | 2593 | [2079, 3489] | 3592 | [3917, 1016] |
| 596 | [1088, 1089] | 1595 | [2493, 1499] | 2594 | [1985, 1702] | 3593 | [305, 1085] |
| 597 | [1090, 1091] | 1596 | [2494, 2495] | 2595 | [1776, 1647] | 3594 | [3029, 3825] |
| 598 | [1092, 934] | 1597 | [2496, 2497] | 2596 | [1544, 3490] | 3595 | [3911, 3953] |
| 599 | [1093, 1094] | 1598 | [2498, 2499] | 2597 | [490, 3491] | 3596 | [2877, 2965] |
| 600 | [1095, 1096] | 1599 | [2500, 2501] | 2598 | [3492, 3432] | 3597 | [89, 3031] |
| 601 | [414, 1097] | 1600 | [2502, 2503] | 2599 | [3493, 842] | 3598 | [1271, 1359] |
| 602 | [917, 1098] | 1601 | [2495, 2504] | 2600 | [3494, 1621] | 3599 | [3943, 2704] |
| 603 | [923, 1099] | 1602 | [2505, 2506] | 2601 | [1662, 3495] | 3600 | [3034, 2593] |
| 604 | [1100, 1101] | 1603 | [1153, 2507] | 2602 | [3496, 3497] | 3601 | [2736, 3077] |
| 605 | [1102, 1103] | 1604 | [2508, 2509] | 2603 | [232, 3498] | 3602 | [2451, 1404] |
| 606 | [1104, 296] | 1605 | [2510, 2511] | 2604 | [3499, 3500] | 3603 | [3260, 259] |
| 607 | [1105, 1106] | 1606 | [2512, 2513] | 2605 | [1554, 3501] | 3604 | [3937, 267] |
| 608 | [1107, 1108] | 1607 | [356, 302] | 2606 | [3502, 3503] | 3605 | [3846, 75] |
| 609 | [933, 1109] | 1608 | [898, 1168] | 2607 | [1904, 3437] | 3606 | [3097, 2859] |
| 610 | [1110, 1111] | 1609 | [2514, 2515] | 2608 | [3381, 3504] | 3607 | [1114, 1486] |
| 611 | [1112, 1113] | 1610 | [1091, 1172] | 2609 | [2277, 1767] | 3608 | [3945, 3037] |
| 612 | [338, 1114] | 1611 | [2516, 2517] | 2610 | [3390, 1651] | 3609 | [4, 3954] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 613 | [1115, 1006] | 1612 | [2518, 2519] | 2611 | [3505, 3506] | 3610 | [3951, 3939] |
| 614 | [1116, 1031] | 1613 | [2520, 967] | 2612 | [2176, 3507] | 3611 | [3955, 3229] |
| 615 | [1117, 1118] | 1614 | [1129, 2521] | 2613 | [3466, 3508] | 3612 | [299, 1375] |
| 616 | [1119, 1120] | 1615 | [2522, 2523] | 2614 | [3509, 3345] | 3613 | [3134, 3174] |
| 617 | [1121, 1035] | 1616 | [2524, 2525] | 2615 | [3510, 3511] | 3614 | [3096, 954] |
| 618 | [1122, 1123] | 1617 | [2526, 2527] | 2616 | [1941, 3471] | 3615 | [439, 2564] |
| 619 | [1124, 1125] | 1618 | [1361, 2528] | 2617 | [1952, 3512] | 3616 | [3243, 255] |
| 620 | [410, 1126] | 1619 | [2529, 978] | 2618 | [3513, 2322] | 3617 | [3915, 2526] |
| 621 | [1127, 1128] | 1620 | [1471, 65] | 2619 | [3301, 3514] | 3618 | [2686, 2975] |
| 622 | [938, 1129] | 1621 | [2530, 90] | 2620 | [3515, 3516] | 3619 | [951, 3952] |
| 623 | [1130, 1131] | 1622 | [2531, 2500] | 2621 | [636, 3365] | 3620 | [953, 1256] |
| 624 | [1132, 1133] | 1623 | [1335, 2532] | 2622 | [1892, 3517] | 3621 | [3956, 3957] |
| 625 | [1134, 1135] | 1624 | [1334, 2533] | 2623 | [527, 1799] | 3622 | [3003, 3163] |
| 626 | [1136, 1137] | 1625 | [2534, 2535] | 2624 | [3518, 3519] | 3623 | [3145, 2514] |
| 627 | [1138, 1139] | 1626 | [2536, 2537] | 2625 | [2091, 3520] | 3624 | [2835, 2742] |
| 628 | [1140, 1141] | 1627 | [2538, 2539] | 2626 | [1766, 2338] | 3625 | [2951, 3902] |
| 629 | [1142, 1143] | 1628 | [2540, 2541] | 2627 | [1910, 1682] | 3626 | [2638, 1303] |
| 630 | [1144, 1145] | 1629 | [2542, 2543] | 2628 | [1641, 3411] | 3627 | [1166, 3958] |
| 631 | [1146, 1147] | 1630 | [2544, 2545] | 2629 | [1659, 3521] | 3628 | [3144, 331] |
| 632 | [1148, 1149] | 1631 | [2546, 2547] | 2630 | [3522, 3423] | 3629 | [2868, 1229] |
| 633 | [1150, 1151] | 1632 | [2548, 2549] | 2631 | [3523, 3524] | 3630 | [971, 3941] |
| 634 | [1152, 1153] | 1633 | [1490, 2550] | 2632 | [645, 3525] | 3631 | [2444, 2883] |
| 635 | [1154, 1155] | 1634 | [1000, 2551] | 2633 | [3526, 2357] | 3632 | [2665, 3929] |
| 636 | [1156, 1157] | 1635 | [2552, 2553] | 2634 | [2083, 3316] | 3633 | [2798, 1300] |
| 637 | [1056, 1158] | 1636 | [2554, 2555] | 2635 | [3407, 3527] | 3634 | [3959, 3887] |
| 638 | [1159, 395] | 1637 | [1089, 2516] | 2636 | [3514, 677] | 3635 | [3045, 3914] |
| 639 | [1160, 1161] | 1638 | [2556, 2557] | 2637 | [3431, 3528] | 3636 | [3843, 2914] |
| 640 | [1162, 930] | 1639 | [2558, 2393] | 2638 | [1961, 1633] | 3637 | [3168, 1013] |
| 641 | [1163, 1164] | 1640 | [2559, 916] | 2639 | [3529, 3530] | 3638 | [1034, 1083] |
| 642 | [1165, 1166] | 1641 | [2560, 2561] | 2640 | [3531, 1528] | 3639 | [3960, 1055] |
| 643 | [1019, 1167] | 1642 | [2562, 2563] | 2641 | [3525, 3532] | 3640 | [1312, 114] |
| 644 | [1168, 1169] | 1643 | [2564, 2565] | 2642 | [2154, 3533] | 3641 | [3961, 461] |
| 645 | [1170, 1171] | 1644 | [319, 330] | 2643 | [3342, 479] | 3642 | [327, 3936] |
| 646 | [1172, 1173] | 1645 | [2566, 2567] | 2644 | [3534, 1693] | 3643 | [3859, 417] |
| 647 | [1174, 1175] | 1646 | [2568, 2569] | 2645 | [2266, 1623] | 3644 | [370, 3961] |
| 648 | [959, 897] | 1647 | [2570, 2429] | 2646 | [837, 2112] | 3645 | [3828, 2670] |
| 649 | [1176, 1177] | 1648 | [2571, 2572] | 2647 | [640, 502] | 3646 | [1325, 3257] |
| 650 | [1178, 1179] | 1649 | [2573, 1200] | 2648 | [2237, 3535] | 3647 | [28, 3942] |
| 651 | [1180, 1163] | 1650 | [260, 2574] | 2649 | [499, 3536] | 3648 | [2447, 3921] |
| 652 | [1181, 304] | 1651 | [2575, 2576] | 2650 | [3537, 1869] | 3649 | [1514, 3835] |
| 653 | [1182, 1183] | 1652 | [1281, 2577] | 2651 | [1996, 3538] | 3650 | [2701, 3962] |
| 654 | [1184, 1185] | 1653 | [2578, 2579] | 2652 | [1925, 2206] | 3651 | [400, 377] |
| 655 | [252, 1186] | 1654 | [2580, 2581] | 2653 | [1917, 3334] | 3652 | [1070, 1136] |
| 656 | [1187, 1188] | 1655 | [2582, 2583] | 2654 | [2043, 1885] | 3653 | [3963, 3956] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 657 | [1189, 1190] | 1656 | [2584, 367] | 2655 | [2208, 3539] | 3654 | [3964, 3905] |
| 658 | [1191, 1192] | 1657 | [2585, 891] | 2656 | [3540, 3372] | 3655 | [3231, 3955] |
| 659 | [1193, 965] | 1658 | [2586, 2587] | 2657 | [3541, 127] | 3656 | [3953, 3137] |
| 660 | [1194, 1195] | 1659 | [2588, 2589] | 2658 | [2086, 1689] | 3657 | [2754, 2426] |
| 661 | [1196, 1197] | 1660 | [386, 889] | 2659 | [1650, 3371] | 3658 | [3965, 3038] |
| 662 | [1198, 1199] | 1661 | [423, 2590] | 2660 | [3542, 3314] | 3659 | [123, 1465] |
| 663 | [1200, 1201] | 1662 | [2591, 2592] | 2661 | [728, 3543] | 3660 | [2506, 3928] |
| 664 | [1202, 1203] | 1663 | [2593, 2594] | 2662 | [3543, 3385] | 3661 | [1223, 2922] |
| 665 | [1204, 1205] | 1664 | [2595, 2596] | 2663 | [3544, 1980] | 3662 | [1205, 3169] |
| 666 | [1206, 1207] | 1665 | [2597, 2598] | 2664 | [2147, 3545] | 3663 | [408, 3959] |
| 667 | [1208, 1209] | 1666 | [2599, 2600] | 2665 | [3546, 3456] | 3664 | [2795, 1071] |
| 668 | [1210, 1211] | 1667 | [1068, 389] | 2666 | [3482, 3445] | 3665 | [3876, 2845] |
| 669 | [1212, 1213] | 1668 | [2601, 2602] | 2667 | [3483, 3547] | 3666 | [1380, 3136] |
| 670 | [1214, 1215] | 1669 | [2603, 2604] | 2668 | [3548, 3549] | 3667 | [307, 2692] |
| 671 | [1216, 1160] | 1670 | [994, 1110] | 2669 | [673, 518] | 3668 | [3058, 324] |
| 672 | [1207, 1217] | 1671 | [2605, 2606] | 2670 | [3550, 635] | 3669 | [3966, 2693] |
| 673 | [1218, 958] | 1672 | [2607, 2544] | 2671 | [3457, 637] | 3670 | [3032, 3913] |
| 674 | [1219, 1191] | 1673 | [2608, 2609] | 2672 | [3290, 3281] | 3671 | [1430, 3964] |
| 675 | [1220, 1221] | 1674 | [2497, 2610] | 2673 | [3501, 2128] | 3672 | [3931, 294] |
| 676 | [1222, 1223] | 1675 | [2611, 1154] | 2674 | [3551, 3552] | 3673 | [1275, 3829] |
| 677 | [1224, 1225] | 1676 | [1039, 879] | 2675 | [201, 3553] | 3674 | [3870, 3904] |
| 678 | [1226, 1227] | 1677 | [1023, 2612] | 2676 | [203, 3554] | 3675 | [390, 397] |
| 679 | [984, 1228] | 1678 | [258, 2613] | 2677 | [1730, 3555] | 3676 | [1323, 3967] |
| 680 | [1229, 1230] | 1679 | [2456, 2614] | 2678 | [3556, 814] | 3677 | [2969, 3181] |
| 681 | [1231, 1232] | 1680 | [2401, 2615] | 2679 | [3557, 1934] | 3678 | [3968, 2485] |
| 682 | [1233, 1234] | 1681 | [2616, 2575] | 2680 | [40, 2321] | 3679 | [2890, 3909] |
| 683 | [1235, 1236] | 1682 | [2617, 2618] | 2681 | [2001, 3558] | 3680 | [3916, 2730] |
| 684 | [1237, 1238] | 1683 | [1292, 2450] | 2682 | [3367, 655] | 3681 | [2903, 2768] |
| 685 | [1239, 1240] | 1684 | [2619, 2620] | 2683 | [3559, 3550] | 3682 | [3883, 1463] |
| 686 | [1241, 1242] | 1685 | [2621, 2622] | 2684 | [750, 185] | 3683 | [2576, 2502] |
| 687 | [264, 1243] | 1686 | [2623, 2538] | 2685 | [3560, 2341] | 3684 | [2598, 3201] |
| 688 | [1244, 1245] | 1687 | [2462, 2512] | 2686 | [3561, 617] | 3685 | [1260, 2973] |
| 689 | [1246, 1247] | 1688 | [2425, 2624] | 2687 | [632, 3562] | 3686 | [3103, 3966] |
| 690 | [1248, 1249] | 1689 | [2625, 2626] | 2688 | [3563, 3564] | 3687 | [2592, 2953] |
| 691 | [1250, 1251] | 1690 | [2627, 454] | 2689 | [2186, 2123] | 3688 | [2574, 284] |
| 692 | [1252, 1253] | 1691 | [2517, 2588] | 2690 | [3435, 2059] | 3689 | [3238, 3934] |
| 693 | [1254, 1255] | 1692 | [1008, 2628] | 2691 | [3565, 1786] | 3690 | [402, 1233] |
| 694 | [1256, 1092] | 1693 | [1158, 2568] | 2692 | [60, 3566] | 3691 | [3967, 1142] |
| 695 | [1257, 1258] | 1694 | [966, 2629] | 2693 | [3567, 1612] | 3692 | [1454, 3119] |
| 696 | [1259, 1260] | 1695 | [2630, 2631] | 2694 | [3568, 1738] | 3693 | [2695, 3969] |
| 697 | [1261, 1053] | 1696 | [1436, 2603] | 2695 | [792, 3374] | 3694 | [1440, 1093] |
| 698 | [973, 1262] | 1697 | [2632, 2633] | 2696 | [2050, 690] | 3695 | [1036, 1332] |
| 699 | [1263, 371] | 1698 | [2634, 2635] | 2697 | [1746, 3569] | 3696 | [1073, 355] |
| 700 | [1264, 1265] | 1699 | [2620, 2636] | 2698 | [2243, 1777] | 3697 | [303, 1064] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 701 | [1266, 1267] | 1700 | [2637, 1409] | 2699 | [3497, 1890] | 3698 | [2936, 2616] |
| 702 | [1268, 1269] | 1701 | [2472, 2638] | 2700 | [3570, 2236] | 3699 | [3108, 3858] |
| 703 | [1270, 1271] | 1702 | [1280, 2639] | 2701 | [590, 3571] | 3700 | [1442, 1425] |
| 704 | [428, 1272] | 1703 | [2640, 2641] | 2702 | [2368, 3341] | 3701 | [2957, 3199] |
| 705 | [1273, 1274] | 1704 | [2533, 2642] | 2703 | [2016, 692] | 3702 | [1185, 3248] |
| 706 | [1145, 1275] | 1705 | [2643, 2644] | 2704 | [3572, 1814] | 3703 | [111, 3214] |
| 707 | [1276, 1132] | 1706 | [2645, 2646] | 2705 | [3573, 2301] | 3704 | [3970, 2630] |
| 708 | [1277, 1278] | 1707 | [2647, 1340] | 2706 | [3424, 2227] | 3705 | [1240, 2505] |
