

PROOF OF THE CONTINUED FRACTION CONJECTURE FOR

$$(a, b) = (z^6 + z^5 + z^4 + z^3 + z^2 + 1, z + 1)$$

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 $(a, b) = (z^6 + z^5 + z^4 + z^3 + z^2 + 1, z + 1)$.

1. INTRODUCTION

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

$$(1.1) \quad \text{CF}(\mathbf{a}(z)) = \frac{1}{a_0(z) + \frac{1}{a_1(z) + \frac{1}{a_2(z) + \frac{1}{\ddots}}}}$$

as the limit of the finite continued fractions

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

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

$$(1.3) \quad c_{-1}z^{-1} + c_{-2}z^{-2} + c_{-3}z^{-3} + \dots$$

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

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

that we shall denote

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

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Theorem 1.1. *When $(a, b) = (z^6 + z^5 + z^4 + z^3 + z^2 + 1, z + 1)$, the two power series $\text{CF}(a, b)$ and $\text{CF}(b, a)$ 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 $\text{CF}(a, b)$,

$$\begin{aligned} p_0(z) &= z^{17} + z^{15} + z^{12} + z^{11} + z^{10} + z^8 + z^6 + z^5 + z^4 + z + 1, \\ p_1(z) &= z^{23} + z^{22} + z^{18} + z^{17} + z^{16} + z^{14} + z^{13} + z^{10} + z^9 + z^8 + z^6 + z^4 + z^3 \\ &\quad + z, \\ p_2(z) &= z^{24} + z^{22} + z^{16} + z^{14} + z^{12} + z^{10} + z^2 + 1, \\ p_3(z) &= z^{23} + z^{22} + z^{18} + z^{17} + z^{16} + z^{14} + z^{13} + z^{10} + z^9 + z^8 + z^6 + z^4 + z^3 \\ &\quad + z, \\ p_4(z) &= z^{22} + z^{17} + z^{15} + z^{14} + z^{11} + z^6 + z^5 + z^2 + z + 1, \end{aligned}$$

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

$$\begin{aligned} p_0(z) &= z^{20} + z^{17} + z^{15} + z^{11} + z^{10} + z^8 + z^6 + z^5 + z + 1, \\ p_1(z) &= z^{23} + z^{22} + z^{18} + z^{17} + z^{16} + z^{14} + z^{13} + z^{10} + z^9 + z^8 + z^6 + z^4 + z^3 \\ &\quad + z, \\ p_2(z) &= z^{24} + z^{22} + z^{16} + z^{14} + z^{12} + z^{10} + z^2 + 1, \\ p_3(z) &= z^{23} + z^{22} + z^{18} + z^{17} + z^{16} + z^{14} + z^{13} + z^{10} + z^9 + z^8 + z^6 + z^4 + z^3 \\ &\quad + z, \\ p_4(z) &= z^{22} + z^{20} + z^{17} + z^{15} + z^{14} + z^{12} + z^{11} + z^6 + z^5 + z^4 + z^2 + z + 1. \end{aligned}$$

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

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

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

$$\begin{aligned} M_n(x) &= x^{\deg(t_{2^n-1})} \begin{pmatrix} t_{2^n-1}(1/x) & 1 \\ 1 & 0 \end{pmatrix} \times x^{\deg(t_{2^n-2})} \begin{pmatrix} t_{2^n-2}(1/x) & 1 \\ 1 & 0 \end{pmatrix} \times \\ &\quad \cdots \times x^{\deg(t_0)} \begin{pmatrix} t_0(1/x) & 1 \\ 1 & 0 \end{pmatrix}, \\ W_n(x) &= x^{\deg(\bar{t}_{2^n-1})} \begin{pmatrix} \bar{t}_{2^n-1}(1/x) & 1 \\ 1 & 0 \end{pmatrix} \times x^{\deg(\bar{t}_{2^n-2})} \begin{pmatrix} \bar{t}_{2^n-2}(1/x) & 1 \\ 1 & 0 \end{pmatrix} \times \\ &\quad \cdots \times x^{\deg(\bar{t}_0)} \begin{pmatrix} \bar{t}_0(1/x) & 1 \\ 1 & 0 \end{pmatrix}, \end{aligned}$$

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,

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

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

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

for some positive integer d_n . Hence,

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

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

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

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

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

of the vector

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

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

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

Lemma 2.1. *We have*

$$(2.3) \quad M^e = W^o \cdot M^o,$$

$$(2.4) \quad M^o = W^e \cdot M^e,$$

$$(2.5) \quad W^e = M^o \cdot W^o,$$

$$(2.6) \quad W^o = M^e \cdot W^e.$$

Proof. We give the proof of the identity

$$M_{0,0}^e = W_{0,0}^o M_{0,0}^o + W_{0,1}^o M_{1,0}^o,$$

the proofs of the others being similar.

First, we compute the minimal polynomials of $W_{0,0}^o M_{0,0}^o$ and $W_{0,1}^o M_{1,0}^o$. We know that

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

is an annihilating polynomial of $W_{0,0}^o M_{0,0}^o$. We use Padé-Hermite approximation to find a candidate for the minimal polynomial of $W_{0,0}^o M_{0,0}^o$, 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 $W_{0,0}^o M_{0,0}^o$. We verify the first point directly. For the second point, we truncate $W_{0,0}^o M_{0,0}^o$ 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 $W_{0,0}^o M_{0,0}^o$. We find the minimal polynomial $\phi_1(x, y)$ of $W_{0,1}^o M_{1,0}^o$ in a similar way.

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

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

is an annihilating of $W_{0,0}^o M_{0,0}^o + W_{0,1}^o M_{1,0}^o$. We verify that $\phi(M^e, 0, 0)$ is an irreducible factor of $S(x, y)$ of multiplicity μ , and that $Q(x, y) := S(x, y)/\phi(M^e, 0, 0)^\mu$ is not an annihilating polynomial of $W_{0,0}^o M_{0,0}^o + W_{0,1}^o M_{1,0}^o$. To see the last point, we truncate $W_{0,0}^o M_{0,0}^o + W_{0,1}^o M_{1,0}^o$ 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 $W_{0,0}^o M_{0,0}^o + W_{0,1}^o M_{1,0}^o$.

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

Define

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

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

$$\begin{aligned} M^e[:14u] &= M^e[:7u] + x^{2u} M^e[:5u] + x^{5u} M^e[:2u] + x^{6u} M^e[:u] + x^{2u} M^e[:7u] \\ &\quad + x^{4u} M^e[:5u] + x^{7u} M^e[:2u] + x^{8u} M^e[:u] + x^{4u} M^e[:7u] \\ &\quad + x^{6u} M^e[:5u] + x^{9u} M^e[:2u] + x^{10u} M^e[:u] + x^{5u} M^e[:7u] \\ &\quad + x^{7u} M^e[:5u] + x^{10u} M^e[:2u] + x^{11u} M^e[:u] + x^{8u} M^e[:6u] \end{aligned}$$

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

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

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

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 $T = M_{0,0}^o$, for all integer $k \geq 2$ and $u = 2^{2k}$,

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

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

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

$$0 = x^{10u}T[3u:4u] + x^{8u}T[5u:6u] + T[13u:14u],$$

which can be rewritten as

$$(2.7) \quad 0 = T[[1w]_2] + T[[10w]_2] + T[[101w]_2] + T[[111w]_2],$$

$$(2.8) \quad 0 = T[[10w]_2] + T[[11w]_2] + T[[110w]_2] + T[[1000w]_2],$$

$$(2.9) \quad 0 = T[[w]_2] + T[[1w]_2] + T[[10w]_2] + T[[11w]_2] + T[[100w]_2] \\ + T[[101w]_2] + T[[1001w]_2],$$

$$(2.10) \quad 0 = T[[w]_2] + T[[1w]_2] + T[[10w]_2] + T[[11w]_2] + T[[100w]_2] \\ + T[[101w]_2] + T[[110w]_2] + T[[1010w]_2],$$

$$(2.11) \quad 0 = T[[w]_2] + T[[11w]_2] + T[[100w]_2] + T[[110w]_2] + T[[1011w]_2],$$

$$(2.12) \quad 0 = T[[10w]_2] + T[[100w]_2] + T[[1100w]_2],$$

$$(2.13) \quad 0 = T[[11w]_2] + T[[101w]_2] + T[[1101w]_2],$$

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

$$(2.14) \quad 1 = T[[1w]_2] + T[[10w]_2] + T[[101w]_2] + T[[111w]_2],$$

$$(2.15) \quad 0 = T[[10w]_2] + T[[11w]_2] + T[[110w]_2] + T[[1000w]_2],$$

$$(2.16) \quad 1 = T[[w]_2] + T[[1w]_2] + T[[10w]_2] + T[[11w]_2] + T[[100w]_2] \\ + T[[101w]_2] + T[[1001w]_2],$$

$$(2.17) \quad 0 = T[[w]_2] + T[[1w]_2] + T[[10w]_2] + T[[11w]_2] + T[[100w]_2] \\ + T[[101w]_2] + T[[110w]_2] + T[[1010w]_2],$$

$$(2.18) \quad 1 = T[[w]_2] + T[[11w]_2] + T[[100w]_2] + T[[110w]_2] + T[[1011w]_2],$$

$$(2.19) \quad 1 = T[[10w]_2] + T[[100w]_2] + T[[1100w]_2],$$

$$(2.20) \quad 0 = T[[11w]_2] + T[[101w]_2] + T[[1101w]_2],$$

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

First we calculate an 2-automaton that generates T from its minimal polynomial and its first terms. This automaton has 6178 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 τ 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

$$(2.21) \quad 0 = \tau(A(s, 1)) + \tau(A(s, 10)) + \tau(A(s, 101)) + \tau(A(s, 111)),$$