| 709 | [1279, 1280] | 1708 | [1342, 2648] | 2707 | [3574, 3575] | 3706 | [944, 263] |
| 710 | [1186, 1281] | 1709 | [435, 1458] | 2708 | [3516, 61] | 3707 | [1330, 124] |
| 711 | [1282, 882] | 1710 | [2649, 2650] | 2709 | [3576, 2334] | 3708 | [1047, 1488] |
| 712 | [1283, 1284] | 1711 | [2651, 2652] | 2710 | [3577, 1740] | 3709 | [3886, 469] |
| 713 | [1285, 1286] | 1712 | [2653, 2654] | 2711 | [3578, 3579] | 3710 | [3125, 3868] |
| 714 | [1287, 1288] | 1713 | [1269, 2489] | 2712 | [3580, 3581] | 3711 | [3182, 3207] |
| 715 | [1289, 1290] | 1714 | [2655, 2656] | 2713 | [3454, 3582] | 3712 | [366, 1057] |
| 716 | [1291, 1292] | 1715 | [2657, 1453] | 2714 | [3583, 3584] | 3713 | [3009, 3971] |
| 717 | [1293, 1294] | 1716 | [1238, 2658] | 2715 | [1901, 3585] | 3714 | [1002, 3183] |
| 718 | [1295, 1296] | 1717 | [2659, 25] | 2716 | [3586, 1928] | 3715 | [3204, 3264] |
| 719 | [474, 1254] | 1718 | [2660, 2661] | 2717 | [1629, 2213] | 3716 | [931, 3049] |
| 720 | [1297, 1298] | 1719 | [2454, 2662] | 2718 | [3587, 1768] | 3717 | [3177, 2459] |
| 721 | [940, 1299] | 1720 | [22, 2663] | 2719 | [3588, 3589] | 3718 | [1421, 3073] |
| 722 | [1300, 1301] | 1721 | [2664, 2665] | 2720 | [3549, 2028] | 3719 | [1505, 3900] |
| 723 | [119, 1302] | 1722 | [2666, 2667] | 2721 | [3326, 1590] | 3720 | [3094, 310] |
| 724 | [1303, 948] | 1723 | [2668, 2669] | 2722 | [3590, 3280] | 3721 | [1478, 3233] |
| 725 | [1304, 1305] | 1724 | [2670, 2671] | 2723 | [3591, 1886] | 3722 | [1097, 3960] |
| 726 | [1306, 1307] | 1725 | [2672, 2673] | 2724 | [2101, 514] | 3723 | [418, 2466] |
| 727 | [1308, 1309] | 1726 | [2428, 2674] | 2725 | [3592, 3499] | 3724 | [1462, 970] |
| 728 | [1310, 100] | 1727 | [2675, 2676] | 2726 | [171, 3593] | 3725 | [2959, 3255] |
| 729 | [1311, 1312] | 1728 | [1328, 2677] | 2727 | [774, 1808] | 3726 | [2748, 904] |
| 730 | [1192, 1313] | 1729 | [2678, 2679] | 2728 | [3594, 3271] | 3727 | [3920, 3972] |
| 731 | [1314, 1116] | 1730 | [2667, 2552] | 2729 | [3595, 3596] | 3728 | [1386, 1489] |
| 732 | [1315, 990] | 1731 | [2680, 2681] | 2730 | [3597, 1824] | 3729 | [3159, 413] |
| 733 | [1106, 1316] | 1732 | [2644, 2682] | 2731 | [3598, 3429] | 3730 | [3235, 3071] |
| 734 | [1317, 326] | 1733 | [2683, 2684] | 2732 | [3599, 3600] | 3731 | [2759, 1187] |
| 735 | [1318, 1319] | 1734 | [2685, 2686] | 2733 | [494, 3601] | 3732 | [3973, 2938] |
| 736 | [1320, 1321] | 1735 | [885, 2687] | 2734 | [3602, 3603] | 3733 | [3855, 3026] |
| 737 | [1322, 1323] | 1736 | [2688, 2689] | 2735 | [1815, 2175] | 3734 | [406, 3871] |
| 738 | [1324, 1325] | 1737 | [2633, 895] | 2736 | [3426, 3604] | 3735 | [3949, 3973] |
| 739 | [1326, 1170] | 1738 | [2690, 2691] | 2737 | [2159, 681] | 3736 | [3962, 3965] |
| 740 | [892, 1206] | 1739 | [2692, 1196] | 2738 | [1835, 3322] | 3737 | [2986, 3091] |
| 741 | [1014, 1327] | 1740 | [2693, 2562] | 2739 | [803, 3605] | 3738 | [3954, 1314] |
| 742 | [1015, 1328] | 1741 | [2694, 2695] | 2740 | [3606, 2218] | 3739 | [2467, 3109] |
| 743 | [1329, 1330] | 1742 | [2696, 1390] | 2741 | [654, 3607] | 3740 | [376, 3974] |
| 744 | [1331, 1252] | 1743 | [2697, 2698] | 2742 | [3608, 1997] | 3741 | [2750, 2688] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 745 | [1332, 1333] | 1744 | [91, 2699] | 2743 | [149, 3526] | 3742 | [1190, 2927] |
| 746 | [1316, 1334] | 1745 | [1249, 2700] | 2744 | [3609, 3610] | 3743 | [3919, 1074] |
| 747 | [1183, 1335] | 1746 | [354, 2701] | 2745 | [3611, 3612] | 3744 | [113, 3860] |
| 748 | [1336, 974] | 1747 | [1512, 2702] | 2746 | [3613, 2177] | 3745 | [3157, 3000] |
| 749 | [1337, 320] | 1748 | [2703, 1220] | 2747 | [1566, 3602] | 3746 | [3880, 1498] |
| 750 | [1338, 1339] | 1749 | [2704, 1067] | 2748 | [1867, 3614] | 3747 | [101, 73] |
| 751 | [1340, 261] | 1750 | [76, 1219] | 2749 | [2004, 3563] | 3748 | [2700, 3099] |
| 752 | [1341, 1342] | 1751 | [1199, 2705] | 2750 | [3369, 3330] | 3749 | [2939, 3963] |
| 753 | [1343, 1344] | 1752 | [2706, 2707] | 2751 | [1964, 3468] | 3750 | [394, 3148] |
| 754 | [1345, 1293] | 1753 | [2430, 2708] | 2752 | [3615, 3616] | 3751 | [3895, 2872] |
| 755 | [266, 1346] | 1754 | [2709, 2710] | 2753 | [1579, 1958] | 3752 | [2613, 3882] |
| 756 | [1347, 1348] | 1755 | [332, 986] | 2754 | [3500, 3617] | 3753 | [3110, 3166] |
| 757 | [1349, 1350] | 1756 | [2711, 2712] | 2755 | [667, 3618] | 3754 | [3217, 1431] |
| 758 | [1049, 1351] | 1757 | [2713, 2380] | 2756 | [3619, 3620] | 3755 | [3130, 918] |
| 759 | [1352, 1353] | 1758 | [2714, 2715] | 2757 | [3621, 3622] | 3756 | [1501, 1239] |
| 760 | [1197, 1354] | 1759 | [396, 2716] | 2758 | [3539, 1930] | 3757 | [2646, 3968] |
| 761 | [1094, 1355] | 1760 | [105, 2717] | 2759 | [3623, 2366] | 3758 | [3958, 963] |
| 762 | [1356, 106] | 1761 | [2718, 2719] | 2760 | [3547, 546] | 3759 | [2535, 2640] |
| 763 | [1357, 1358] | 1762 | [2720, 269] | 2761 | [3527, 2319] | 3760 | [3826, 3896] |
| 764 | [1359, 1360] | 1763 | [2721, 2722] | 2762 | [3624, 1643] | 3761 | [3888, 2885] |
| 765 | [359, 1361] | 1764 | [2723, 1370] | 2763 | [2201, 674] | 3762 | [1147, 1061] |
| 766 | [361, 1362] | 1765 | [2724, 2725] | 2764 | [1793, 3625] | 3763 | [3903, 3863] |
| 767 | [1363, 1364] | 1766 | [2726, 2727] | 2765 | [3626, 723] | 3764 | [3841, 3250] |
| 768 | [1365, 1366] | 1767 | [2728, 2383] | 2766 | [2199, 3627] | 3765 | [3033, 3200] |
| 769 | [1041, 1367] | 1768 | [2729, 387] | 2767 | [2203, 3628] | 3766 | [1401, 94] |
| 770 | [1368, 71] | 1769 | [2730, 1104] | 2768 | [3297, 1700] | 3767 | [1495, 1241] |
| 771 | [64, 1324] | 1770 | [980, 2731] | 2769 | [3629, 679] | 3768 | [3213, 1270] |
| 772 | [1369, 1130] | 1771 | [2732, 2733] | 2770 | [3351, 3606] | 3769 | [1367, 3261] |
| 773 | [1370, 1117] | 1772 | [2734, 2672] | 2771 | [1976, 627] | 3770 | [3187, 3975] |
| 774 | [1371, 1372] | 1773 | [2735, 2736] | 2772 | [2045, 1615] | 3771 | [3974, 3938] |
| 775 | [1373, 1374] | 1774 | [2737, 1237] | 2773 | [701, 3572] | 3772 | [3957, 3950] |
| 776 | [1375, 1376] | 1775 | [2738, 2570] | 2774 | [3555, 2094] | 3773 | [2800, 2756] |
| 777 | [1377, 1378] | 1776 | [2739, 2740] | 2775 | [3436, 3630] | 3774 | [3893, 1162] |
| 778 | [1379, 1380] | 1777 | [2741, 1434] | 2776 | [3620, 3588] | 3775 | [3005, 1399] |
| 779 | [1381, 427] | 1778 | [2742, 1077] | 2777 | [592, 3392] | 3776 | [70, 1389] |
| 780 | [1382, 1383] | 1779 | [2743, 2744] | 2778 | [3618, 3515] | 3777 | [2609, 3258] |
| 781 | [1384, 67] | 1780 | [2745, 2746] | 2779 | [2196, 3631] | 3778 | [2842, 393] |
| 782 | [1385, 1386] | 1781 | [2747, 2748] | 2780 | [1798, 3632] | 3779 | [2769, 3135] |
| 783 | [378, 1387] | 1782 | [2749, 2750] | 2781 | [1805, 712] | 3780 | [336, 2621] |
| 784 | [445, 1388] | 1783 | [2751, 2548] | 2782 | [3279, 3633] | 3781 | [1476, 3158] |
| 785 | [1389, 913] | 1784 | [2752, 112] | 2783 | [1712, 3634] | 3782 | [2943, 77] |
| 786 | [1390, 1391] | 1785 | [2753, 2754] | 2784 | [1863, 2369] | 3783 | [1242, 3823] |
| 787 | [1392, 884] | 1786 | [309, 2755] | 2785 | [3635, 3636] | 3784 | [2492, 1513] |
| 788 | [468, 1345] | 1787 | [2756, 2757] | 2786 | [3637, 551] | 3785 | [3851, 3133] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 789 | [1393, 1394] | 1788 | [2758, 2759] | 2787 | [3294, 3638] | 3786 | [3048, 3151] |
| 790 | [1395, 1396] | 1789 | [1309, 2760] | 2788 | [3639, 575] | 3787 | [2398, 1441] |
| 791 | [1397, 1310] | 1790 | [1234, 1028] | 2789 | [730, 3640] | 3788 | [1245, 3085] |
| 792 | [1398, 471] | 1791 | [2761, 920] | 2790 | [3641, 154] | 3789 | [2396, 3947] |
| 793 | [1399, 1400] | 1792 | [2762, 357] | 2791 | [1828, 1912] | 3790 | [2563, 2478] |
| 794 | [16, 1401] | 1793 | [2740, 2763] | 2792 | [1830, 3477] | 3791 | [1133, 3228] |
| 795 | [1402, 1403] | 1794 | [2414, 2764] | 2793 | [3475, 3318] | 3792 | [1161, 3205] |
| 796 | [1404, 1405] | 1795 | [2765, 383] | 2794 | [845, 3529] | 3793 | [1215, 1210] |
| 797 | [1406, 932] | 1796 | [1374, 2766] | 2795 | [1894, 2100] | 3794 | [3844, 3127] |
| 798 | [1407, 1408] | 1797 | [1376, 2767] | 2796 | [3410, 1945] | 3795 | [2961, 3890] |
| 799 | [1409, 1410] | 1798 | [2768, 2769] | 2797 | [3403, 2179] | 3796 | [1099, 2996] |
| 800 | [1411, 1250] | 1799 | [2770, 2739] | 2798 | [2294, 2114] | 3797 | [3969, 3912] |
| 801 | [1412, 1095] | 1800 | [2551, 1257] | 2799 | [515, 3619] | 3798 | [3933, 3923] |
| 802 | [1413, 1414] | 1801 | [1433, 2771] | 2800 | [3642, 3643] | 3799 | [998, 3044] |
| 803 | [325, 1218] | 1802 | [2772, 2773] | 2801 | [3446, 1779] | 3800 | [3252, 2571] |
| 804 | [1072, 1048] | 1803 | [374, 425] | 2802 | [3346, 1991] | 3801 | [3175, 465] |
| 805 | [1415, 1416] | 1804 | [2774, 1283] | 2803 | [190, 3644] | 3802 | [3894, 886] |
| 806 | [1417, 1418] | 1805 | [2775, 937] | 2804 | [3645, 2247] | 3803 | [117, 3090] |
| 807 | [1416, 1419] | 1806 | [2757, 2776] | 2805 | [1718, 3646] | 3804 | [93, 3140] |
| 808 | [894, 1420] | 1807 | [2777, 2778] | 2806 | [3344, 2085] | 3805 | [3179, 2923] |
| 809 | [896, 1421] | 1808 | [1103, 2683] | 2807 | [873, 696] | 3806 | [3948, 3930] |
| 810 | [1422, 1423] | 1809 | [1372, 2779] | 2808 | [3647, 3648] | 3807 | [3918, 2758] |
| 811 | [1424, 463] | 1810 | [1058, 2780] | 2809 | [2255, 3309] | 3808 | [2933, 3932] |
| 812 | [1425, 1426] | 1811 | [1062, 2781] | 2810 | [3649, 1866] | 3809 | [3011, 3191] |
| 813 | [1427, 1428] | 1812 | [2782, 2783] | 2811 | [3569, 3650] | 3810 | [3862, 3940] |
| 814 | [1355, 1411] | 1813 | [2622, 1122] | 2812 | [3632, 2049] | 3811 | [2788, 300] |
| 815 | [1429, 1412] | 1814 | [1267, 1226] | 2813 | [207, 3651] | 3812 | [2710, 69] |
| 816 | [1418, 1430] | 1815 | [2784, 2785] | 2814 | [3652, 1857] | 3813 | [311, 2530] |
| 817 | [1431, 1432] | 1816 | [1203, 2786] | 2815 | [2119, 168] | 3814 | [2725, 3842] |
| 818 | [1017, 1433] | 1817 | [2787, 415] | 2816 | [3653, 1935] | 3815 | [3036, 1040] |
| 819 | [1434, 1311] | 1818 | [1139, 2788] | 2817 | [3654, 3546] | 3816 | [3155, 358] |
| 820 | [1435, 1436] | 1819 | [2789, 2790] | 2818 | [3517, 2007] | 3817 | [3922, 3124] |
| 821 | [1437, 1438] | 1820 | [2791, 2792] | 2819 | [3655, 3656] | 3818 | [3975, 3944] |
| 822 | [1051, 1439] | 1821 | [416, 2752] | 2820 | [626, 3657] | 3819 | [2433, 2886] |
| 823 | [295, 1440] | 1822 | [925, 2490] | 2821 | [618, 3597] | 3820 | [3972, 306] |
| 824 | [901, 1369] | 1823 | [2793, 2794] | 2822 | [3506, 3583] | 3821 | [3976, 3664] |
| 825 | [1441, 1442] | 1824 | [1123, 2795] | 2823 | [1564, 3655] | 3822 | [3752, 3592] |
| 826 | [1443, 1444] | 1825 | [2796, 349] | 2824 | [2105, 1920] | 3823 | [2047, 3809] |
| 827 | [1445, 1446] | 1826 | [2797, 2798] | 2825 | [3658, 3641] | 3824 | [3370, 3377] |
| 828 | [1447, 1448] | 1827 | [2799, 2800] | 2826 | [3659, 1599] | 3825 | [3759, 3816] |
| 829 | [1302, 385] | 1828 | [2553, 2801] | 2827 | [3535, 2] | 3826 | [3760, 3438] |
| 830 | [1449, 1450] | 1829 | [1446, 2802] | 2828 | [2251, 3660] | 3827 | [36, 3707] |
| 831 | [1451, 1452] | 1830 | [2803, 2804] | 2829 | [2036, 1753] | 3828 | [758, 3730] |
| 832 | [1453, 1454] | 1831 | [2805, 2806] | 2830 | [2006, 485] | 3829 | [3751, 3777] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 833 | [1455, 1456] | 1832 | [2807, 2808] | 2831 | [2340, 3661] | 3830 | [3779, 2191] |
| 834 | [1457, 1306] | 1833 | [1348, 1259] | 2832 | [3662, 3513] | 3831 | [145, 3556] |
| 835 | [1458, 1459] | 1834 | [2809, 2810] | 2833 | [3633, 721] | 3832 | [1936, 716] |
| 836 | [1460, 1202] | 1835 | [2811, 2812] | 2834 | [217, 3663] | 3833 | [2288, 3817] |
| 837 | [1461, 1462] | 1836 | [2717, 2813] | 2835 | [3575, 2253] | 3834 | [2125, 1578] |
| 838 | [1463, 1464] | 1837 | [2814, 2726] | 2836 | [3643, 498] | 3835 | [609, 3762] |
| 839 | [1465, 290] | 1838 | [2815, 2816] | 2837 | [1825, 3664] | 3836 | [3348, 3502] |
| 840 | [1466, 1455] | 1839 | [2817, 2664] | 2838 | [3323, 3623] | 3837 | [2217, 3819] |
| 841 | [1467, 1244] | 1840 | [2818, 1212] | 2839 | [3665, 1937] | 3838 | [3277, 3496] |
| 842 | [1468, 281] | 1841 | [2819, 2820] | 2840 | [3666, 2102] | 3839 | [709, 2076] |
| 843 | [293, 1469] | 1842 | [2596, 2821] | 2841 | [3554, 3667] | 3840 | [3977, 2022] |
| 844 | [1470, 1471] | 1843 | [2822, 2823] | 2842 | [553, 741] | 3841 | [3564, 2231] |
| 845 | [1472, 1473] | 1844 | [2824, 1277] | 2843 | [3664, 3417] | 3842 | [2275, 3705] |
| 846 | [962, 1474] | 1845 | [1327, 2817] | 2844 | [3668, 579] | 3843 | [3800, 3673] |
| 847 | [1444, 1178] | 1846 | [2825, 2826] | 2845 | [3614, 2021] | 3844 | [3508, 3792] |
| 848 | [1475, 1476] | 1847 | [2827, 1005] | 2846 | [3669, 660] | 3845 | [1677, 3653] |
| 849 | [278, 1468] | 1848 | [905, 2828] | 2847 | [1572, 3310] | 3846 | [3811, 152] |
| 850 | [352, 1415] | 1849 | [1179, 2829] | 2848 | [3584, 3287] | 3847 | [2161, 2158] |
| 851 | [887, 1477] | 1850 | [256, 2830] | 2849 | [2018, 2075] | 3848 | [628, 2150] |
| 852 | [1366, 1478] | 1851 | [2831, 457] | 2850 | [3405, 506] | 3849 | [3650, 3735] |
| 853 | [1120, 1479] | 1852 | [1339, 2832] | 2851 | [2350, 524] | 3850 | [2228, 3637] |
| 854 | [1480, 1481] | 1853 | [2677, 2833] | 2852 | [1933, 3349] | 3851 | [242, 3793] |
| 855 | [1217, 1482] | 1854 | [2780, 1044] | 2853 | [2124, 685] | 3852 | [2003, 3677] |
| 856 | [1262, 1483] | 1855 | [2834, 2835] | 2854 | [534, 134] | 3853 | [2358, 1565] |
| 857 | [1109, 1484] | 1856 | [883, 2836] | 2855 | [2070, 3670] | 3854 | [548, 2293] |
| 858 | [957, 1485] | 1857 | [2833, 2765] | 2856 | [2129, 3542] | 3855 | [3627, 3757] |
| 859 | [1486, 1174] | 1858 | [2423, 2837] | 2857 | [3340, 2222] | 3856 | [3785, 2188] |
| 860 | [1473, 1487] | 1859 | [2838, 1007] | 2858 | [3671, 3479] | 3857 | [2192, 2256] |
| 861 | [1488, 316] | 1860 | [2641, 318] | 2859 | [1951, 3672] | 3858 | [1739, 3577] |
| 862 | [1032, 1198] | 1861 | [2839, 2840] | 2860 | [3673, 3590] | 3859 | [1526, 3725] |
| 863 | [1489, 1490] | 1862 | [109, 2841] | 2861 | [3674, 3450] | 3860 | [221, 3368] |
| 864 | [1491, 1492] | 1863 | [2840, 1395] | 2862 | [1780, 3268] | 3861 | [3797, 3671] |
| 865 | [1493, 1494] | 1864 | [289, 2842] | 2863 | [3675, 3505] | 3862 | [2172, 3492] |
| 866 | [1350, 1495] | 1865 | [2843, 2844] | 2864 | [1956, 844] | 3863 | [492, 3285] |
| 867 | [1496, 1497] | 1866 | [2845, 1449] | 2865 | [3676, 587] | 3864 | [3579, 9] |
| 868 | [1498, 911] | 1867 | [1143, 2449] | 2866 | [3677, 2285] | 3865 | [806, 1535] |
| 869 | [1499, 96] | 1868 | [1167, 1289] | 2867 | [2020, 3678] | 3866 | [3272, 1597] |
| 870 | [1500, 1501] | 1869 | [2846, 1216] | 2868 | [3362, 2029] | 3867 | [1687, 3565] |
| 871 | [1502, 1503] | 1870 | [1265, 2847] | 2869 | [3679, 593] | 3868 | [3416, 1973] |
| 872 | [1504, 1505] | 1871 | [1414, 2848] | 2870 | [3680, 2336] | 3869 | [3366, 2034] |
| 873 | [1506, 1507] | 1872 | [2470, 1264] | 2871 | [1884, 1635] | 3870 | [3678, 1588] |
| 874 | [1508, 442] | 1873 | [2849, 1266] | 2872 | [3681, 3397] | 3871 | [3672, 2278] |
| 875 | [1509, 1510] | 1874 | [2513, 2850] | 2873 | [1548, 1760] | 3872 | [2058, 1567] |
| 876 | [1511, 1512] | 1875 | [881, 2851] | 2874 | [3682, 3683] | 3873 | [3600, 1749] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 877 | [1513, 1514] | 1876 | [1054, 2741] | 2875 | [2134, 3574] | 3874 | [3498, 3978] |
| 878 | [1515, 819] | 1877 | [2852, 2457] | 2876 | [1666, 3684] | 3875 | [3558, 1559] |
| 879 | [1516, 1517] | 1878 | [2853, 2854] | 2877 | [3685, 1950] | 3876 | [3288, 798] |
| 880 | [1518, 664] | 1879 | [1483, 2855] | 2878 | [3686, 3401] | 3877 | [3794, 3979] |
| 881 | [1519, 1520] | 1880 | [2856, 2857] | 2879 | [2378, 1916] | 3878 | [3308, 1966] |
| 882 | [1521, 1522] | 1881 | [2858, 2559] | 2880 | [719, 2303] | 3879 | [572, 2245] |
| 883 | [1523, 1524] | 1882 | [1482, 2849] | 2881 | [1784, 2327] | 3880 | [3764, 1896] |
| 884 | [1525, 1526] | 1883 | [2859, 2860] | 2882 | [1836, 2110] | 3881 | [1624, 3460] |
| 885 | [1527, 779] | 1884 | [2861, 2554] | 2883 | [3336, 767] | 3882 | [3804, 2299] |
| 886 | [1528, 138] | 1885 | [2862, 2713] | 2884 | [3687, 3688] | 3883 | [3589, 2320] |
| 887 | [1529, 1530] | 1886 | [2629, 926] | 2885 | [1711, 3573] | 3884 | [1787, 1926] |
| 888 | [1531, 1532] | 1887 | [2863, 1046] | 2886 | [3538, 3689] | 3885 | [3791, 3518] |
| 889 | [1533, 1534] | 1888 | [2864, 452] | 2887 | [665, 2069] | 3886 | [3414, 3567] |
| 890 | [1535, 1536] | 1889 | [384, 2865] | 2888 | [740, 142] | 3887 | [236, 2258] |
| 891 | [1537, 625] | 1890 | [2866, 405] | 2889 | [3690, 3691] | 3888 | [3651, 2361] |
| 892 | [1538, 1539] | 1891 | [2867, 2868] | 2890 | [3449, 2153] | 3889 | [2166, 863] |
| 893 | [825, 1540] | 1892 | [2869, 2870] | 2891 | [3656, 3611] | 3890 | [3728, 3820] |
| 894 | [1541, 1542] | 1893 | [283, 2871] | 2892 | [2254, 644] | 3891 | [1652, 3557] |
| 895 | [1543, 1544] | 1894 | [2872, 2608] | 2893 | [3628, 1537] | 3892 | [2143, 1561] |
| 896 | [1545, 1546] | 1895 | [1080, 2791] | 2894 | [3692, 782] | 3893 | [3810, 1788] |
| 897 | [1547, 1548] | 1896 | [2873, 429] | 2895 | [3693, 807] | 3894 | [3364, 3693] |
| 898 | [1549, 1550] | 1897 | [2874, 2875] | 2896 | [530, 3474] | 3895 | [3753, 3771] |
| 899 | [1551, 648] | 1898 | [2876, 2877] | 2897 | [3694, 3680] | 3896 | [2323, 3465] |
| 900 | [523, 1552] | 1899 | [2878, 2653] | 2898 | [3695, 3544] | 3897 | [3582, 3609] |
| 901 | [1553, 1554] | 1900 | [2879, 1315] | 2899 | [3696, 1897] | 3898 | [3801, 1848] |
| 902 | [1555, 1556] | 1901 | [2763, 2762] | 2900 | [2362, 2148] | 3899 | [3610, 3738] |
| 903 | [772, 650] | 1902 | [2880, 2881] | 2901 | [2111, 2160] | 3900 | [3596, 652] |
| 904 | [1557, 1558] | 1903 | [456, 2882] | 2902 | [3444, 804] | 3901 | [2367, 2345] |
| 905 | [1559, 607] | 1904 | [2883, 2387] | 2903 | [155, 3697] | 3902 | [3980, 3772] |
| 906 | [770, 1560] | 1905 | [2400, 2884] | 2904 | [3698, 1680] | 3903 | [3720, 3652] |
| 907 | [1561, 1562] | 1906 | [2885, 968] | 2905 | [3699, 3595] | 3904 | [869, 3789] |
| 908 | [1563, 1564] | 1907 | [2886, 2814] | 2906 | [3530, 3700] | 3905 | [3719, 3448] |
| 909 | [1565, 1566] | 1908 | [1405, 2887] | 2907 | [1854, 158] | 3906 | [1811, 1608] |
| 910 | [1567, 1568] | 1909 | [1043, 2888] | 2908 | [2268, 187] | 3907 | [3713, 2048] |
| 911 | [1569, 1570] | 1910 | [997, 2889] | 2909 | [3701, 3702] | 3908 | [2156, 1880] |
| 912 | [1571, 1572] | 1911 | [2786, 286] | 2910 | [823, 3467] | 3909 | [3978, 3980] |
| 913 | [1573, 1574] | 1912 | [2555, 2890] | 2911 | [2204, 3703] | 3910 | [1764, 1942] |
| 914 | [1575, 1576] | 1913 | [82, 2718] | 2912 | [3270, 3704] | 3911 | [3389, 670] |
| 915 | [819, 1577] | 1914 | [2891, 1124] | 2913 | [3702, 1822] | 3912 | [3812, 3806] |
| 916 | [1578, 1579] | 1915 | [2715, 2892] | 2914 | [3705, 483] | 3913 | [3524, 3798] |
| 917 | [1580, 1581] | 1916 | [1164, 2893] | 2915 | [3706, 3629] | 3914 | [3700, 659] |
| 918 | [1582, 1583] | 1917 | [2894, 2895] | 2916 | [3707, 3453] | 3915 | [3617, 3422] |
| 919 | [1584, 1521] | 1918 | [2716, 1148] | 2917 | [3644, 3658] | 3916 | [3490, 1858] |
| 920 | [1585, 1586] | 1919 | [2589, 2896] | 2918 | [1622, 3659] | 3917 | [3286, 3541] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 921 | [532, 1587] | 1920 | [2897, 2898] | 2919 | [1998, 614] | 3918 | [1714, 3692] |
| 922 | [1588, 1589] | 1921 | [2899, 2900] | 2920 | [3708, 3608] | 3919 | [1803, 3698] |
| 923 | [1590, 1591] | 1922 | [2707, 2597] | 2921 | [3553, 3675] | 3920 | [561, 585] |
| 924 | [1592, 1593] | 1923 | [2901, 2902] | 2922 | [3636, 3709] | 3921 | [3684, 850] |
| 925 | [1594, 1595] | 1924 | [78, 2903] | 2923 | [3333, 1549] | 3922 | [1605, 3485] |
| 926 | [1596, 688] | 1925 | [2904, 983] | 2924 | [3710, 3711] | 3923 | [3979, 2183] |
| 927 | [1597, 1598] | 1926 | [2755, 2777] | 2925 | [238, 3712] | 3924 | [1524, 3325] |
| 928 | [1599, 1600] | 1927 | [1175, 1107] | 2926 | [3607, 858] | 3925 | [3808, 210] |
| 929 | [1536, 1601] | 1928 | [2905, 2906] | 2927 | [3400, 3713] | 3926 | [3981, 2207] |
| 930 | [1602, 1603] | 1929 | [2907, 1105] | 2928 | [3320, 508] | 3927 | [630, 3289] |
| 931 | [1604, 1605] | 1930 | [1307, 2908] | 2929 | [2174, 3442] | 3928 | [3657, 3814] |
| 932 | [1606, 1607] | 1931 | [2909, 373] | 2930 | [2372, 3598] | 3929 | [3545, 2377] |
| 933 | [1608, 1609] | 1932 | [441, 2910] | 2931 | [3714, 2328] | 3930 | [3601, 1518] |
| 934 | [1610, 1611] | 1933 | [2911, 2912] | 2932 | [864, 840] | 3931 | [1999, 3773] |
| 935 | [1612, 1613] | 1934 | [2577, 2625] | 2933 | [1833, 3715] | 3932 | [3755, 1553] |