$$(2.22) \quad 0 = \tau(A(s, 10)) + \tau(A(s, 11)) + \tau(A(s, 110)) + \tau(A(s, 1000)),$$

$$(2.23) \quad 0 = \tau(A(s, \epsilon)) + \tau(A(s, 1)) + \tau(A(s, 10)) + \tau(A(s, 11)) + \tau(A(s, 100)) \\ + \tau(A(s, 101)) + \tau(A(s, 1001)),$$

$$(2.24) \quad 0 = \tau(A(s, \epsilon)) + \tau(A(s, 1)) + \tau(A(s, 10)) + \tau(A(s, 11)) + \tau(A(s, 100)) \\ + \tau(A(s, 101)) + \tau(A(s, 110)) + \tau(A(s, 1010)),$$

$$(2.25) \quad 0 = \tau(A(s, \epsilon)) + \tau(A(s, 11)) + \tau(A(s, 100)) + \tau(A(s, 110))$$

$$+ \tau(A(s, 1011)),$$

$$(2.26) \quad 0 = \tau(A(s, 10)) + \tau(A(s, 100)) + \tau(A(s, 1100)),$$

$$(2.27) \quad 0 = \tau(A(s, 11)) + \tau(A(s, 101)) + \tau(A(s, 1101)),$$

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

$$(2.28) \quad 1 = \tau(A(s, 1)) + \tau(A(s, 10)) + \tau(A(s, 101)) + \tau(A(s, 111)),$$

$$(2.29) \quad 0 = \tau(A(s, 10)) + \tau(A(s, 11)) + \tau(A(s, 110)) + \tau(A(s, 1000)),$$

$$(2.30) \quad \begin{aligned} 1 &= \tau(A(s, \epsilon)) + \tau(A(s, 1)) + \tau(A(s, 10)) + \tau(A(s, 11)) + \tau(A(s, 100)) \\ &\quad + \tau(A(s, 101)) + \tau(A(s, 1001)), \end{aligned}$$

$$(2.31) \quad \begin{aligned} 0 &= \tau(A(s, \epsilon)) + \tau(A(s, 1)) + \tau(A(s, 10)) + \tau(A(s, 11)) + \tau(A(s, 100)) \\ &\quad + \tau(A(s, 101)) + \tau(A(s, 110)) + \tau(A(s, 1010)), \end{aligned}$$

$$(2.32) \quad \begin{aligned} 1 &= \tau(A(s, \epsilon)) + \tau(A(s, 11)) + \tau(A(s, 100)) + \tau(A(s, 110)) \\ &\quad + \tau(A(s, 1011)), \end{aligned}$$

$$(2.33) \quad 1 = \tau(A(s, 10)) + \tau(A(s, 100)) + \tau(A(s, 1100)),$$

$$(2.34) \quad 0 = \tau(A(s, 11)) + \tau(A(s, 101)) + \tau(A(s, 1101)),$$

for $s = A(i, 0^{2k})$. We find that $(A(i, 0^{24}), E_{24}) = (A(i, 0^{22}), E_{22})$, so that we only have to verify that identities (2.21) through (2.34) hold for $2 \leq k \leq 12$, 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 $k \geq 2$, and $u = 2^{2k-1}$,*

$$\begin{aligned} M_{2k} &= M^e[:7u] + x^{2u}M^e[:5u] + x^{5u}M^e[:2u] + x^{6u}M^e[:u] + x^{7u}R^e, \\ W_{2k} &= W^e[:7u] + x^{2u}W^e[:5u] + x^{5u}W^e[:2u] + x^{6u}W^e[:u] + x^{7u}R^e. \end{aligned}$$

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

$$\begin{aligned} M_{2k+1} &= M^o[:7u] + x^{2u}M^o[:5u] + x^{5u}M^o[:2u] + x^{6u}M^o[:u] + x^{7u}R^o, \\ W_{2k+1} &= W^o[:7u] + x^{2u}W^o[:5u] + x^{5u}W^o[:2u] + x^{6u}W^o[:u] + x^{7u}R^o. \end{aligned}$$

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 $n \geq 2$, we claim that

$$\begin{aligned} M_{2k} \wedge W_{2k} &\Rightarrow M_{2k+1} \wedge W_{2k+1}, \\ M_{2k+1} \wedge W_{2k+1} &\Rightarrow M_{2k+2} \wedge W_{2k+2}. \end{aligned}$$

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

$$(2.35) \quad \begin{aligned} W_{2k}M_{2k} &= (W^e[:7v] + x^{2v}W^e[:5v] + x^{5v}W^e[:2v] + x^{6v}W^e[:v] + x^{7v}R^e) \times (\\ &\quad M^e[:7v] + x^{2v}M^e[:5v] + x^{5v}M^e[:2v] + x^{6v}M^e[:v] + x^{7v}R^e); \end{aligned}$$

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

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

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 $\mathbb{F}_2[a_1, \dots, a_{14}, b_1, \dots, b_{14}, c][X]$. 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 $\text{CF}(a, b)$; for $\text{CF}(b, a)$, the proof is similar. By Lemma 2.3, we have For all $0 \leq j, k \leq 1$,

$$\begin{aligned} \lim_{n \rightarrow \infty} M_{2n,j,k} &= M_{j,k}^e, \\ \lim_{n \rightarrow \infty} M_{2n+1,j,k} &= M_{j,k}^o, \\ \lim_{n \rightarrow \infty} W_{2n,j,k} &= W_{j,k}^e, \\ \lim_{n \rightarrow \infty} W_{2n+1,j,k} &= W_{j,k}^o. \end{aligned}$$

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

$$\text{CF}(a, b) = \frac{M_{0,1}^e(x)}{M_{0,0}^e(x)}.$$

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

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

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

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

$$\begin{aligned} q_0(x) &= x^{24} + x^{23} + x^{20} + x^{19} + x^{18} + x^{16} + x^{14} + x^{13} + x^{12} + x^9 + x^7, \\ q_1(x) &= x^{23} + x^{21} + x^{20} + x^{18} + x^{16} + x^{15} + x^{14} + x^{11} + x^{10} + x^8 + x^7 + x^6 \\ &\quad + x^2 + x, \\ q_2(x) &= x^{24} + x^{22} + x^{14} + x^{12} + x^{10} + x^8 + x^2 + 1, \\ q_3(x) &= x^{23} + x^{21} + x^{20} + x^{18} + x^{16} + x^{15} + x^{14} + x^{11} + x^{10} + x^8 + x^7 + x^6 \\ &\quad + x^2 + x, \\ q_4(x) &= x^{24} + x^{23} + x^{22} + x^{19} + x^{18} + x^{13} + x^{10} + x^9 + x^7 + x^2. \end{aligned}$$

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 $\text{CF}(a, b) = f(1/z)$. $\square$

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

$$\begin{aligned} p_0(x) &= x^{114} + x^{110} + x^{106} + x^{104} + x^{102} + x^{100} + x^{96} + x^{94} + x^{90} + x^{86} \\ &\quad + x^{84} + x^{82} + x^{72} + x^{70} + x^{66} + x^{54} + x^{52} + x^{50} + x^{48} + x^{46} + x^{44} \\ &\quad + x^{42} + x^{20} + x^{16} + x^{12}, \\ p_3(x) &= x^{112} + x^{108} + x^{106} + x^{102} + x^{100} + x^{98} + x^{92} + x^{90} + x^{86} + x^{82} + x^{78} \\ &\quad + x^{74} + x^{72} + x^{70} + x^{68} + x^{64} + x^{58} + x^{56} + x^{44} + x^{40} + x^{38} + x^{34} \\ &\quad + x^{32} + x^{30} + x^{28} + x^{16} + x^{10} + x^8, \\ p_6(x) &= x^{112} + x^{110} + x^{104} + x^{102} + x^{94} + x^{92} + x^{88} + x^{86} + x^{82} + x^{80} + x^{76} \\ &\quad + x^{74} + x^{72} + x^{68} + x^{62} + x^{54} + x^{48} + x^{46} + x^{36} + x^{34} + x^{32} + x^{30} \\ &\quad + x^{26} + x^{24} + x^{22} + x^{14} + x^{12} + x^{10} + x^8 + x^4 + x^2 + 1, \\ p_9(x) &= x^{112} + x^{104} + x^{102} + x^{98} + x^{94} + x^{92} + x^{88} + x^{84} + x^{80} + x^{70} + x^{68} \\ &\quad + x^{62} + x^{56} + x^{54} + x^{42} + x^{40} + x^{34} + x^{32} + x^{30} + x^{28} + x^{26} + x^{24} \\ &\quad + x^{22} + x^{18} + x^6 + x^2, \\ p_{12}(x) &= x^{114} + x^{112} + x^{108} + x^{106} + x^{100} + x^{98} + x^{92} + x^{90} + x^{84} + x^{82} + x^{76} \\ &\quad + x^{74} + x^{68} + x^{64} + x^{50} + x^{48} + x^{44} + x^{42} + x^{36} + x^{32} + x^{18} + x^{16} \\ &\quad + x^{12} + x^{10} + x^4 + 1, \end{aligned}$$