| 936 | [623, 1614] | 1935 | [2913, 2909] | 2934 | [661, 3716] | 3933 | [3818, 3682] |
| 937 | [817, 809] | 1936 | [2914, 2732] | 2935 | [2273, 520] | 3934 | [3404, 140] |
| 938 | [1615, 1616] | 1937 | [927, 2529] | 2936 | [2088, 3469] | 3935 | [557, 1584] |
| 939 | [1617, 1618] | 1938 | [1456, 2915] | 2937 | [2335, 2326] | 3936 | [3982, 3977] |
| 940 | [1619, 1620] | 1939 | [1452, 2508] | 2938 | [3717, 2104] | 3937 | [538, 516] |
| 941 | [1621, 1622] | 1940 | [2916, 2439] | 2939 | [3283, 3576] | 3938 | [710, 853] |
| 942 | [1623, 1624] | 1941 | [2917, 2918] | 2940 | [2284, 2095] | 3939 | [3782, 37] |
| 943 | [1625, 1626] | 1942 | [1484, 2919] | 2941 | [3718, 2106] | 3940 | [2291, 1531] |
| 944 | [1627, 1628] | 1943 | [2920, 2858] | 2942 | [3715, 3719] | 3941 | [2093, 857] |
| 945 | [588, 1629] | 1944 | [2921, 1180] | 2943 | [2289, 156] | 3942 | [2010, 3560] |
| 946 | [1630, 1631] | 1945 | [2922, 1231] | 2944 | [3704, 2084] | 3943 | [3521, 1813] |
| 947 | [1632, 1585] | 1946 | [2923, 2542] | 2945 | [194, 2173] | 3944 | [1946, 1543] |
| 948 | [1633, 1573] | 1947 | [2924, 2925] | 2946 | [3585, 1792] | 3945 | [1919, 160] |
| 949 | [843, 666] | 1948 | [2926, 1424] | 2947 | [3418, 3355] | 3946 | [570, 3983] |
| 950 | [545, 1634] | 1949 | [1247, 2510] | 2948 | [178, 3686] | 3947 | [3488, 1735] |
| 951 | [1635, 1636] | 1950 | [2927, 122] | 2949 | [3406, 1918] | 3948 | [2214, 3765] |
| 952 | [597, 1637] | 1951 | [2870, 1208] | 2950 | [1818, 3452] | 3949 | [2109, 3717] |
| 953 | [1638, 1639] | 1952 | [2392, 1413] | 2951 | [584, 3720] | 3950 | [1785, 3981] |
| 954 | [1640, 1641] | 1953 | [2928, 1443] | 2952 | [3721, 2371] | 3951 | [3747, 35] |
| 955 | [1642, 47] | 1954 | [2521, 2582] | 2953 | [3487, 2078] | 3952 | [1634, 3714] |
| 956 | [1643, 1644] | 1955 | [2929, 2930] | 2954 | [2296, 3722] | 3953 | [3398, 3534] |
| 957 | [1645, 1646] | 1956 | [2931, 1472] | 2955 | [1823, 3509] | 3954 | [8, 794] |
| 958 | [1647, 1547] | 1957 | [2932, 2933] | 2956 | [513, 2024] | 3955 | [849, 3493] |
| 959 | [1648, 1649] | 1958 | [2934, 945] | 2957 | [1698, 3723] | 3956 | [1646, 2287] |
| 960 | [691, 1650] | 1959 | [2935, 2936] | 2958 | [3724, 1706] | 3957 | [3638, 3679] |
| 961 | [1651, 1652] | 1960 | [2937, 1466] | 2959 | [3725, 3726] | 3958 | [1953, 3767] |
| 962 | [1653, 567] | 1961 | [2652, 2463] | 2960 | [3727, 3728] | 3959 | [3688, 3807] |
| 963 | [1654, 1655] | 1962 | [2938, 104] | 2961 | [2298, 826] | 3960 | [776, 1796] |
| 964 | [1656, 1657] | 1963 | [1346, 2939] | 2962 | [3354, 2178] | 3961 | [697, 3685] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 965 | [1658, 1659] | 1964 | [2940, 2941] | 2963 | [3729, 1862] | 3962 | [669, 3473] |
| 966 | [1660, 720] | 1965 | [2918, 2825] | 2964 | [3730, 3718] | 3963 | [3815, 2142] |
| 967 | [860, 738] | 1966 | [1111, 1504] | 2965 | [3731, 3587] | 3964 | [3625, 3674] |
| 968 | [1661, 1662] | 1967 | [2942, 424] | 2966 | [3732, 3311] | 3965 | [3571, 1895] |
| 969 | [38, 1663] | 1968 | [2567, 2943] | 2967 | [1734, 1968] | 3966 | [2250, 3382] |
| 970 | [143, 1664] | 1969 | [2776, 314] | 2968 | [58, 3733] | 3967 | [3766, 785] |
| 971 | [1665, 1666] | 1970 | [2944, 2945] | 2969 | [1534, 2130] | 3968 | [3507, 3292] |
| 972 | [1667, 199] | 1971 | [2946, 343] | 2970 | [1679, 796] | 3969 | [3504, 1709] |
| 973 | [1668, 1669] | 1972 | [1232, 2556] | 2971 | [1703, 3734] | 3970 | [3689, 3523] |
| 974 | [1558, 1670] | 1973 | [2612, 1050] | 2972 | [3712, 2315] | 3971 | [3421, 1697] |
| 975 | [1671, 749] | 1974 | [2947, 2948] | 2973 | [2067, 3594] | 3972 | [3799, 477] |
| 976 | [1556, 1527] | 1975 | [466, 88] | 2974 | [3562, 3459] | 3973 | [3983, 3982] |
| 977 | [1672, 1673] | 1976 | [2949, 1140] | 2975 | [1609, 1555] | 3974 | [3768, 3591] |
| 978 | [1598, 1674] | 1977 | [2792, 2950] | 2976 | [3735, 3736] | 3975 | [726, 2037] |
| 979 | [564, 1675] | 1978 | [1201, 2643] | 2977 | [3737, 136] | 3976 | [3984, 3149] |
| 980 | [568, 1676] | 1979 | [2682, 991] | 2978 | [1532, 2267] | 3977 | [3899, 2979] |
| 981 | [1676, 769] | 1980 | [1173, 2951] | 2979 | [1639, 1658] | 3978 | [3906, 2697] |
| 982 | [1562, 1677] | 1981 | [2420, 2853] | 2980 | [3738, 3537] | 3979 | [3971, 3970] |
| 983 | [1678, 1679] | 1982 | [2882, 1297] | 2981 | [3697, 1990] | 3980 | [2954, 2963] |
| 984 | [1680, 1681] | 1983 | [2432, 2952] | 2982 | [3739, 3740] | 3981 | [2681, 3100] |
| 985 | [1682, 1683] | 1984 | [2953, 362] | 2983 | [3741, 3347] | 3982 | [1045, 2595] |
| 986 | [1684, 1685] | 1985 | [2941, 1295] | 2984 | [3722, 3742] | 3983 | [2900, 2745] |
| 987 | [1686, 1687] | 1986 | [1448, 2954] | 2985 | [48, 2272] | 3984 | [3985, 806] |
| 988 | [1688, 1678] | 1987 | [2955, 1042] | 2986 | [52, 3428] | 3985 | [3986, 2410] |
| 989 | [1689, 1690] | 1988 | [2892, 2946] | 2987 | [2295, 1691] | 3986 | [3987, 2051] |
| 990 | [1691, 1692] | 1989 | [921, 2956] | 2988 | [2308, 2346] | 3987 | [3988, 3014] |
| 991 | [1693, 1645] | 1990 | [334, 2957] | 2989 | [1899, 1888] | 3988 | [3989, 1683] |
| 992 | [1694, 702] | 1991 | [2790, 2958] | 2990 | [2351, 3561] | 3989 | [3990, 3025] |
| 993 | [1695, 1696] | 1992 | [2895, 2959] | 2991 | [2252, 3743] | 3990 | [3991, 2120] |
| 994 | [1697, 1698] | 1993 | [2960, 2961] | 2992 | [2220, 491] | 3991 | [3992, 74] |
| 995 | [1685, 1699] | 1994 | [1086, 1009] | 2993 | [1696, 1816] | 3992 | [1, 3582] |
| 996 | [1700, 1701] | 1995 | [2962, 421] | 2994 | [3451, 214] | | |
| 997 | [1702, 718] | 1996 | [2963, 2964] | 2995 | [624, 3744] | | |
| 998 | [687, 1703] | 1997 | [462, 2619] | 2996 | [3670, 3745] | | |

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 | 666 | 1 | 1332 | 1 | 1998 | 0 | 2664 | 0 | 3330 | 0 |
| 1 | 0 | 667 | 0 | 1333 | 0 | 1999 | 1 | 2665 | 1 | 3331 | 1 |
| 2 | 0 | 668 | 0 | 1334 | 0 | 2000 | 1 | 2666 | 0 | 3332 | 0 |
| 3 | 0 | 669 | 1 | 1335 | 0 | 2001 | 0 | 2667 | 0 | 3333 | 0 |
| 4 | 0 | 670 | 0 | 1336 | 0 | 2002 | 0 | 2668 | 0 | 3334 | 0 |
| 5 | 0 | 671 | 0 | 1337 | 0 | 2003 | 1 | 2669 | 0 | 3335 | 0 |
| 6 | 0 | 672 | 1 | 1338 | 1 | 2004 | 0 | 2670 | 0 | 3336 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0 | 673 | 0 | 1339 | 0 | 2005 | 1 | 2671 | 0 | 3337 | 0 |
| 8 | 1 | 674 | 0 | 1340 | 0 | 2006 | 0 | 2672 | 0 | 3338 | 0 |
| 9 | 0 | 675 | 0 | 1341 | 1 | 2007 | 0 | 2673 | 0 | 3339 | 0 |
| 10 | 1 | 676 | 1 | 1342 | 0 | 2008 | 0 | 2674 | 0 | 3340 | 0 |
| 11 | 0 | 677 | 1 | 1343 | 0 | 2009 | 1 | 2675 | 0 | 3341 | 1 |
| 12 | 0 | 678 | 1 | 1344 | 0 | 2010 | 0 | 2676 | 0 | 3342 | 0 |
| 13 | 0 | 679 | 0 | 1345 | 1 | 2011 | 0 | 2677 | 0 | 3343 | 1 |
| 14 | 1 | 680 | 0 | 1346 | 0 | 2012 | 1 | 2678 | 0 | 3344 | 0 |
| 15 | 0 | 681 | 0 | 1347 | 0 | 2013 | 0 | 2679 | 0 | 3345 | 0 |
| 16 | 0 | 682 | 1 | 1348 | 1 | 2014 | 0 | 2680 | 1 | 3346 | 1 |
| 17 | 1 | 683 | 0 | 1349 | 1 | 2015 | 0 | 2681 | 0 | 3347 | 1 |
| 18 | 0 | 684 | 1 | 1350 | 0 | 2016 | 1 | 2682 | 1 | 3348 | 0 |
| 19 | 0 | 685 | 0 | 1351 | 0 | 2017 | 0 | 2683 | 0 | 3349 | 1 |
| 20 | 1 | 686 | 0 | 1352 | 1 | 2018 | 0 | 2684 | 1 | 3350 | 1 |
| 21 | 1 | 687 | 1 | 1353 | 1 | 2019 | 0 | 2685 | 1 | 3351 | 0 |
| 22 | 0 | 688 | 1 | 1354 | 1 | 2020 | 0 | 2686 | 1 | 3352 | 1 |
| 23 | 0 | 689 | 0 | 1355 | 0 | 2021 | 1 | 2687 | 1 | 3353 | 1 |
| 24 | 0 | 690 | 1 | 1356 | 1 | 2022 | 1 | 2688 | 0 | 3354 | 1 |
| 25 | 0 | 691 | 0 | 1357 | 0 | 2023 | 1 | 2689 | 0 | 3355 | 0 |
| 26 | 0 | 692 | 0 | 1358 | 1 | 2024 | 0 | 2690 | 1 | 3356 | 0 |
| 27 | 0 | 693 | 1 | 1359 | 1 | 2025 | 0 | 2691 | 1 | 3357 | 0 |
| 28 | 1 | 694 | 0 | 1360 | 1 | 2026 | 1 | 2692 | 1 | 3358 | 1 |
| 29 | 1 | 695 | 1 | 1361 | 1 | 2027 | 1 | 2693 | 0 | 3359 | 0 |
| 30 | 1 | 696 | 0 | 1362 | 0 | 2028 | 0 | 2694 | 0 | 3360 | 1 |
| 31 | 0 | 697 | 1 | 1363 | 1 | 2029 | 1 | 2695 | 1 | 3361 | 1 |
| 32 | 0 | 698 | 0 | 1364 | 0 | 2030 | 0 | 2696 | 0 | 3362 | 0 |
| 33 | 0 | 699 | 0 | 1365 | 1 | 2031 | 0 | 2697 | 0 | 3363 | 0 |
| 34 | 0 | 700 | 1 | 1366 | 1 | 2032 | 0 | 2698 | 1 | 3364 | 1 |
| 35 | 1 | 701 | 0 | 1367 | 0 | 2033 | 0 | 2699 | 1 | 3365 | 0 |
| 36 | 1 | 702 | 1 | 1368 | 0 | 2034 | 1 | 2700 | 1 | 3366 | 1 |
| 37 | 0 | 703 | 1 | 1369 | 1 | 2035 | 0 | 2701 | 0 | 3367 | 1 |
| 38 | 0 | 704 | 0 | 1370 | 1 | 2036 | 1 | 2702 | 1 | 3368 | 0 |
| 39 | 0 | 705 | 0 | 1371 | 0 | 2037 | 0 | 2703 | 1 | 3369 | 0 |
| 40 | 1 | 706 | 0 | 1372 | 1 | 2038 | 0 | 2704 | 0 | 3370 | 1 |
| 41 | 1 | 707 | 0 | 1373 | 0 | 2039 | 0 | 2705 | 0 | 3371 | 0 |
| 42 | 0 | 708 | 0 | 1374 | 1 | 2040 | 1 | 2706 | 0 | 3372 | 1 |
| 43 | 1 | 709 | 1 | 1375 | 0 | 2041 | 0 | 2707 | 0 | 3373 | 1 |
| 44 | 1 | 710 | 0 | 1376 | 1 | 2042 | 0 | 2708 | 1 | 3374 | 1 |
| 45 | 0 | 711 | 1 | 1377 | 0 | 2043 | 0 | 2709 | 1 | 3375 | 1 |
| 46 | 0 | 712 | 1 | 1378 | 0 | 2044 | 0 | 2710 | 1 | 3376 | 0 |
| 47 | 0 | 713 | 1 | 1379 | 0 | 2045 | 0 | 2711 | 1 | 3377 | 1 |
| 48 | 0 | 714 | 1 | 1380 | 1 | 2046 | 0 | 2712 | 0 | 3378 | 1 |
| 49 | 0 | 715 | 1 | 1381 | 0 | 2047 | 1 | 2713 | 1 | 3379 | 1 |
| 50 | 1 | 716 | 1 | 1382 | 1 | 2048 | 0 | 2714 | 1 | 3380 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 0 | 717 | 0 | 1383 | 1 | 2049 | 0 | 2715 | 0 | 3381 | 1 |
| 52 | 1 | 718 | 0 | 1384 | 0 | 2050 | 0 | 2716 | 0 | 3382 | 1 |
| 53 | 0 | 719 | 1 | 1385 | 1 | 2051 | 0 | 2717 | 0 | 3383 | 1 |
| 54 | 1 | 720 | 1 | 1386 | 0 | 2052 | 0 | 2718 | 0 | 3384 | 1 |
| 55 | 0 | 721 | 1 | 1387 | 0 | 2053 | 0 | 2719 | 1 | 3385 | 1 |
| 56 | 0 | 722 | 0 | 1388 | 1 | 2054 | 1 | 2720 | 1 | 3386 | 1 |
| 57 | 1 | 723 | 1 | 1389 | 1 | 2055 | 1 | 2721 | 1 | 3387 | 1 |
| 58 | 0 | 724 | 1 | 1390 | 0 | 2056 | 0 | 2722 | 1 | 3388 | 0 |
| 59 | 1 | 725 | 1 | 1391 | 1 | 2057 | 0 | 2723 | 0 | 3389 | 1 |
| 60 | 1 | 726 | 0 | 1392 | 1 | 2058 | 1 | 2724 | 1 | 3390 | 0 |
| 61 | 1 | 727 | 1 | 1393 | 0 | 2059 | 0 | 2725 | 1 | 3391 | 1 |
| 62 | 1 | 728 | 1 | 1394 | 0 | 2060 | 1 | 2726 | 0 | 3392 | 0 |
| 63 | 0 | 729 | 0 | 1395 | 0 | 2061 | 1 | 2727 | 0 | 3393 | 1 |
| 64 | 1 | 730 | 0 | 1396 | 1 | 2062 | 1 | 2728 | 0 | 3394 | 0 |
| 65 | 0 | 731 | 1 | 1397 | 0 | 2063 | 1 | 2729 | 1 | 3395 | 1 |
| 66 | 1 | 732 | 1 | 1398 | 1 | 2064 | 1 | 2730 | 1 | 3396 | 1 |
| 67 | 0 | 733 | 0 | 1399 | 1 | 2065 | 1 | 2731 | 1 | 3397 | 0 |