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

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

$$\begin{aligned} p_0(x) &= x^{129} + x^{128} + x^{125} + x^{121} + x^{120} + x^{119} + x^{117} + x^{116} + x^{115} + x^{105} \\ &\quad + x^{102} + x^{100} + x^{99} + x^{94} + x^{92} + x^{91} + x^{89} + x^{87} + x^{81} + x^{80} + x^{77} \\ &\quad + x^{73} + x^{72} + x^{70} + x^{69} + x^{68} + x^{66} + x^{64} + x^{61} + x^{59} + x^{55} + x^{50} \\ &\quad + x^{49} + x^{48} + x^{47} + x^{42} + x^{41} + x^{39} + x^{38} + x^{35} + x^{32} + x^{31} + x^{27}, \\ p_3(x) &= x^{120} + x^{119} + x^{118} + x^{117} + x^{114} + x^{113} + x^{108} + x^{107} + x^{104} + x^{103} \\ &\quad + x^{98} + x^{97} + x^{88} + x^{87} + x^{82} + x^{81} + x^{78} + x^{77} + x^{72} + x^{71} + x^{70} \end{aligned}$$

$$\begin{aligned}
& + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{60} + x^{59} + x^{56} + x^{55} + x^{54} + x^{53} \\
& + x^{50} + x^{49} + x^{48} + x^{47} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} \\
& + x^{37} + x^{34} + x^{33} + x^{32} + x^{31} + x^{30} + x^{29} + x^{28} + x^{27} + x^{26} + x^{25} \\
& + x^{22} + x^{21} + x^{20} + x^{19} + x^{16} + x^{15} + x^{12} + x^{11} + x^{10} + x^9, \\
p_6(x) = & x^{123} + x^{122} + x^{120} + x^{118} + x^{117} + x^{116} + x^{115} + x^{110} + x^{103} + x^{102} \\
& + x^{100} + x^{98} + x^{97} + x^{96} + x^{95} + x^{90} + x^{75} + x^{74} + x^{72} + x^{71} + x^{69} \\
& + x^{65} + x^{62} + x^{61} + x^{58} + x^{57} + x^{55} + x^{53} + x^{52} + x^{51} + x^{50} + x^{46} \\
& + x^{39} + x^{38} + x^{36} + x^{35} + x^{33} + x^{29} + x^{27} + x^{25} + x^{24} + x^{20} + x^{19} \\
& + x^{18} + x^{17} + x^{15} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^6, \\
p_9(x) = & x^{126} + x^{125} + x^{124} + x^{123} + x^{122} + x^{121} + x^{120} + x^{119} + x^{118} + x^{117} \\
& + x^{114} + x^{113} + x^{112} + x^{111} + x^{104} + x^{103} + x^{102} + x^{101} + x^{100} \\
& + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{88} + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} \\
& + x^{82} + x^{81} + x^{74} + x^{73} + x^{70} + x^{69} + x^{64} + x^{63} + x^{62} + x^{61} + x^{58} \\
& + x^{57} + x^{42} + x^{41} + x^{36} + x^{35} + x^{30} + x^{29} + x^{24} + x^{23} + x^{18} + x^{17} \\
& + x^{12} + x^{11} + x^{10} + x^9 + x^8 + x^7 + x^4 + x^3, \\
p_{12}(x) = & x^{129} + x^{128} + x^{126} + x^{125} + x^{122} + x^{121} + x^{118} + x^{116} + x^{113} + x^{112} \\
& + x^{110} + x^{109} + x^{106} + x^{105} + x^{102} + x^{101} + x^{98} + x^{97} + x^{94} + x^{93} \\
& + x^{90} + x^{89} + x^{86} + x^{85} + x^{82} + x^{80} + x^{69} + x^{68} + x^{66} + x^{65} + x^{62} \\
& + x^{61} + x^{58} + x^{57} + x^{54} + x^{52} + x^{37} + x^{36} + x^{34} + x^{33} + x^{30} + x^{29} \\
& + x^{26} + x^{25} + x^{22} + x^{20} + x^5 + x^4 + x^2 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = & x^{129} + x^{128} + x^{125} + x^{121} + x^{120} + x^{119} + x^{117} + x^{116} + x^{115} + x^{105} \\
& + x^{102} + x^{100} + x^{99} + x^{94} + x^{92} + x^{91} + x^{89} + x^{87} + x^{81} + x^{80} + x^{77} \\
& + x^{73} + x^{72} + x^{70} + x^{69} + x^{68} + x^{66} + x^{64} + x^{61} + x^{59} + x^{55} + x^{50} \\
& + x^{49} + x^{48} + x^{47} + x^{42} + x^{41} + x^{39} + x^{38} + x^{35} + x^{32} + x^{31} + x^{27}, \\
p_3(x) = & x^{120} + x^{119} + x^{118} + x^{117} + x^{114} + x^{113} + x^{108} + x^{107} + x^{104} + x^{103} \\
& + x^{98} + x^{97} + x^{88} + x^{87} + x^{82} + x^{81} + x^{78} + x^{77} + x^{72} + x^{71} + x^{70} \\
& + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{60} + x^{59} + x^{56} + x^{55} + x^{54} + x^{53} \\
& + x^{50} + x^{49} + x^{48} + x^{47} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} \\
& + x^{37} + x^{34} + x^{33} + x^{32} + x^{31} + x^{30} + x^{29} + x^{28} + x^{27} + x^{26} + x^{25} \\
& + x^{22} + x^{21} + x^{20} + x^{19} + x^{16} + x^{15} + x^{12} + x^{11} + x^{10} + x^9, \\
p_6(x) = & x^{123} + x^{122} + x^{120} + x^{118} + x^{117} + x^{116} + x^{115} + x^{110} + x^{103} + x^{102} \\
& + x^{100} + x^{98} + x^{97} + x^{96} + x^{95} + x^{90} + x^{75} + x^{74} + x^{72} + x^{71} + x^{69} \\
& + x^{65} + x^{62} + x^{61} + x^{58} + x^{57} + x^{55} + x^{53} + x^{52} + x^{51} + x^{50} + x^{46}
\end{aligned}$$