| 68 | 0 | 734 | 0 | 1400 | 0 | 2066 | 0 | 2732 | 0 | 3398 | 1 |
| 69 | 0 | 735 | 1 | 1401 | 0 | 2067 | 0 | 2733 | 1 | 3399 | 0 |
| 70 | 0 | 736 | 0 | 1402 | 0 | 2068 | 1 | 2734 | 1 | 3400 | 1 |
| 71 | 1 | 737 | 1 | 1403 | 1 | 2069 | 0 | 2735 | 1 | 3401 | 0 |
| 72 | 1 | 738 | 1 | 1404 | 0 | 2070 | 1 | 2736 | 0 | 3402 | 1 |
| 73 | 1 | 739 | 0 | 1405 | 0 | 2071 | 1 | 2737 | 0 | 3403 | 0 |
| 74 | 0 | 740 | 1 | 1406 | 1 | 2072 | 1 | 2738 | 0 | 3404 | 0 |
| 75 | 0 | 741 | 0 | 1407 | 1 | 2073 | 0 | 2739 | 1 | 3405 | 1 |
| 76 | 1 | 742 | 0 | 1408 | 0 | 2074 | 0 | 2740 | 1 | 3406 | 0 |
| 77 | 0 | 743 | 1 | 1409 | 1 | 2075 | 0 | 2741 | 1 | 3407 | 0 |
| 78 | 0 | 744 | 0 | 1410 | 0 | 2076 | 1 | 2742 | 1 | 3408 | 1 |
| 79 | 0 | 745 | 1 | 1411 | 0 | 2077 | 1 | 2743 | 0 | 3409 | 0 |
| 80 | 0 | 746 | 1 | 1412 | 1 | 2078 | 0 | 2744 | 0 | 3410 | 1 |
| 81 | 1 | 747 | 0 | 1413 | 1 | 2079 | 1 | 2745 | 0 | 3411 | 1 |
| 82 | 1 | 748 | 0 | 1414 | 0 | 2080 | 1 | 2746 | 1 | 3412 | 1 |
| 83 | 1 | 749 | 0 | 1415 | 1 | 2081 | 1 | 2747 | 1 | 3413 | 0 |
| 84 | 1 | 750 | 1 | 1416 | 1 | 2082 | 1 | 2748 | 1 | 3414 | 0 |
| 85 | 0 | 751 | 0 | 1417 | 0 | 2083 | 1 | 2749 | 0 | 3415 | 0 |
| 86 | 0 | 752 | 1 | 1418 | 0 | 2084 | 0 | 2750 | 0 | 3416 | 0 |
| 87 | 1 | 753 | 0 | 1419 | 0 | 2085 | 0 | 2751 | 0 | 3417 | 0 |
| 88 | 1 | 754 | 1 | 1420 | 1 | 2086 | 0 | 2752 | 0 | 3418 | 0 |
| 89 | 1 | 755 | 0 | 1421 | 0 | 2087 | 1 | 2753 | 1 | 3419 | 0 |
| 90 | 0 | 756 | 0 | 1422 | 0 | 2088 | 0 | 2754 | 1 | 3420 | 1 |
| 91 | 0 | 757 | 1 | 1423 | 0 | 2089 | 1 | 2755 | 0 | 3421 | 0 |
| 92 | 0 | 758 | 0 | 1424 | 1 | 2090 | 1 | 2756 | 0 | 3422 | 1 |
| 93 | 0 | 759 | 1 | 1425 | 0 | 2091 | 0 | 2757 | 1 | 3423 | 0 |
| 94 | 0 | 760 | 1 | 1426 | 1 | 2092 | 1 | 2758 | 0 | 3424 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95 | 1 | 761 | 1 | 1427 | 1 | 2093 | 1 | 2759 | 1 | 3425 | 0 |
| 96 | 0 | 762 | 1 | 1428 | 1 | 2094 | 0 | 2760 | 1 | 3426 | 0 |
| 97 | 0 | 763 | 0 | 1429 | 0 | 2095 | 0 | 2761 | 1 | 3427 | 0 |
| 98 | 0 | 764 | 1 | 1430 | 0 | 2096 | 1 | 2762 | 1 | 3428 | 0 |
| 99 | 1 | 765 | 1 | 1431 | 1 | 2097 | 1 | 2763 | 0 | 3429 | 1 |
| 100 | 1 | 766 | 0 | 1432 | 0 | 2098 | 0 | 2764 | 1 | 3430 | 1 |
| 101 | 0 | 767 | 1 | 1433 | 0 | 2099 | 0 | 2765 | 0 | 3431 | 1 |
| 102 | 0 | 768 | 1 | 1434 | 1 | 2100 | 0 | 2766 | 1 | 3432 | 0 |
| 103 | 0 | 769 | 1 | 1435 | 0 | 2101 | 1 | 2767 | 1 | 3433 | 0 |
| 104 | 1 | 770 | 0 | 1436 | 0 | 2102 | 1 | 2768 | 1 | 3434 | 0 |
| 105 | 0 | 771 | 1 | 1437 | 1 | 2103 | 1 | 2769 | 0 | 3435 | 1 |
| 106 | 0 | 772 | 1 | 1438 | 1 | 2104 | 0 | 2770 | 0 | 3436 | 1 |
| 107 | 0 | 773 | 1 | 1439 | 1 | 2105 | 1 | 2771 | 0 | 3437 | 0 |
| 108 | 1 | 774 | 0 | 1440 | 1 | 2106 | 1 | 2772 | 0 | 3438 | 0 |
| 109 | 0 | 775 | 0 | 1441 | 1 | 2107 | 0 | 2773 | 0 | 3439 | 1 |
| 110 | 0 | 776 | 0 | 1442 | 0 | 2108 | 1 | 2774 | 0 | 3440 | 0 |
| 111 | 0 | 777 | 0 | 1443 | 1 | 2109 | 0 | 2775 | 1 | 3441 | 1 |
| 112 | 0 | 778 | 0 | 1444 | 1 | 2110 | 1 | 2776 | 1 | 3442 | 1 |
| 113 | 1 | 779 | 0 | 1445 | 1 | 2111 | 0 | 2777 | 0 | 3443 | 0 |
| 114 | 1 | 780 | 1 | 1446 | 0 | 2112 | 1 | 2778 | 1 | 3444 | 1 |
| 115 | 0 | 781 | 0 | 1447 | 0 | 2113 | 0 | 2779 | 1 | 3445 | 0 |
| 116 | 0 | 782 | 1 | 1448 | 0 | 2114 | 1 | 2780 | 1 | 3446 | 1 |
| 117 | 0 | 783 | 1 | 1449 | 1 | 2115 | 0 | 2781 | 1 | 3447 | 1 |
| 118 | 1 | 784 | 1 | 1450 | 1 | 2116 | 1 | 2782 | 1 | 3448 | 0 |
| 119 | 1 | 785 | 1 | 1451 | 1 | 2117 | 1 | 2783 | 1 | 3449 | 1 |
| 120 | 1 | 786 | 0 | 1452 | 0 | 2118 | 1 | 2784 | 1 | 3450 | 1 |
| 121 | 1 | 787 | 1 | 1453 | 1 | 2119 | 0 | 2785 | 0 | 3451 | 1 |
| 122 | 1 | 788 | 1 | 1454 | 1 | 2120 | 0 | 2786 | 0 | 3452 | 1 |
| 123 | 0 | 789 | 0 | 1455 | 1 | 2121 | 0 | 2787 | 1 | 3453 | 0 |
| 124 | 1 | 790 | 0 | 1456 | 1 | 2122 | 1 | 2788 | 0 | 3454 | 1 |
| 125 | 0 | 791 | 0 | 1457 | 1 | 2123 | 0 | 2789 | 0 | 3455 | 0 |
| 126 | 0 | 792 | 1 | 1458 | 0 | 2124 | 1 | 2790 | 1 | 3456 | 0 |
| 127 | 1 | 793 | 1 | 1459 | 1 | 2125 | 1 | 2791 | 1 | 3457 | 0 |
| 128 | 1 | 794 | 0 | 1460 | 0 | 2126 | 1 | 2792 | 1 | 3458 | 1 |
| 129 | 0 | 795 | 0 | 1461 | 0 | 2127 | 1 | 2793 | 1 | 3459 | 0 |
| 130 | 0 | 796 | 0 | 1462 | 0 | 2128 | 1 | 2794 | 0 | 3460 | 1 |
| 131 | 0 | 797 | 1 | 1463 | 1 | 2129 | 0 | 2795 | 0 | 3461 | 1 |
| 132 | 1 | 798 | 1 | 1464 | 0 | 2130 | 0 | 2796 | 1 | 3462 | 0 |
| 133 | 1 | 799 | 1 | 1465 | 0 | 2131 | 0 | 2797 | 0 | 3463 | 0 |
| 134 | 0 | 800 | 0 | 1466 | 1 | 2132 | 0 | 2798 | 0 | 3464 | 0 |
| 135 | 0 | 801 | 1 | 1467 | 0 | 2133 | 0 | 2799 | 0 | 3465 | 1 |
| 136 | 0 | 802 | 1 | 1468 | 1 | 2134 | 1 | 2800 | 1 | 3466 | 0 |
| 137 | 1 | 803 | 1 | 1469 | 0 | 2135 | 1 | 2801 | 1 | 3467 | 1 |
| 138 | 0 | 804 | 0 | 1470 | 1 | 2136 | 1 | 2802 | 1 | 3468 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 139 | 1 | 805 | 1 | 1471 | 1 | 2137 | 0 | 2803 | 1 | 3469 | 0 |
| 140 | 0 | 806 | 0 | 1472 | 0 | 2138 | 0 | 2804 | 0 | 3470 | 0 |
| 141 | 1 | 807 | 1 | 1473 | 0 | 2139 | 1 | 2805 | 1 | 3471 | 0 |
| 142 | 1 | 808 | 1 | 1474 | 0 | 2140 | 0 | 2806 | 0 | 3472 | 0 |
| 143 | 1 | 809 | 0 | 1475 | 1 | 2141 | 0 | 2807 | 0 | 3473 | 0 |
| 144 | 1 | 810 | 0 | 1476 | 0 | 2142 | 0 | 2808 | 1 | 3474 | 0 |
| 145 | 1 | 811 | 1 | 1477 | 0 | 2143 | 0 | 2809 | 0 | 3475 | 1 |
| 146 | 1 | 812 | 0 | 1478 | 1 | 2144 | 1 | 2810 | 1 | 3476 | 0 |
| 147 | 0 | 813 | 1 | 1479 | 1 | 2145 | 0 | 2811 | 0 | 3477 | 1 |
| 148 | 0 | 814 | 0 | 1480 | 1 | 2146 | 0 | 2812 | 1 | 3478 | 0 |
| 149 | 0 | 815 | 0 | 1481 | 0 | 2147 | 0 | 2813 | 0 | 3479 | 1 |
| 150 | 0 | 816 | 0 | 1482 | 0 | 2148 | 1 | 2814 | 1 | 3480 | 0 |
| 151 | 0 | 817 | 1 | 1483 | 1 | 2149 | 1 | 2815 | 0 | 3481 | 0 |
| 152 | 1 | 818 | 1 | 1484 | 1 | 2150 | 1 | 2816 | 0 | 3482 | 0 |
| 153 | 1 | 819 | 1 | 1485 | 1 | 2151 | 0 | 2817 | 0 | 3483 | 0 |
| 154 | 0 | 820 | 0 | 1486 | 0 | 2152 | 0 | 2818 | 0 | 3484 | 0 |
| 155 | 0 | 821 | 1 | 1487 | 0 | 2153 | 0 | 2819 | 0 | 3485 | 1 |
| 156 | 0 | 822 | 0 | 1488 | 1 | 2154 | 1 | 2820 | 1 | 3486 | 1 |
| 157 | 1 | 823 | 1 | 1489 | 1 | 2155 | 0 | 2821 | 0 | 3487 | 0 |
| 158 | 0 | 824 | 0 | 1490 | 1 | 2156 | 0 | 2822 | 0 | 3488 | 0 |
| 159 | 0 | 825 | 1 | 1491 | 1 | 2157 | 0 | 2823 | 1 | 3489 | 1 |
| 160 | 0 | 826 | 1 | 1492 | 0 | 2158 | 0 | 2824 | 1 | 3490 | 0 |
| 161 | 0 | 827 | 1 | 1493 | 1 | 2159 | 0 | 2825 | 1 | 3491 | 1 |
| 162 | 1 | 828 | 0 | 1494 | 0 | 2160 | 1 | 2826 | 0 | 3492 | 1 |
| 163 | 0 | 829 | 1 | 1495 | 1 | 2161 | 1 | 2827 | 1 | 3493 | 0 |
| 164 | 1 | 830 | 1 | 1496 | 1 | 2162 | 0 | 2828 | 0 | 3494 | 1 |
| 165 | 1 | 831 | 1 | 1497 | 1 | 2163 | 1 | 2829 | 1 | 3495 | 1 |
| 166 | 1 | 832 | 1 | 1498 | 0 | 2164 | 0 | 2830 | 0 | 3496 | 1 |
| 167 | 0 | 833 | 1 | 1499 | 1 | 2165 | 0 | 2831 | 1 | 3497 | 1 |
| 168 | 1 | 834 | 1 | 1500 | 0 | 2166 | 1 | 2832 | 1 | 3498 | 0 |
| 169 | 1 | 835 | 0 | 1501 | 0 | 2167 | 1 | 2833 | 0 | 3499 | 0 |
| 170 | 0 | 836 | 0 | 1502 | 0 | 2168 | 1 | 2834 | 1 | 3500 | 1 |
| 171 | 0 | 837 | 0 | 1503 | 1 | 2169 | 0 | 2835 | 1 | 3501 | 0 |
| 172 | 0 | 838 | 1 | 1504 | 1 | 2170 | 0 | 2836 | 1 | 3502 | 1 |
| 173 | 0 | 839 | 0 | 1505 | 0 | 2171 | 1 | 2837 | 1 | 3503 | 1 |
| 174 | 1 | 840 | 1 | 1506 | 0 | 2172 | 1 | 2838 | 1 | 3504 | 1 |
| 175 | 1 | 841 | 0 | 1507 | 1 | 2173 | 0 | 2839 | 1 | 3505 | 0 |
| 176 | 1 | 842 | 1 | 1508 | 1 | 2174 | 1 | 2840 | 1 | 3506 | 0 |
| 177 | 1 | 843 | 0 | 1509 | 1 | 2175 | 1 | 2841 | 1 | 3507 | 0 |
| 178 | 0 | 844 | 1 | 1510 | 1 | 2176 | 0 | 2842 | 0 | 3508 | 0 |
| 179 | 0 | 845 | 0 | 1511 | 1 | 2177 | 1 | 2843 | 0 | 3509 | 1 |
| 180 | 1 | 846 | 0 | 1512 | 0 | 2178 | 0 | 2844 | 1 | 3510 | 0 |
| 181 | 0 | 847 | 1 | 1513 | 1 | 2179 | 0 | 2845 | 1 | 3511 | 0 |
| 182 | 0 | 848 | 1 | 1514 | 1 | 2180 | 0 | 2846 | 1 | 3512 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 183 | 0 | 849 | 0 | 1515 | 0 | 2181 | 1 | 2847 | 1 | 3513 | 0 |
| 184 | 0 | 850 | 1 | 1516 | 0 | 2182 | 1 | 2848 | 0 | 3514 | 0 |
| 185 | 0 | 851 | 1 | 1517 | 0 | 2183 | 1 | 2849 | 0 | 3515 | 1 |
| 186 | 0 | 852 | 1 | 1518 | 0 | 2184 | 0 | 2850 | 1 | 3516 | 1 |
| 187 | 1 | 853 | 0 | 1519 | 1 | 2185 | 1 | 2851 | 1 | 3517 | 0 |
| 188 | 0 | 854 | 1 | 1520 | 1 | 2186 | 0 | 2852 | 0 | 3518 | 1 |
| 189 | 0 | 855 | 1 | 1521 | 0 | 2187 | 1 | 2853 | 1 | 3519 | 1 |
| 190 | 1 | 856 | 0 | 1522 | 1 | 2188 | 0 | 2854 | 1 | 3520 | 0 |
| 191 | 0 | 857 | 1 | 1523 | 1 | 2189 | 1 | 2855 | 1 | 3521 | 0 |
| 192 | 0 | 858 | 0 | 1524 | 0 | 2190 | 1 | 2856 | 0 | 3522 | 1 |
| 193 | 0 | 859 | 0 | 1525 | 1 | 2191 | 1 | 2857 | 0 | 3523 | 0 |
| 194 | 1 | 860 | 0 | 1526 | 1 | 2192 | 1 | 2858 | 0 | 3524 | 0 |
| 195 | 1 | 861 | 1 | 1527 | 0 | 2193 | 1 | 2859 | 0 | 3525 | 0 |
| 196 | 0 | 862 | 1 | 1528 | 1 | 2194 | 1 | 2860 | 0 | 3526 | 1 |
| 197 | 1 | 863 | 1 | 1529 | 1 | 2195 | 0 | 2861 | 0 | 3527 | 1 |
| 198 | 1 | 864 | 1 | 1530 | 1 | 2196 | 1 | 2862 | 0 | 3528 | 0 |
| 199 | 0 | 865 | 1 | 1531 | 0 | 2197 | 1 | 2863 | 1 | 3529 | 1 |
| 200 | 0 | 866 | 0 | 1532 | 0 | 2198 | 0 | 2864 | 0 | 3530 | 0 |
| 201 | 0 | 867 | 1 | 1533 | 0 | 2199 | 1 | 2865 | 0 | 3531 | 0 |
| 202 | 0 | 868 | 0 | 1534 | 0 | 2200 | 1 | 2866 | 0 | 3532 | 1 |
| 203 | 0 | 869 | 1 | 1535 | 1 | 2201 | 0 | 2867 | 0 | 3533 | 0 |
| 204 | 1 | 870 | 0 | 1536 | 0 | 2202 | 0 | 2868 | 0 | 3534 | 0 |
| 205 | 0 | 871 | 0 | 1537 | 1 | 2203 | 1 | 2869 | 1 | 3535 | 1 |
| 206 | 0 | 872 | 1 | 1538 | 1 | 2204 | 0 | 2870 | 0 | 3536 | 1 |
| 207 | 0 | 873 | 0 | 1539 | 1 | 2205 | 1 | 2871 | 0 | 3537 | 0 |
| 208 | 0 | 874 | 1 | 1540 | 1 | 2206 | 0 | 2872 | 0 | 3538 | 1 |
| 209 | 1 | 875 | 1 | 1541 | 1 | 2207 | 1 | 2873 | 1 | 3539 | 0 |
| 210 | 0 | 876 | 1 | 1542 | 1 | 2208 | 0 | 2874 | 0 | 3540 | 1 |
| 211 | 1 | 877 | 1 | 1543 | 0 | 2209 | 1 | 2875 | 1 | 3541 | 1 |
| 212 | 1 | 878 | 0 | 1544 | 0 | 2210 | 1 | 2876 | 0 | 3542 | 1 |
| 213 | 1 | 879 | 0 | 1545 | 0 | 2211 | 0 | 2877 | 1 | 3543 | 1 |
| 214 | 0 | 880 | 0 | 1546 | 0 | 2212 | 0 | 2878 | 1 | 3544 | 1 |
| 215 | 1 | 881 | 1 | 1547 | 1 | 2213 | 1 | 2879 | 1 | 3545 | 0 |
| 216 | 0 | 882 | 0 | 1548 | 1 | 2214 | 1 | 2880 | 1 | 3546 | 1 |
| 217 | 1 | 883 | 1 | 1549 | 1 | 2215 | 0 | 2881 | 0 | 3547 | 1 |
| 218 | 0 | 884 | 1 | 1550 | 0 | 2216 | 0 | 2882 | 0 | 3548 | 0 |
| 219 | 1 | 885 | 0 | 1551 | 0 | 2217 | 0 | 2883 | 0 | 3549 | 1 |