$$\begin{aligned}
& + x^{39} + x^{38} + x^{36} + x^{35} + x^{33} + x^{29} + x^{27} + x^{25} + x^{24} + x^{20} + x^{19} \\
& + x^{18} + x^{17} + x^{15} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^6, \\
p_9(x) = & x^{126} + x^{125} + x^{124} + x^{123} + x^{122} + x^{121} + x^{120} + x^{119} + x^{118} + x^{117} \\
& + x^{114} + x^{113} + x^{112} + x^{111} + x^{104} + x^{103} + x^{102} + x^{101} + x^{100} \\
& + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{88} + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} \\
& + x^{82} + x^{81} + x^{74} + x^{73} + x^{70} + x^{69} + x^{64} + x^{63} + x^{62} + x^{61} + x^{58} \\
& + x^{57} + x^{42} + x^{41} + x^{36} + x^{35} + x^{30} + x^{29} + x^{24} + x^{23} + x^{18} + x^{17} \\
& + x^{12} + x^{11} + x^{10} + x^9 + x^8 + x^7 + x^4 + x^3, \\
p_{12}(x) = & x^{129} + x^{128} + x^{126} + x^{125} + x^{122} + x^{121} + x^{118} + x^{116} + x^{113} + x^{112} \\
& + x^{110} + x^{109} + x^{106} + x^{105} + x^{102} + x^{101} + x^{98} + x^{97} + x^{94} + x^{93} \\
& + x^{90} + x^{89} + x^{86} + x^{85} + x^{82} + x^{80} + x^{69} + x^{68} + x^{66} + x^{65} + x^{62} \\
& + x^{61} + x^{58} + x^{57} + x^{54} + x^{52} + x^{37} + x^{36} + x^{34} + x^{33} + x^{30} + x^{29} \\
& + x^{26} + x^{25} + x^{22} + x^{20} + x^5 + x^4 + x^2 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = & x^{144} + x^{142} + x^{140} + x^{138} + x^{136} + x^{134} + x^{130} + x^{128} + x^{126} + x^{124} \\
& + x^{118} + x^{116} + x^{108} + x^{104} + x^{102} + x^{98} + x^{92} + x^{82} + x^{80} + x^{66} \\
& + x^{56} + x^{52} + x^{50} + x^{46} + x^{42}, \\
p_3(x) = & x^{142} + x^{140} + x^{138} + x^{134} + x^{132} + x^{126} + x^{124} + x^{120} + x^{116} + x^{114} \\
& + x^{110} + x^{106} + x^{104} + x^{100} + x^{98} + x^{96} + x^{92} + x^{90} + x^{88} + x^{84} \\
& + x^{82} + x^{76} + x^{68} + x^{62} + x^{56} + x^{52} + x^{48} + x^{46} + x^{44} + x^{38} + x^{36} \\
& + x^{30} + x^{28} + x^{20} + x^{14} + x^6, \\
p_6(x) = & x^{142} + x^{140} + x^{138} + x^{128} + x^{124} + x^{122} + x^{120} + x^{118} + x^{108} + x^{106} \\
& + x^{102} + x^{100} + x^{92} + x^{88} + x^{86} + x^{84} + x^{76} + x^{74} + x^{72} + x^{66} + x^{64} \\
& + x^{62} + x^{60} + x^{52} + x^{50} + x^{48} + x^{46} + x^{42} + x^{38} + x^{32} + x^{26} + x^{22} \\
& + x^{16} + x^{10} + x^8 + x^4 + x^2 + 1, \\
p_9(x) = & x^{142} + x^{140} + x^{138} + x^{134} + x^{130} + x^{126} + x^{124} + x^{120} + x^{108} + x^{104} \\
& + x^{94} + x^{82} + x^{80} + x^{78} + x^{74} + x^{70} + x^{62} + x^{60} + x^{58} + x^{54} + x^{48} \\
& + x^{44} + x^{38} + x^{36} + x^{34} + x^{32} + x^{20} + x^{16} + x^{14} + x^{12} + x^{10} + x^2, \\
p_{12}(x) = & x^{144} + x^{120} + x^{112} + x^{96} + x^{80} + x^{72} + x^{56} + x^{40} + x^{24} + x^{16} + x^8 + 1
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = & x^{144} + x^{142} + x^{138} + x^{136} + x^{132} + x^{130} + x^{128} + x^{124} + x^{118} + x^{116} \\
& + x^{114} + x^{110} + x^{106} + x^{100} + x^{98} + x^{94} + x^{90} + x^{86} + x^{84} + x^{82}
\end{aligned}$$