| 220 | 0 | 886 | 1 | 1552 | 1 | 2218 | 1 | 2884 | 1 | 3550 | 0 |
| 221 | 1 | 887 | 1 | 1553 | 0 | 2219 | 0 | 2885 | 1 | 3551 | 0 |
| 222 | 1 | 888 | 0 | 1554 | 0 | 2220 | 0 | 2886 | 1 | 3552 | 1 |
| 223 | 0 | 889 | 0 | 1555 | 1 | 2221 | 0 | 2887 | 1 | 3553 | 1 |
| 224 | 1 | 890 | 1 | 1556 | 0 | 2222 | 1 | 2888 | 1 | 3554 | 1 |
| 225 | 1 | 891 | 1 | 1557 | 1 | 2223 | 0 | 2889 | 0 | 3555 | 0 |
| 226 | 0 | 892 | 1 | 1558 | 0 | 2224 | 0 | 2890 | 1 | 3556 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 227 | 1 | 893 | 1 | 1559 | 1 | 2225 | 1 | 2891 | 1 | 3557 | 0 |
| 228 | 0 | 894 | 1 | 1560 | 0 | 2226 | 0 | 2892 | 0 | 3558 | 1 |
| 229 | 1 | 895 | 0 | 1561 | 0 | 2227 | 0 | 2893 | 0 | 3559 | 0 |
| 230 | 0 | 896 | 0 | 1562 | 1 | 2228 | 0 | 2894 | 1 | 3560 | 1 |
| 231 | 1 | 897 | 1 | 1563 | 0 | 2229 | 1 | 2895 | 1 | 3561 | 1 |
| 232 | 1 | 898 | 1 | 1564 | 1 | 2230 | 1 | 2896 | 0 | 3562 | 0 |
| 233 | 1 | 899 | 0 | 1565 | 0 | 2231 | 1 | 2897 | 1 | 3563 | 0 |
| 234 | 1 | 900 | 0 | 1566 | 1 | 2232 | 1 | 2898 | 1 | 3564 | 0 |
| 235 | 1 | 901 | 0 | 1567 | 0 | 2233 | 1 | 2899 | 1 | 3565 | 1 |
| 236 | 0 | 902 | 1 | 1568 | 1 | 2234 | 0 | 2900 | 1 | 3566 | 1 |
| 237 | 1 | 903 | 1 | 1569 | 1 | 2235 | 0 | 2901 | 0 | 3567 | 0 |
| 238 | 1 | 904 | 1 | 1570 | 1 | 2236 | 0 | 2902 | 1 | 3568 | 0 |
| 239 | 1 | 905 | 1 | 1571 | 0 | 2237 | 1 | 2903 | 0 | 3569 | 0 |
| 240 | 0 | 906 | 0 | 1572 | 1 | 2238 | 1 | 2904 | 0 | 3570 | 1 |
| 241 | 0 | 907 | 0 | 1573 | 1 | 2239 | 0 | 2905 | 0 | 3571 | 1 |
| 242 | 0 | 908 | 0 | 1574 | 1 | 2240 | 1 | 2906 | 0 | 3572 | 0 |
| 243 | 1 | 909 | 0 | 1575 | 0 | 2241 | 0 | 2907 | 1 | 3573 | 0 |
| 244 | 0 | 910 | 0 | 1576 | 0 | 2242 | 1 | 2908 | 1 | 3574 | 0 |
| 245 | 0 | 911 | 1 | 1577 | 0 | 2243 | 1 | 2909 | 1 | 3575 | 1 |
| 246 | 1 | 912 | 0 | 1578 | 1 | 2244 | 1 | 2910 | 1 | 3576 | 1 |
| 247 | 0 | 913 | 1 | 1579 | 1 | 2245 | 0 | 2911 | 0 | 3577 | 1 |
| 248 | 0 | 914 | 0 | 1580 | 0 | 2246 | 0 | 2912 | 1 | 3578 | 1 |
| 249 | 1 | 915 | 1 | 1581 | 0 | 2247 | 1 | 2913 | 0 | 3579 | 1 |
| 250 | 0 | 916 | 1 | 1582 | 0 | 2248 | 0 | 2914 | 1 | 3580 | 0 |
| 251 | 1 | 917 | 0 | 1583 | 0 | 2249 | 0 | 2915 | 1 | 3581 | 0 |
| 252 | 1 | 918 | 0 | 1584 | 1 | 2250 | 1 | 2916 | 1 | 3582 | 0 |
| 253 | 0 | 919 | 1 | 1585 | 1 | 2251 | 0 | 2917 | 0 | 3583 | 1 |
| 254 | 1 | 920 | 1 | 1586 | 1 | 2252 | 1 | 2918 | 0 | 3584 | 0 |
| 255 | 0 | 921 | 1 | 1587 | 0 | 2253 | 1 | 2919 | 0 | 3585 | 1 |
| 256 | 1 | 922 | 1 | 1588 | 1 | 2254 | 0 | 2920 | 0 | 3586 | 0 |
| 257 | 0 | 923 | 1 | 1589 | 1 | 2255 | 0 | 2921 | 1 | 3587 | 0 |
| 258 | 1 | 924 | 1 | 1590 | 1 | 2256 | 1 | 2922 | 0 | 3588 | 1 |
| 259 | 1 | 925 | 0 | 1591 | 0 | 2257 | 0 | 2923 | 0 | 3589 | 0 |
| 260 | 1 | 926 | 1 | 1592 | 1 | 2258 | 1 | 2924 | 1 | 3590 | 1 |
| 261 | 1 | 927 | 0 | 1593 | 1 | 2259 | 0 | 2925 | 1 | 3591 | 0 |
| 262 | 0 | 928 | 1 | 1594 | 0 | 2260 | 0 | 2926 | 0 | 3592 | 1 |
| 263 | 0 | 929 | 0 | 1595 | 1 | 2261 | 1 | 2927 | 1 | 3593 | 1 |
| 264 | 1 | 930 | 0 | 1596 | 1 | 2262 | 1 | 2928 | 0 | 3594 | 0 |
| 265 | 0 | 931 | 1 | 1597 | 0 | 2263 | 1 | 2929 | 1 | 3595 | 1 |
| 266 | 0 | 932 | 0 | 1598 | 0 | 2264 | 1 | 2930 | 1 | 3596 | 1 |
| 267 | 0 | 933 | 1 | 1599 | 1 | 2265 | 1 | 2931 | 0 | 3597 | 1 |
| 268 | 1 | 934 | 0 | 1600 | 0 | 2266 | 1 | 2932 | 1 | 3598 | 1 |
| 269 | 1 | 935 | 0 | 1601 | 0 | 2267 | 1 | 2933 | 1 | 3599 | 0 |
| 270 | 0 | 936 | 0 | 1602 | 0 | 2268 | 1 | 2934 | 0 | 3600 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 271 | 0 | 937 | 1 | 1603 | 0 | 2269 | 1 | 2935 | 0 | 3601 | 0 |
| 272 | 0 | 938 | 0 | 1604 | 1 | 2270 | 1 | 2936 | 0 | 3602 | 1 |
| 273 | 1 | 939 | 1 | 1605 | 0 | 2271 | 1 | 2937 | 1 | 3603 | 0 |
| 274 | 0 | 940 | 1 | 1606 | 0 | 2272 | 1 | 2938 | 1 | 3604 | 0 |
| 275 | 0 | 941 | 1 | 1607 | 1 | 2273 | 0 | 2939 | 1 | 3605 | 0 |
| 276 | 0 | 942 | 0 | 1608 | 1 | 2274 | 0 | 2940 | 0 | 3606 | 1 |
| 277 | 1 | 943 | 0 | 1609 | 1 | 2275 | 0 | 2941 | 0 | 3607 | 0 |
| 278 | 0 | 944 | 1 | 1610 | 0 | 2276 | 1 | 2942 | 1 | 3608 | 1 |
| 279 | 1 | 945 | 0 | 1611 | 0 | 2277 | 0 | 2943 | 0 | 3609 | 0 |
| 280 | 1 | 946 | 1 | 1612 | 0 | 2278 | 0 | 2944 | 0 | 3610 | 0 |
| 281 | 1 | 947 | 0 | 1613 | 1 | 2279 | 0 | 2945 | 1 | 3611 | 0 |
| 282 | 1 | 948 | 1 | 1614 | 0 | 2280 | 1 | 2946 | 1 | 3612 | 0 |
| 283 | 0 | 949 | 0 | 1615 | 0 | 2281 | 0 | 2947 | 0 | 3613 | 1 |
| 284 | 1 | 950 | 0 | 1616 | 0 | 2282 | 1 | 2948 | 0 | 3614 | 1 |
| 285 | 0 | 951 | 0 | 1617 | 1 | 2283 | 0 | 2949 | 0 | 3615 | 0 |
| 286 | 1 | 952 | 0 | 1618 | 1 | 2284 | 0 | 2950 | 1 | 3616 | 1 |
| 287 | 0 | 953 | 1 | 1619 | 1 | 2285 | 1 | 2951 | 0 | 3617 | 0 |
| 288 | 0 | 954 | 1 | 1620 | 1 | 2286 | 1 | 2952 | 1 | 3618 | 1 |
| 289 | 1 | 955 | 1 | 1621 | 1 | 2287 | 1 | 2953 | 0 | 3619 | 0 |
| 290 | 0 | 956 | 1 | 1622 | 0 | 2288 | 1 | 2954 | 1 | 3620 | 1 |
| 291 | 1 | 957 | 0 | 1623 | 0 | 2289 | 0 | 2955 | 1 | 3621 | 1 |
| 292 | 0 | 958 | 0 | 1624 | 0 | 2290 | 0 | 2956 | 1 | 3622 | 0 |
| 293 | 0 | 959 | 1 | 1625 | 0 | 2291 | 1 | 2957 | 1 | 3623 | 1 |
| 294 | 0 | 960 | 0 | 1626 | 0 | 2292 | 1 | 2958 | 0 | 3624 | 1 |
| 295 | 1 | 961 | 0 | 1627 | 1 | 2293 | 1 | 2959 | 1 | 3625 | 0 |
| 296 | 0 | 962 | 0 | 1628 | 1 | 2294 | 0 | 2960 | 0 | 3626 | 0 |
| 297 | 0 | 963 | 0 | 1629 | 0 | 2295 | 1 | 2961 | 1 | 3627 | 0 |
| 298 | 1 | 964 | 1 | 1630 | 1 | 2296 | 1 | 2962 | 1 | 3628 | 0 |
| 299 | 0 | 965 | 0 | 1631 | 0 | 2297 | 0 | 2963 | 1 | 3629 | 0 |
| 300 | 1 | 966 | 1 | 1632 | 0 | 2298 | 1 | 2964 | 0 | 3630 | 0 |
| 301 | 1 | 967 | 0 | 1633 | 1 | 2299 | 1 | 2965 | 1 | 3631 | 0 |
| 302 | 0 | 968 | 0 | 1634 | 1 | 2300 | 1 | 2966 | 1 | 3632 | 1 |
| 303 | 0 | 969 | 0 | 1635 | 0 | 2301 | 0 | 2967 | 1 | 3633 | 0 |
| 304 | 0 | 970 | 1 | 1636 | 0 | 2302 | 1 | 2968 | 0 | 3634 | 1 |
| 305 | 1 | 971 | 0 | 1637 | 0 | 2303 | 1 | 2969 | 0 | 3635 | 0 |
| 306 | 0 | 972 | 0 | 1638 | 1 | 2304 | 1 | 2970 | 1 | 3636 | 0 |
| 307 | 0 | 973 | 0 | 1639 | 1 | 2305 | 1 | 2971 | 0 | 3637 | 0 |
| 308 | 1 | 974 | 0 | 1640 | 1 | 2306 | 0 | 2972 | 1 | 3638 | 0 |
| 309 | 0 | 975 | 0 | 1641 | 0 | 2307 | 1 | 2973 | 0 | 3639 | 0 |
| 310 | 0 | 976 | 0 | 1642 | 1 | 2308 | 1 | 2974 | 0 | 3640 | 0 |
| 311 | 0 | 977 | 0 | 1643 | 1 | 2309 | 0 | 2975 | 1 | 3641 | 1 |
| 312 | 0 | 978 | 0 | 1644 | 1 | 2310 | 1 | 2976 | 0 | 3642 | 1 |
| 313 | 1 | 979 | 1 | 1645 | 0 | 2311 | 1 | 2977 | 1 | 3643 | 1 |
| 314 | 0 | 980 | 0 | 1646 | 1 | 2312 | 0 | 2978 | 0 | 3644 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 315 | 1 | 981 | 1 | 1647 | 0 | 2313 | 1 | 2979 | 1 | 3645 | 0 |
| 316 | 0 | 982 | 1 | 1648 | 1 | 2314 | 1 | 2980 | 1 | 3646 | 0 |
| 317 | 1 | 983 | 1 | 1649 | 1 | 2315 | 0 | 2981 | 0 | 3647 | 1 |
| 318 | 1 | 984 | 0 | 1650 | 1 | 2316 | 0 | 2982 | 1 | 3648 | 0 |
| 319 | 1 | 985 | 1 | 1651 | 0 | 2317 | 1 | 2983 | 0 | 3649 | 1 |
| 320 | 0 | 986 | 0 | 1652 | 0 | 2318 | 0 | 2984 | 0 | 3650 | 0 |
| 321 | 0 | 987 | 0 | 1653 | 0 | 2319 | 1 | 2985 | 0 | 3651 | 0 |
| 322 | 1 | 988 | 1 | 1654 | 0 | 2320 | 0 | 2986 | 1 | 3652 | 1 |
| 323 | 0 | 989 | 0 | 1655 | 1 | 2321 | 0 | 2987 | 1 | 3653 | 0 |
| 324 | 1 | 990 | 1 | 1656 | 1 | 2322 | 1 | 2988 | 1 | 3654 | 0 |
| 325 | 1 | 991 | 0 | 1657 | 0 | 2323 | 1 | 2989 | 1 | 3655 | 0 |
| 326 | 1 | 992 | 1 | 1658 | 0 | 2324 | 1 | 2990 | 0 | 3656 | 1 |
| 327 | 1 | 993 | 1 | 1659 | 1 | 2325 | 1 | 2991 | 1 | 3657 | 1 |
| 328 | 0 | 994 | 1 | 1660 | 1 | 2326 | 1 | 2992 | 0 | 3658 | 1 |
| 329 | 0 | 995 | 1 | 1661 | 0 | 2327 | 0 | 2993 | 0 | 3659 | 0 |
| 330 | 1 | 996 | 1 | 1662 | 0 | 2328 | 0 | 2994 | 1 | 3660 | 0 |
| 331 | 1 | 997 | 1 | 1663 | 1 | 2329 | 0 | 2995 | 0 | 3661 | 0 |
| 332 | 1 | 998 | 1 | 1664 | 1 | 2330 | 1 | 2996 | 0 | 3662 | 1 |
| 333 | 0 | 999 | 0 | 1665 | 0 | 2331 | 0 | 2997 | 0 | 3663 | 1 |
| 334 | 1 | 1000 | 1 | 1666 | 0 | 2332 | 0 | 2998 | 1 | 3664 | 0 |
| 335 | 0 | 1001 | 0 | 1667 | 0 | 2333 | 1 | 2999 | 0 | 3665 | 1 |
| 336 | 1 | 1002 | 0 | 1668 | 0 | 2334 | 0 | 3000 | 0 | 3666 | 1 |
| 337 | 0 | 1003 | 1 | 1669 | 1 | 2335 | 1 | 3001 | 1 | 3667 | 0 |
| 338 | 1 | 1004 | 1 | 1670 | 1 | 2336 | 1 | 3002 | 0 | 3668 | 1 |
| 339 | 0 | 1005 | 0 | 1671 | 0 | 2337 | 1 | 3003 | 0 | 3669 | 1 |
| 340 | 1 | 1006 | 1 | 1672 | 0 | 2338 | 1 | 3004 | 0 | 3670 | 0 |
| 341 | 1 | 1007 | 1 | 1673 | 1 | 2339 | 0 | 3005 | 0 | 3671 | 0 |
| 342 | 1 | 1008 | 1 | 1674 | 1 | 2340 | 1 | 3006 | 0 | 3672 | 1 |
| 343 | 1 | 1009 | 0 | 1675 | 0 | 2341 | 1 | 3007 | 1 | 3673 | 0 |
| 344 | 1 | 1010 | 0 | 1676 | 1 | 2342 | 1 | 3008 | 1 | 3674 | 0 |
| 345 | 1 | 1011 | 0 | 1677 | 0 | 2343 | 0 | 3009 | 0 | 3675 | 1 |
| 346 | 1 | 1012 | 0 | 1678 | 1 | 2344 | 0 | 3010 | 0 | 3676 | 0 |
| 347 | 1 | 1013 | 0 | 1679 | 1 | 2345 | 0 | 3011 | 0 | 3677 | 0 |
| 348 | 1 | 1014 | 0 | 1680 | 0 | 2346 | 1 | 3012 | 1 | 3678 | 0 |
| 349 | 0 | 1015 | 0 | 1681 | 0 | 2347 | 1 | 3013 | 0 | 3679 | 1 |
| 350 | 0 | 1016 | 1 | 1682 | 1 | 2348 | 1 | 3014 | 0 | 3680 | 0 |
| 351 | 0 | 1017 | 1 | 1683 | 0 | 2349 | 1 | 3015 | 1 | 3681 | 0 |
| 352 | 1 | 1018 | 0 | 1684 | 0 | 2350 | 1 | 3016 | 1 | 3682 | 0 |
| 353 | 1 | 1019 | 0 | 1685 | 1 | 2351 | 0 | 3017 | 0 | 3683 | 0 |
| 354 | 0 | 1020 | 0 | 1686 | 0 | 2352 | 1 | 3018 | 0 | 3684 | 1 |
| 355 | 0 | 1021 | 1 | 1687 | 1 | 2353 | 0 | 3019 | 1 | 3685 | 1 |
| 356 | 1 | 1022 | 0 | 1688 | 1 | 2354 | 1 | 3020 | 1 | 3686 | 1 |
| 357 | 0 | 1023 | 0 | 1689 | 0 | 2355 | 0 | 3021 | 0 | 3687 | 1 |
| 358 | 0 | 1024 | 0 | 1690 | 1 | 2356 | 1 | 3022 | 1 | 3688 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 359 | 1 | 1025 | 1 | 1691 | 1 | 2357 | 0 | 3023 | 1 | 3689 | 0 |
| 360 | 0 | 1026 | 0 | 1692 | 1 | 2358 | 0 | 3024 | 1 | 3690 | 0 |
| 361 | 0 | 1027 | 0 | 1693 | 0 | 2359 | 1 | 3025 | 0 | 3691 | 0 |
| 362 | 0 | 1028 | 0 | 1694 | 1 | 2360 | 0 | 3026 | 1 | 3692 | 1 |
| 363 | 0 | 1029 | 1 | 1695 | 1 | 2361 | 0 | 3027 | 0 | 3693 | 1 |
| 364 | 0 | 1030 | 0 | 1696 | 0 | 2362 | 1 | 3028 | 0 | 3694 | 1 |
| 365 | 1 | 1031 | 1 | 1697 | 1 | 2363 | 0 | 3029 | 0 | 3695 | 1 |
| 366 | 1 | 1032 | 1 | 1698 | 1 | 2364 | 1 | 3030 | 1 | 3696 | 1 |
| 367 | 0 | 1033 | 1 | 1699 | 1 | 2365 | 1 | 3031 | 1 | 3697 | 0 |
| 368 | 0 | 1034 | 0 | 1700 | 1 | 2366 | 0 | 3032 | 0 | 3698 | 0 |
| 369 | 0 | 1035 | 1 | 1701 | 0 | 2367 | 1 | 3033 | 1 | 3699 | 0 |
| 370 | 0 | 1036 | 1 | 1702 | 1 | 2368 | 1 | 3034 | 0 | 3700 | 0 |
| 371 | 1 | 1037 | 1 | 1703 | 0 | 2369 | 1 | 3035 | 1 | 3701 | 1 |
| 372 | 1 | 1038 | 0 | 1704 | 0 | 2370 | 0 | 3036 | 0 | 3702 | 0 |
| 373 | 0 | 1039 | 1 | 1705 | 0 | 2371 | 1 | 3037 | 0 | 3703 | 0 |
| 374 | 0 | 1040 | 0 | 1706 | 1 | 2372 | 1 | 3038 | 0 | 3704 | 0 |
| 375 | 0 | 1041 | 1 | 1707 | 0 | 2373 | 1 | 3039 | 0 | 3705 | 1 |
| 376 | 0 | 1042 | 1 | 1708 | 0 | 2374 | 0 | 3040 | 1 | 3706 | 1 |
| 377 | 1 | 1043 | 1 | 1709 | 0 | 2375 | 1 | 3041 | 1 | 3707 | 1 |
| 378 | 1 | 1044 | 0 | 1710 | 1 | 2376 | 1 | 3042 | 1 | 3708 | 0 |
| 379 | 1 | 1045 | 1 | 1711 | 1 | 2377 | 1 | 3043 | 0 | 3709 | 0 |
| 380 | 1 | 1046 | 0 | 1712 | 1 | 2378 | 1 | 3044 | 1 | 3710 | 1 |
| 381 | 0 | 1047 | 0 | 1713 | 0 | 2379 | 0 | 3045 | 0 | 3711 | 0 |
| 382 | 1 | 1048 | 1 | 1714 | 0 | 2380 | 0 | 3046 | 1 | 3712 | 1 |
| 383 | 1 | 1049 | 0 | 1715 | 1 | 2381 | 0 | 3047 | 1 | 3713 | 0 |
| 384 | 1 | 1050 | 1 | 1716 | 0 | 2382 | 0 | 3048 | 1 | 3714 | 0 |
| 385 | 1 | 1051 | 0 | 1717 | 1 | 2383 | 0 | 3049 | 0 | 3715 | 1 |
| 386 | 1 | 1052 | 0 | 1718 | 1 | 2384 | 1 | 3050 | 0 | 3716 | 1 |
| 387 | 0 | 1053 | 1 | 1719 | 0 | 2385 | 0 | 3051 | 0 | 3717 | 1 |
| 388 | 1 | 1054 | 1 | 1720 | 0 | 2386 | 1 | 3052 | 0 | 3718 | 0 |
| 389 | 0 | 1055 | 1 | 1721 | 0 | 2387 | 1 | 3053 | 0 | 3719 | 0 |
| 390 | 1 | 1056 | 1 | 1722 | 0 | 2388 | 1 | 3054 | 0 | 3720 | 0 |
| 391 | 0 | 1057 | 0 | 1723 | 0 | 2389 | 0 | 3055 | 1 | 3721 | 1 |
| 392 | 1 | 1058 | 0 | 1724 | 0 | 2390 | 0 | 3056 | 0 | 3722 | 0 |
| 393 | 0 | 1059 | 0 | 1725 | 0 | 2391 | 0 | 3057 | 0 | 3723 | 1 |
| 394 | 0 | 1060 | 0 | 1726 | 0 | 2392 | 1 | 3058 | 1 | 3724 | 0 |
| 395 | 1 | 1061 | 0 | 1727 | 0 | 2393 | 1 | 3059 | 1 | 3725 | 1 |
| 396 | 0 | 1062 | 1 | 1728 | 0 | 2394 | 1 | 3060 | 1 | 3726 | 1 |
| 397 | 0 | 1063 | 1 | 1729 | 0 | 2395 | 0 | 3061 | 0 | 3727 | 0 |
| 398 | 0 | 1064 | 0 | 1730 | 0 | 2396 | 1 | 3062 | 1 | 3728 | 0 |
| 399 | 0 | 1065 | 1 | 1731 | 1 | 2397 | 1 | 3063 | 1 | 3729 | 1 |
| 400 | 0 | 1066 | 0 | 1732 | 0 | 2398 | 1 | 3064 | 0 | 3730 | 0 |
| 401 | 0 | 1067 | 1 | 1733 | 0 | 2399 | 1 | 3065 | 0 | 3731 | 1 |
| 402 | 0 | 1068 | 0 | 1734 | 1 | 2400 | 1 | 3066 | 1 | 3732 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 403 | 0 | 1069 | 0 | 1735 | 0 | 2401 | 0 | 3067 | 1 | 3733 | 0 |
| 404 | 1 | 1070 | 1 | 1736 | 0 | 2402 | 1 | 3068 | 1 | 3734 | 1 |
| 405 | 1 | 1071 | 0 | 1737 | 1 | 2403 | 1 | 3069 | 0 | 3735 | 0 |
| 406 | 1 | 1072 | 0 | 1738 | 1 | 2404 | 1 | 3070 | 1 | 3736 | 1 |
| 407 | 0 | 1073 | 1 | 1739 | 1 | 2405 | 1 | 3071 | 1 | 3737 | 1 |
| 408 | 1 | 1074 | 0 | 1740 | 0 | 2406 | 1 | 3072 | 1 | 3738 | 1 |
| 409 | 1 | 1075 | 0 | 1741 | 0 | 2407 | 1 | 3073 | 0 | 3739 | 1 |
| 410 | 1 | 1076 | 0 | 1742 | 0 | 2408 | 0 | 3074 | 1 | 3740 | 0 |
| 411 | 1 | 1077 | 1 | 1743 | 0 | 2409 | 1 | 3075 | 1 | 3741 | 0 |
| 412 | 1 | 1078 | 1 | 1744 | 0 | 2410 | 1 | 3076 | 0 | 3742 | 1 |
| 413 | 1 | 1079 | 0 | 1745 | 1 | 2411 | 0 | 3077 | 1 | 3743 | 0 |
| 414 | 0 | 1080 | 0 | 1746 | 0 | 2412 | 0 | 3078 | 0 | 3744 | 1 |
| 415 | 0 | 1081 | 0 | 1747 | 0 | 2413 | 1 | 3079 | 0 | 3745 | 1 |
| 416 | 0 | 1082 | 0 | 1748 | 1 | 2414 | 1 | 3080 | 0 | 3746 | 0 |
| 417 | 1 | 1083 | 0 | 1749 | 0 | 2415 | 1 | 3081 | 0 | 3747 | 0 |
| 418 | 1 | 1084 | 0 | 1750 | 1 | 2416 | 1 | 3082 | 0 | 3748 | 1 |
| 419 | 0 | 1085 | 1 | 1751 | 1 | 2417 | 1 | 3083 | 0 | 3749 | 1 |
| 420 | 1 | 1086 | 0 | 1752 | 0 | 2418 | 1 | 3084 | 0 | 3750 | 0 |
| 421 | 1 | 1087 | 0 | 1753 | 0 | 2419 | 1 | 3085 | 1 | 3751 | 0 |
| 422 | 0 | 1088 | 0 | 1754 | 1 | 2420 | 0 | 3086 | 0 | 3752 | 0 |
| 423 | 0 | 1089 | 0 | 1755 | 1 | 2421 | 0 | 3087 | 1 | 3753 | 0 |
| 424 | 1 | 1090 | 0 | 1756 | 1 | 2422 | 0 | 3088 | 0 | 3754 | 1 |
| 425 | 0 | 1091 | 0 | 1757 | 1 | 2423 | 1 | 3089 | 1 | 3755 | 1 |
| 426 | 0 | 1092 | 1 | 1758 | 1 | 2424 | 0 | 3090 | 1 | 3756 | 0 |
| 427 | 1 | 1093 | 1 | 1759 | 0 | 2425 | 1 | 3091 | 1 | 3757 | 0 |
| 428 | 0 | 1094 | 1 | 1760 | 0 | 2426 | 0 | 3092 | 1 | 3758 | 0 |
| 429 | 1 | 1095 | 0 | 1761 | 0 | 2427 | 1 | 3093 | 0 | 3759 | 0 |
| 430 | 0 | 1096 | 1 | 1762 | 1 | 2428 | 0 | 3094 | 0 | 3760 | 0 |
| 431 | 1 | 1097 | 0 | 1763 | 1 | 2429 | 1 | 3095 | 1 | 3761 | 0 |
| 432 | 1 | 1098 | 1 | 1764 | 0 | 2430 | 0 | 3096 | 1 | 3762 | 0 |
| 433 | 0 | 1099 | 1 | 1765 | 1 | 2431 | 1 | 3097 | 1 | 3763 | 0 |
| 434 | 1 | 1100 | 1 | 1766 | 0 | 2432 | 0 | 3098 | 1 | 3764 | 0 |
| 435 | 0 | 1101 | 0 | 1767 | 0 | 2433 | 1 | 3099 | 0 | 3765 | 1 |
| 436 | 0 | 1102 | 1 | 1768 | 1 | 2434 | 0 | 3100 | 0 | 3766 | 0 |
| 437 | 0 | 1103 | 1 | 1769 | 1 | 2435 | 1 | 3101 | 1 | 3767 | 1 |
| 438 | 1 | 1104 | 1 | 1770 | 0 | 2436 | 1 | 3102 | 1 | 3768 | 1 |
| 439 | 0 | 1105 | 1 | 1771 | 0 | 2437 | 1 | 3103 | 1 | 3769 | 0 |
| 440 | 0 | 1106 | 0 | 1772 | 1 | 2438 | 0 | 3104 | 0 | 3770 | 1 |
| 441 | 0 | 1107 | 0 | 1773 | 1 | 2439 | 0 | 3105 | 0 | 3771 | 1 |
| 442 | 1 | 1108 | 1 | 1774 | 0 | 2440 | 0 | 3106 | 0 | 3772 | 0 |
| 443 | 0 | 1109 | 1 | 1775 | 0 | 2441 | 1 | 3107 | 0 | 3773 | 1 |
| 444 | 0 | 1110 | 0 | 1776 | 1 | 2442 | 0 | 3108 | 0 | 3774 | 1 |
| 445 | 1 | 1111 | 1 | 1777 | 1 | 2443 | 0 | 3109 | 0 | 3775 | 0 |
| 446 | 1 | 1112 | 1 | 1778 | 1 | 2444 | 0 | 3110 | 0 | 3776 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 447 | 1 | 1113 | 0 | 1779 | 0 | 2445 | 0 | 3111 | 1 | 3777 | 0 |
| 448 | 1 | 1114 | 0 | 1780 | 0 | 2446 | 1 | 3112 | 1 | 3778 | 0 |
| 449 | 0 | 1115 | 0 | 1781 | 1 | 2447 | 0 | 3113 | 1 | 3779 | 0 |
| 450 | 1 | 1116 | 0 | 1782 | 0 | 2448 | 0 | 3114 | 1 | 3780 | 1 |
| 451 | 1 | 1117 | 1 | 1783 | 0 | 2449 | 1 | 3115 | 1 | 3781 | 0 |
| 452 | 1 | 1118 | 0 | 1784 | 0 | 2450 | 0 | 3116 | 0 | 3782 | 0 |
| 453 | 1 | 1119 | 0 | 1785 | 1 | 2451 | 1 | 3117 | 0 | 3783 | 0 |
| 454 | 0 | 1120 | 0 | 1786 | 0 | 2452 | 1 | 3118 | 1 | 3784 | 1 |
| 455 | 1 | 1121 | 1 | 1787 | 0 | 2453 | 0 | 3119 | 1 | 3785 | 0 |
| 456 | 1 | 1122 | 0 | 1788 | 0 | 2454 | 0 | 3120 | 0 | 3786 | 1 |
| 457 | 1 | 1123 | 0 | 1789 | 1 | 2455 | 1 | 3121 | 1 | 3787 | 1 |
| 458 | 0 | 1124 | 1 | 1790 | 1 | 2456 | 1 | 3122 | 0 | 3788 | 0 |
| 459 | 1 | 1125 | 0 | 1791 | 1 | 2457 | 1 | 3123 | 0 | 3789 | 1 |
| 460 | 1 | 1126 | 1 | 1792 | 1 | 2458 | 1 | 3124 | 0 | 3790 | 0 |
| 461 | 0 | 1127 | 1 | 1793 | 1 | 2459 | 1 | 3125 | 1 | 3791 | 1 |
| 462 | 1 | 1128 | 1 | 1794 | 1 | 2460 | 1 | 3126 | 1 | 3792 | 1 |
| 463 | 0 | 1129 | 0 | 1795 | 0 | 2461 | 1 | 3127 | 1 | 3793 | 1 |
| 464 | 1 | 1130 | 0 | 1796 | 1 | 2462 | 1 | 3128 | 1 | 3794 | 0 |
| 465 | 0 | 1131 | 1 | 1797 | 1 | 2463 | 1 | 3129 | 0 | 3795 | 1 |
| 466 | 1 | 1132 | 0 | 1798 | 1 | 2464 | 1 | 3130 | 1 | 3796 | 1 |
| 467 | 1 | 1133 | 1 | 1799 | 0 | 2465 | 0 | 3131 | 0 | 3797 | 1 |
| 468 | 1 | 1134 | 1 | 1800 | 0 | 2466 | 0 | 3132 | 0 | 3798 | 0 |
| 469 | 0 | 1135 | 1 | 1801 | 0 | 2467 | 1 | 3133 | 1 | 3799 | 1 |
| 470 | 0 | 1136 | 1 | 1802 | 0 | 2468 | 0 | 3134 | 1 | 3800 | 0 |
| 471 | 0 | 1137 | 1 | 1803 | 0 | 2469 | 1 | 3135 | 1 | 3801 | 1 |
| 472 | 1 | 1138 | 1 | 1804 | 0 | 2470 | 0 | 3136 | 1 | 3802 | 1 |
| 473 | 1 | 1139 | 1 | 1805 | 1 | 2471 | 1 | 3137 | 0 | 3803 | 0 |
| 474 | 1 | 1140 | 0 | 1806 | 1 | 2472 | 0 | 3138 | 1 | 3804 | 0 |
| 475 | 0 | 1141 | 0 | 1807 | 0 | 2473 | 0 | 3139 | 1 | 3805 | 1 |
| 476 | 0 | 1142 | 1 | 1808 | 1 | 2474 | 1 | 3140 | 0 | 3806 | 1 |
| 477 | 0 | 1143 | 1 | 1809 | 1 | 2475 | 0 | 3141 | 1 | 3807 | 0 |
| 478 | 1 | 1144 | 0 | 1810 | 0 | 2476 | 0 | 3142 | 1 | 3808 | 1 |
| 479 | 1 | 1145 | 0 | 1811 | 1 | 2477 | 1 | 3143 | 0 | 3809 | 0 |
| 480 | 0 | 1146 | 0 | 1812 | 1 | 2478 | 0 | 3144 | 0 | 3810 | 1 |
| 481 | 0 | 1147 | 0 | 1813 | 1 | 2479 | 1 | 3145 | 1 | 3811 | 0 |
| 482 | 1 | 1148 | 1 | 1814 | 0 | 2480 | 1 | 3146 | 0 | 3812 | 1 |
| 483 | 1 | 1149 | 0 | 1815 | 1 | 2481 | 1 | 3147 | 0 | 3813 | 0 |
| 484 | 0 | 1150 | 1 | 1816 | 0 | 2482 | 1 | 3148 | 1 | 3814 | 1 |
| 485 | 1 | 1151 | 0 | 1817 | 1 | 2483 | 1 | 3149 | 0 | 3815 | 0 |
| 486 | 0 | 1152 | 0 | 1818 | 1 | 2484 | 1 | 3150 | 1 | 3816 | 1 |
| 487 | 0 | 1153 | 0 | 1819 | 0 | 2485 | 1 | 3151 | 1 | 3817 | 0 |
| 488 | 1 | 1154 | 0 | 1820 | 1 | 2486 | 1 | 3152 | 1 | 3818 | 0 |
| 489 | 1 | 1155 | 0 | 1821 | 0 | 2487 | 1 | 3153 | 0 | 3819 | 1 |
| 490 | 0 | 1156 | 1 | 1822 | 0 | 2488 | 0 | 3154 | 0 | 3820 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 491 | 0 | 1157 | 1 | 1823 | 1 | 2489 | 1 | 3155 | 1 | 3821 | 0 |
| 492 | 0 | 1158 | 0 | 1824 | 0 | 2490 | 1 | 3156 | 1 | 3822 | 0 |
| 493 | 1 | 1159 | 1 | 1825 | 1 | 2491 | 0 | 3157 | 1 | 3823 | 1 |
| 494 | 1 | 1160 | 0 | 1826 | 0 | 2492 | 1 | 3158 | 0 | 3824 | 1 |
| 495 | 0 | 1161 | 1 | 1827 | 0 | 2493 | 1 | 3159 | 1 | 3825 | 0 |
| 496 | 1 | 1162 | 0 | 1828 | 1 | 2494 | 1 | 3160 | 0 | 3826 | 0 |
| 497 | 0 | 1163 | 1 | 1829 | 0 | 2495 | 0 | 3161 | 1 | 3827 | 1 |
| 498 | 1 | 1164 | 1 | 1830 | 1 | 2496 | 0 | 3162 | 0 | 3828 | 0 |
| 499 | 1 | 1165 | 0 | 1831 | 1 | 2497 | 1 | 3163 | 0 | 3829 | 0 |
| 500 | 1 | 1166 | 0 | 1832 | 0 | 2498 | 0 | 3164 | 1 | 3830 | 0 |
| 501 | 1 | 1167 | 1 | 1833 | 1 | 2499 | 1 | 3165 | 1 | 3831 | 1 |
| 502 | 1 | 1168 | 1 | 1834 | 0 | 2500 | 1 | 3166 | 0 | 3832 | 1 |
| 503 | 0 | 1169 | 0 | 1835 | 0 | 2501 | 1 | 3167 | 0 | 3833 | 1 |
| 504 | 0 | 1170 | 1 | 1836 | 0 | 2502 | 0 | 3168 | 0 | 3834 | 1 |
| 505 | 0 | 1171 | 1 | 1837 | 1 | 2503 | 0 | 3169 | 1 | 3835 | 1 |
| 506 | 0 | 1172 | 1 | 1838 | 0 | 2504 | 0 | 3170 | 1 | 3836 | 0 |
| 507 | 1 | 1173 | 1 | 1839 | 0 | 2505 | 0 | 3171 | 1 | 3837 | 0 |
| 508 | 1 | 1174 | 0 | 1840 | 0 | 2506 | 0 | 3172 | 1 | 3838 | 0 |
| 509 | 1 | 1175 | 1 | 1841 | 0 | 2507 | 0 | 3173 | 1 | 3839 | 1 |
| 510 | 0 | 1176 | 1 | 1842 | 0 | 2508 | 1 | 3174 | 0 | 3840 | 0 |
| 511 | 0 | 1177 | 0 | 1843 | 0 | 2509 | 1 | 3175 | 1 | 3841 | 0 |
| 512 | 0 | 1178 | 1 | 1844 | 1 | 2510 | 0 | 3176 | 1 | 3842 | 0 |
| 513 | 1 | 1179 | 0 | 1845 | 0 | 2511 | 1 | 3177 | 1 | 3843 | 0 |
| 514 | 0 | 1180 | 1 | 1846 | 1 | 2512 | 0 | 3178 | 1 | 3844 | 0 |
| 515 | 0 | 1181 | 1 | 1847 | 1 | 2513 | 0 | 3179 | 1 | 3845 | 0 |
| 516 | 1 | 1182 | 1 | 1848 | 1 | 2514 | 1 | 3180 | 1 | 3846 | 0 |
| 517 | 1 | 1183 | 0 | 1849 | 0 | 2515 | 0 | 3181 | 0 | 3847 | 1 |