$$\begin{aligned}
& + x^{76} + x^{74} + x^{70} + x^{64} + x^{62} + x^{58} + x^{56} + x^{54} + x^{50} + x^{48} + x^{44} \\
& + x^{30} + x^{28} + x^{26} + x^{24} + x^{22} + x^{20} + x^{16} + x^{12}, \\
p_3(x) &= x^{142} + x^{140} + x^{134} + x^{130} + x^{124} + x^{118} + x^{116} + x^{110} + x^{108} + x^{104} \\
& + x^{102} + x^{100} + x^{94} + x^{88} + x^{86} + x^{84} + x^{80} + x^{78} + x^{70} + x^{66} + x^{64} \\
& + x^{62} + x^{58} + x^{54} + x^{48} + x^{42} + x^{40} + x^{38} + x^{36} + x^{32} + x^{28} + x^{26} \\
& + x^{18} + x^8, \\
p_6(x) &= x^{142} + x^{130} + x^{126} + x^{122} + x^{120} + x^{114} + x^{108} + x^{104} + x^{100} + x^{98} \\
& + x^{94} + x^{90} + x^{84} + x^{82} + x^{78} + x^{76} + x^{74} + x^{70} + x^{68} + x^{62} + x^{58} \\
& + x^{54} + x^{52} + x^{50} + x^{44} + x^{40} + x^{38} + x^{32} + x^{30} + x^{22} + x^{18} + x^{14} \\
& + x^{12} + x^{10} + x^8 + x^6 + x^2 + 1, \\
p_9(x) &= x^{142} + x^{140} + x^{138} + x^{134} + x^{130} + x^{126} + x^{124} + x^{120} + x^{108} + x^{104} \\
& + x^{94} + x^{82} + x^{80} + x^{78} + x^{74} + x^{70} + x^{62} + x^{60} + x^{58} + x^{54} + x^{48} \\
& + x^{44} + x^{38} + x^{36} + x^{34} + x^{32} + x^{20} + x^{16} + x^{14} + x^{12} + x^{10} + x^2, \\
p_{12}(x) &= x^{144} + x^{120} + x^{112} + x^{96} + x^{80} + x^{72} + x^{56} + x^{40} + x^{24} + x^{16} + x^8 + 1 \\
& ,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{129} + x^{128} + x^{125} + x^{123} + x^{122} + x^{121} + x^{116} + x^{115} + x^{114} + x^{112} \\
& + x^{110} + x^{106} + x^{104} + x^{103} + x^{102} + x^{101} + x^{100} + x^{99} + x^{97} + x^{96} \\
& + x^{93} + x^{92} + x^{91} + x^{89} + x^{88} + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{79} \\
& + x^{78} + x^{77} + x^{75} + x^{71} + x^{67} + x^{66} + x^{65} + x^{64} + x^{63} + x^{59} + x^{58} \\
& + x^{57} + x^{56} + x^{54} + x^{53} + x^{51} + x^{50} + x^{49} + x^{47} + x^{46} + x^{45} + x^{43} \\
& + x^{38} + x^{37} + x^{33} + x^{31} + x^{29} + x^{28} + x^{23} + x^{22} + x^{21} + x^{18}, \\
p_3(x) &= x^{120} + x^{119} + x^{118} + x^{117} + x^{114} + x^{113} + x^{108} + x^{107} + x^{104} + x^{103} \\
& + x^{98} + x^{97} + x^{88} + x^{87} + x^{82} + x^{81} + x^{78} + x^{77} + x^{72} + x^{71} + x^{70} \\
& + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{60} + x^{59} + x^{56} + x^{55} + x^{54} + x^{53} \\
& + x^{50} + x^{49} + x^{48} + x^{47} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} \\
& + x^{37} + x^{34} + x^{33} + x^{32} + x^{31} + x^{30} + x^{29} + x^{28} + x^{27} + x^{26} + x^{25} \\
& + x^{22} + x^{21} + x^{20} + x^{19} + x^{16} + x^{15} + x^{12} + x^{11} + x^{10} + x^9, \\
p_6(x) &= x^{123} + x^{122} + x^{120} + x^{118} + x^{117} + x^{116} + x^{115} + x^{110} + x^{103} + x^{102} \\
& + x^{100} + x^{98} + x^{97} + x^{96} + x^{95} + x^{90} + x^{75} + x^{74} + x^{72} + x^{71} + x^{69} \\
& + x^{65} + x^{62} + x^{61} + x^{58} + x^{57} + x^{55} + x^{53} + x^{52} + x^{51} + x^{50} + x^{46} \\
& + x^{39} + x^{38} + x^{36} + x^{35} + x^{33} + x^{29} + x^{27} + x^{25} + x^{24} + x^{20} + x^{19} \\
& + x^{18} + x^{17} + x^{15} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^6, \\
p_9(x) &= x^{126} + x^{125} + x^{124} + x^{123} + x^{122} + x^{121} + x^{120} + x^{119} + x^{118} + x^{117}
\end{aligned}$$