| 518 | 1 | 1184 | 1 | 1850 | 1 | 2516 | 0 | 3182 | 0 | 3848 | 0 |
| 519 | 0 | 1185 | 0 | 1851 | 1 | 2517 | 1 | 3183 | 0 | 3849 | 0 |
| 520 | 0 | 1186 | 0 | 1852 | 0 | 2518 | 0 | 3184 | 0 | 3850 | 0 |
| 521 | 1 | 1187 | 1 | 1853 | 0 | 2519 | 0 | 3185 | 0 | 3851 | 0 |
| 522 | 0 | 1188 | 0 | 1854 | 1 | 2520 | 1 | 3186 | 1 | 3852 | 1 |
| 523 | 0 | 1189 | 1 | 1855 | 1 | 2521 | 0 | 3187 | 1 | 3853 | 0 |
| 524 | 0 | 1190 | 1 | 1856 | 1 | 2522 | 0 | 3188 | 0 | 3854 | 1 |
| 525 | 0 | 1191 | 1 | 1857 | 0 | 2523 | 0 | 3189 | 0 | 3855 | 0 |
| 526 | 1 | 1192 | 0 | 1858 | 1 | 2524 | 0 | 3190 | 0 | 3856 | 0 |
| 527 | 0 | 1193 | 0 | 1859 | 1 | 2525 | 0 | 3191 | 0 | 3857 | 1 |
| 528 | 0 | 1194 | 0 | 1860 | 0 | 2526 | 1 | 3192 | 1 | 3858 | 1 |
| 529 | 0 | 1195 | 1 | 1861 | 1 | 2527 | 1 | 3193 | 1 | 3859 | 1 |
| 530 | 0 | 1196 | 0 | 1862 | 0 | 2528 | 1 | 3194 | 1 | 3860 | 1 |
| 531 | 0 | 1197 | 1 | 1863 | 1 | 2529 | 1 | 3195 | 0 | 3861 | 1 |
| 532 | 1 | 1198 | 0 | 1864 | 1 | 2530 | 1 | 3196 | 0 | 3862 | 1 |
| 533 | 1 | 1199 | 1 | 1865 | 0 | 2531 | 0 | 3197 | 1 | 3863 | 0 |
| 534 | 1 | 1200 | 1 | 1866 | 1 | 2532 | 1 | 3198 | 0 | 3864 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 535 | 0 | 1201 | 1 | 1867 | 1 | 2533 | 0 | 3199 | 0 | 3865 | 0 |
| 536 | 1 | 1202 | 1 | 1868 | 1 | 2534 | 0 | 3200 | 0 | 3866 | 0 |
| 537 | 1 | 1203 | 0 | 1869 | 1 | 2535 | 0 | 3201 | 1 | 3867 | 1 |
| 538 | 0 | 1204 | 1 | 1870 | 0 | 2536 | 0 | 3202 | 0 | 3868 | 0 |
| 539 | 1 | 1205 | 1 | 1871 | 0 | 2537 | 0 | 3203 | 1 | 3869 | 1 |
| 540 | 1 | 1206 | 1 | 1872 | 0 | 2538 | 1 | 3204 | 1 | 3870 | 0 |
| 541 | 0 | 1207 | 1 | 1873 | 0 | 2539 | 0 | 3205 | 0 | 3871 | 1 |
| 542 | 1 | 1208 | 0 | 1874 | 0 | 2540 | 1 | 3206 | 0 | 3872 | 1 |
| 543 | 0 | 1209 | 1 | 1875 | 1 | 2541 | 0 | 3207 | 0 | 3873 | 0 |
| 544 | 0 | 1210 | 0 | 1876 | 1 | 2542 | 0 | 3208 | 1 | 3874 | 0 |
| 545 | 0 | 1211 | 0 | 1877 | 0 | 2543 | 1 | 3209 | 0 | 3875 | 1 |
| 546 | 1 | 1212 | 1 | 1878 | 1 | 2544 | 1 | 3210 | 0 | 3876 | 1 |
| 547 | 0 | 1213 | 0 | 1879 | 1 | 2545 | 0 | 3211 | 0 | 3877 | 0 |
| 548 | 1 | 1214 | 0 | 1880 | 0 | 2546 | 0 | 3212 | 0 | 3878 | 1 |
| 549 | 1 | 1215 | 1 | 1881 | 0 | 2547 | 1 | 3213 | 1 | 3879 | 1 |
| 550 | 0 | 1216 | 0 | 1882 | 0 | 2548 | 0 | 3214 | 1 | 3880 | 0 |
| 551 | 0 | 1217 | 1 | 1883 | 0 | 2549 | 1 | 3215 | 1 | 3881 | 0 |
| 552 | 0 | 1218 | 0 | 1884 | 0 | 2550 | 1 | 3216 | 0 | 3882 | 0 |
| 553 | 0 | 1219 | 0 | 1885 | 0 | 2551 | 0 | 3217 | 1 | 3883 | 0 |
| 554 | 1 | 1220 | 0 | 1886 | 1 | 2552 | 0 | 3218 | 1 | 3884 | 0 |
| 555 | 0 | 1221 | 0 | 1887 | 1 | 2553 | 1 | 3219 | 1 | 3885 | 1 |
| 556 | 0 | 1222 | 1 | 1888 | 0 | 2554 | 0 | 3220 | 1 | 3886 | 0 |
| 557 | 0 | 1223 | 0 | 1889 | 1 | 2555 | 1 | 3221 | 1 | 3887 | 0 |
| 558 | 1 | 1224 | 1 | 1890 | 0 | 2556 | 1 | 3222 | 1 | 3888 | 0 |
| 559 | 1 | 1225 | 1 | 1891 | 0 | 2557 | 0 | 3223 | 0 | 3889 | 1 |
| 560 | 0 | 1226 | 1 | 1892 | 1 | 2558 | 1 | 3224 | 1 | 3890 | 0 |
| 561 | 0 | 1227 | 0 | 1893 | 0 | 2559 | 1 | 3225 | 0 | 3891 | 0 |
| 562 | 0 | 1228 | 1 | 1894 | 0 | 2560 | 0 | 3226 | 0 | 3892 | 0 |
| 563 | 1 | 1229 | 0 | 1895 | 0 | 2561 | 1 | 3227 | 0 | 3893 | 1 |
| 564 | 1 | 1230 | 1 | 1896 | 1 | 2562 | 1 | 3228 | 1 | 3894 | 1 |
| 565 | 1 | 1231 | 0 | 1897 | 0 | 2563 | 0 | 3229 | 0 | 3895 | 0 |
| 566 | 1 | 1232 | 0 | 1898 | 0 | 2564 | 1 | 3230 | 1 | 3896 | 1 |
| 567 | 0 | 1233 | 1 | 1899 | 1 | 2565 | 1 | 3231 | 0 | 3897 | 0 |
| 568 | 0 | 1234 | 1 | 1900 | 1 | 2566 | 0 | 3232 | 1 | 3898 | 1 |
| 569 | 1 | 1235 | 0 | 1901 | 0 | 2567 | 1 | 3233 | 1 | 3899 | 0 |
| 570 | 0 | 1236 | 0 | 1902 | 1 | 2568 | 1 | 3234 | 1 | 3900 | 1 |
| 571 | 0 | 1237 | 1 | 1903 | 1 | 2569 | 0 | 3235 | 0 | 3901 | 1 |
| 572 | 1 | 1238 | 0 | 1904 | 0 | 2570 | 0 | 3236 | 1 | 3902 | 1 |
| 573 | 1 | 1239 | 0 | 1905 | 1 | 2571 | 1 | 3237 | 1 | 3903 | 0 |
| 574 | 1 | 1240 | 1 | 1906 | 1 | 2572 | 1 | 3238 | 0 | 3904 | 1 |
| 575 | 1 | 1241 | 0 | 1907 | 1 | 2573 | 1 | 3239 | 1 | 3905 | 0 |
| 576 | 1 | 1242 | 0 | 1908 | 0 | 2574 | 1 | 3240 | 1 | 3906 | 1 |
| 577 | 0 | 1243 | 1 | 1909 | 1 | 2575 | 0 | 3241 | 1 | 3907 | 0 |
| 578 | 0 | 1244 | 1 | 1910 | 1 | 2576 | 0 | 3242 | 1 | 3908 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 579 | 0 | 1245 | 0 | 1911 | 0 | 2577 | 0 | 3243 | 1 | 3909 | 1 |
| 580 | 1 | 1246 | 0 | 1912 | 1 | 2578 | 0 | 3244 | 0 | 3910 | 0 |
| 581 | 0 | 1247 | 0 | 1913 | 1 | 2579 | 0 | 3245 | 1 | 3911 | 1 |
| 582 | 1 | 1248 | 1 | 1914 | 1 | 2580 | 0 | 3246 | 1 | 3912 | 1 |
| 583 | 1 | 1249 | 1 | 1915 | 0 | 2581 | 0 | 3247 | 1 | 3913 | 0 |
| 584 | 0 | 1250 | 0 | 1916 | 1 | 2582 | 1 | 3248 | 1 | 3914 | 0 |
| 585 | 0 | 1251 | 0 | 1917 | 1 | 2583 | 0 | 3249 | 0 | 3915 | 0 |
| 586 | 1 | 1252 | 0 | 1918 | 0 | 2584 | 1 | 3250 | 0 | 3916 | 0 |
| 587 | 0 | 1253 | 1 | 1919 | 1 | 2585 | 0 | 3251 | 0 | 3917 | 1 |
| 588 | 0 | 1254 | 1 | 1920 | 1 | 2586 | 0 | 3252 | 0 | 3918 | 0 |
| 589 | 1 | 1255 | 1 | 1921 | 1 | 2587 | 0 | 3253 | 1 | 3919 | 0 |
| 590 | 0 | 1256 | 0 | 1922 | 0 | 2588 | 1 | 3254 | 1 | 3920 | 0 |
| 591 | 0 | 1257 | 1 | 1923 | 0 | 2589 | 1 | 3255 | 1 | 3921 | 1 |
| 592 | 0 | 1258 | 1 | 1924 | 0 | 2590 | 1 | 3256 | 1 | 3922 | 0 |
| 593 | 0 | 1259 | 0 | 1925 | 0 | 2591 | 0 | 3257 | 0 | 3923 | 0 |
| 594 | 1 | 1260 | 1 | 1926 | 0 | 2592 | 1 | 3258 | 1 | 3924 | 0 |
| 595 | 0 | 1261 | 1 | 1927 | 1 | 2593 | 1 | 3259 | 0 | 3925 | 1 |
| 596 | 0 | 1262 | 0 | 1928 | 0 | 2594 | 0 | 3260 | 0 | 3926 | 0 |
| 597 | 0 | 1263 | 0 | 1929 | 1 | 2595 | 1 | 3261 | 0 | 3927 | 0 |
| 598 | 1 | 1264 | 1 | 1930 | 1 | 2596 | 0 | 3262 | 0 | 3928 | 1 |
| 599 | 1 | 1265 | 0 | 1931 | 1 | 2597 | 0 | 3263 | 1 | 3929 | 0 |
| 600 | 0 | 1266 | 0 | 1932 | 0 | 2598 | 1 | 3264 | 0 | 3930 | 0 |
| 601 | 0 | 1267 | 0 | 1933 | 0 | 2599 | 0 | 3265 | 1 | 3931 | 1 |
| 602 | 0 | 1268 | 1 | 1934 | 0 | 2600 | 1 | 3266 | 1 | 3932 | 1 |
| 603 | 1 | 1269 | 0 | 1935 | 0 | 2601 | 0 | 3267 | 0 | 3933 | 0 |
| 604 | 1 | 1270 | 1 | 1936 | 1 | 2602 | 1 | 3268 | 0 | 3934 | 0 |
| 605 | 1 | 1271 | 1 | 1937 | 0 | 2603 | 1 | 3269 | 0 | 3935 | 0 |
| 606 | 1 | 1272 | 1 | 1938 | 1 | 2604 | 0 | 3270 | 1 | 3936 | 1 |
| 607 | 1 | 1273 | 0 | 1939 | 0 | 2605 | 0 | 3271 | 1 | 3937 | 0 |
| 608 | 0 | 1274 | 0 | 1940 | 1 | 2606 | 1 | 3272 | 0 | 3938 | 0 |
| 609 | 1 | 1275 | 0 | 1941 | 0 | 2607 | 0 | 3273 | 1 | 3939 | 0 |
| 610 | 0 | 1276 | 0 | 1942 | 1 | 2608 | 1 | 3274 | 1 | 3940 | 1 |
| 611 | 1 | 1277 | 0 | 1943 | 0 | 2609 | 0 | 3275 | 1 | 3941 | 1 |
| 612 | 1 | 1278 | 1 | 1944 | 1 | 2610 | 0 | 3276 | 1 | 3942 | 0 |
| 613 | 0 | 1279 | 1 | 1945 | 0 | 2611 | 0 | 3277 | 0 | 3943 | 0 |
| 614 | 0 | 1280 | 1 | 1946 | 0 | 2612 | 0 | 3278 | 0 | 3944 | 0 |
| 615 | 1 | 1281 | 0 | 1947 | 1 | 2613 | 0 | 3279 | 1 | 3945 | 1 |
| 616 | 0 | 1282 | 1 | 1948 | 0 | 2614 | 1 | 3280 | 0 | 3946 | 0 |
| 617 | 1 | 1283 | 1 | 1949 | 0 | 2615 | 0 | 3281 | 1 | 3947 | 0 |
| 618 | 0 | 1284 | 0 | 1950 | 1 | 2616 | 0 | 3282 | 1 | 3948 | 1 |
| 619 | 1 | 1285 | 1 | 1951 | 0 | 2617 | 1 | 3283 | 1 | 3949 | 0 |
| 620 | 1 | 1286 | 0 | 1952 | 1 | 2618 | 0 | 3284 | 1 | 3950 | 1 |
| 621 | 1 | 1287 | 1 | 1953 | 0 | 2619 | 0 | 3285 | 0 | 3951 | 0 |
| 622 | 0 | 1288 | 0 | 1954 | 0 | 2620 | 1 | 3286 | 1 | 3952 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 623 | 0 | 1289 | 1 | 1955 | 1 | 2621 | 1 | 3287 | 1 | 3953 | 1 |
| 624 | 0 | 1290 | 0 | 1956 | 0 | 2622 | 1 | 3288 | 1 | 3954 | 1 |
| 625 | 1 | 1291 | 1 | 1957 | 1 | 2623 | 0 | 3289 | 1 | 3955 | 0 |
| 626 | 1 | 1292 | 0 | 1958 | 0 | 2624 | 1 | 3290 | 0 | 3956 | 1 |
| 627 | 1 | 1293 | 0 | 1959 | 0 | 2625 | 0 | 3291 | 0 | 3957 | 0 |
| 628 | 0 | 1294 | 1 | 1960 | 1 | 2626 | 0 | 3292 | 1 | 3958 | 0 |
| 629 | 1 | 1295 | 0 | 1961 | 0 | 2627 | 1 | 3293 | 0 | 3959 | 1 |
| 630 | 0 | 1296 | 1 | 1962 | 1 | 2628 | 0 | 3294 | 1 | 3960 | 0 |
| 631 | 0 | 1297 | 1 | 1963 | 0 | 2629 | 1 | 3295 | 1 | 3961 | 1 |
| 632 | 1 | 1298 | 1 | 1964 | 0 | 2630 | 1 | 3296 | 1 | 3962 | 1 |
| 633 | 1 | 1299 | 1 | 1965 | 0 | 2631 | 0 | 3297 | 1 | 3963 | 0 |
| 634 | 0 | 1300 | 0 | 1966 | 1 | 2632 | 1 | 3298 | 1 | 3964 | 0 |
| 635 | 0 | 1301 | 1 | 1967 | 1 | 2633 | 1 | 3299 | 1 | 3965 | 1 |
| 636 | 1 | 1302 | 1 | 1968 | 1 | 2634 | 1 | 3300 | 1 | 3966 | 1 |
| 637 | 1 | 1303 | 1 | 1969 | 1 | 2635 | 0 | 3301 | 0 | 3967 | 0 |
| 638 | 1 | 1304 | 1 | 1970 | 0 | 2636 | 0 | 3302 | 0 | 3968 | 0 |
| 639 | 0 | 1305 | 0 | 1971 | 1 | 2637 | 1 | 3303 | 1 | 3969 | 1 |
| 640 | 0 | 1306 | 0 | 1972 | 0 | 2638 | 0 | 3304 | 1 | 3970 | 0 |
| 641 | 1 | 1307 | 1 | 1973 | 0 | 2639 | 1 | 3305 | 0 | 3971 | 0 |
| 642 | 0 | 1308 | 1 | 1974 | 0 | 2640 | 0 | 3306 | 0 | 3972 | 1 |
| 643 | 0 | 1309 | 1 | 1975 | 1 | 2641 | 0 | 3307 | 0 | 3973 | 1 |
| 644 | 1 | 1310 | 1 | 1976 | 0 | 2642 | 1 | 3308 | 1 | 3974 | 1 |
| 645 | 1 | 1311 | 0 | 1977 | 1 | 2643 | 0 | 3309 | 1 | 3975 | 0 |
| 646 | 1 | 1312 | 0 | 1978 | 1 | 2644 | 0 | 3310 | 1 | 3976 | 0 |
| 647 | 0 | 1313 | 0 | 1979 | 1 | 2645 | 1 | 3311 | 1 | 3977 | 0 |
| 648 | 1 | 1314 | 1 | 1980 | 1 | 2646 | 0 | 3312 | 1 | 3978 | 1 |
| 649 | 1 | 1315 | 1 | 1981 | 0 | 2647 | 0 | 3313 | 1 | 3979 | 0 |
| 650 | 1 | 1316 | 1 | 1982 | 0 | 2648 | 1 | 3314 | 1 | 3980 | 1 |
| 651 | 1 | 1317 | 0 | 1983 | 0 | 2649 | 1 | 3315 | 0 | 3981 | 0 |
| 652 | 1 | 1318 | 1 | 1984 | 0 | 2650 | 0 | 3316 | 1 | 3982 | 1 |
| 653 | 1 | 1319 | 0 | 1985 | 0 | 2651 | 1 | 3317 | 0 | 3983 | 1 |
| 654 | 1 | 1320 | 0 | 1986 | 0 | 2652 | 0 | 3318 | 0 | 3984 | 0 |
| 655 | 1 | 1321 | 1 | 1987 | 1 | 2653 | 1 | 3319 | 1 | 3985 | 0 |
| 656 | 1 | 1322 | 1 | 1988 | 0 | 2654 | 0 | 3320 | 0 | 3986 | 0 |
| 657 | 1 | 1323 | 0 | 1989 | 1 | 2655 | 0 | 3321 | 1 | 3987 | 0 |
| 658 | 1 | 1324 | 1 | 1990 | 1 | 2656 | 1 | 3322 | 1 | 3988 | 0 |
| 659 | 0 | 1325 | 0 | 1991 | 1 | 2657 | 1 | 3323 | 1 | 3989 | 0 |
| 660 | 0 | 1326 | 0 | 1992 | 1 | 2658 | 0 | 3324 | 0 | 3990 | 0 |
| 661 | 0 | 1327 | 0 | 1993 | 0 | 2659 | 1 | 3325 | 1 | 3991 | 0 |
| 662 | 0 | 1328 | 0 | 1994 | 0 | 2660 | 1 | 3326 | 1 | 3992 | 0 |
| 663 | 1 | 1329 | 1 | 1995 | 1 | 2661 | 1 | 3327 | 0 | | |
| 664 | 1 | 1330 | 1 | 1996 | 1 | 2662 | 1 | 3328 | 1 | | |
| 665 | 1 | 1331 | 0 | 1997 | 1 | 2663 | 1 | 3329 | 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