$$\begin{aligned}
& + x^{114} + x^{113} + x^{112} + x^{111} + x^{104} + x^{103} + x^{102} + x^{101} + x^{100} \\
& + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{88} + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} \\
& + x^{82} + x^{81} + x^{74} + x^{73} + x^{70} + x^{69} + x^{64} + x^{63} + x^{62} + x^{61} + x^{58} \\
& + x^{57} + x^{42} + x^{41} + x^{36} + x^{35} + x^{30} + x^{29} + x^{24} + x^{23} + x^{18} + x^{17} \\
& + x^{12} + x^{11} + x^{10} + x^9 + x^8 + x^7 + x^4 + x^3, \\
p_{12}(x) = & x^{129} + x^{128} + x^{126} + x^{125} + x^{122} + x^{121} + x^{118} + x^{116} + x^{113} + x^{112} \\
& + x^{110} + x^{109} + x^{106} + x^{105} + x^{102} + x^{101} + x^{98} + x^{97} + x^{94} + x^{93} \\
& + x^{90} + x^{89} + x^{86} + x^{85} + x^{82} + x^{80} + x^{69} + x^{68} + x^{66} + x^{65} + x^{62} \\
& + x^{61} + x^{58} + x^{57} + x^{54} + x^{52} + x^{37} + x^{36} + x^{34} + x^{33} + x^{30} + x^{29} \\
& + x^{26} + x^{25} + x^{22} + x^{20} + x^5 + x^4 + x^2 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = & x^{129} + x^{128} + x^{125} + x^{123} + x^{122} + x^{121} + x^{116} + x^{115} + x^{114} + x^{112} \\
& + x^{110} + x^{106} + x^{104} + x^{103} + x^{102} + x^{101} + x^{100} + x^{99} + x^{97} + x^{96} \\
& + x^{93} + x^{92} + x^{91} + x^{89} + x^{88} + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{79} \\
& + x^{78} + x^{77} + x^{75} + x^{71} + x^{67} + x^{66} + x^{65} + x^{64} + x^{63} + x^{59} + x^{58} \\
& + x^{57} + x^{56} + x^{54} + x^{53} + x^{51} + x^{50} + x^{49} + x^{47} + x^{46} + x^{45} + x^{43} \\
& + x^{38} + x^{37} + x^{33} + x^{31} + x^{29} + x^{28} + x^{23} + x^{22} + x^{21} + x^{18}, \\
p_3(x) = & x^{120} + x^{119} + x^{118} + x^{117} + x^{114} + x^{113} + x^{108} + x^{107} + x^{104} + x^{103} \\
& + x^{98} + x^{97} + x^{88} + x^{87} + x^{82} + x^{81} + x^{78} + x^{77} + x^{72} + x^{71} + x^{70} \\
& + x^{69} + x^{68} + x^{67} + x^{66} + x^{65} + x^{60} + x^{59} + x^{56} + x^{55} + x^{54} + x^{53} \\
& + x^{50} + x^{49} + x^{48} + x^{47} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{39} + x^{38} \\
& + x^{37} + x^{34} + x^{33} + x^{32} + x^{31} + x^{30} + x^{29} + x^{28} + x^{27} + x^{26} + x^{25} \\
& + x^{22} + x^{21} + x^{20} + x^{19} + x^{16} + x^{15} + x^{12} + x^{11} + x^{10} + x^9, \\
p_6(x) = & x^{123} + x^{122} + x^{120} + x^{118} + x^{117} + x^{116} + x^{115} + x^{110} + x^{103} + x^{102} \\
& + x^{100} + x^{98} + x^{97} + x^{96} + x^{95} + x^{90} + x^{75} + x^{74} + x^{72} + x^{71} + x^{69} \\
& + x^{65} + x^{62} + x^{61} + x^{58} + x^{57} + x^{55} + x^{53} + x^{52} + x^{51} + x^{50} + x^{46} \\
& + x^{39} + x^{38} + x^{36} + x^{35} + x^{33} + x^{29} + x^{27} + x^{25} + x^{24} + x^{20} + x^{19} \\
& + x^{18} + x^{17} + x^{15} + x^{14} + x^{13} + x^{12} + x^{11} + x^{10} + x^6, \\
p_9(x) = & x^{126} + x^{125} + x^{124} + x^{123} + x^{122} + x^{121} + x^{120} + x^{119} + x^{118} + x^{117} \\
& + x^{114} + x^{113} + x^{112} + x^{111} + x^{104} + x^{103} + x^{102} + x^{101} + x^{100} \\
& + x^{99} + x^{96} + x^{95} + x^{94} + x^{93} + x^{88} + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} \\
& + x^{82} + x^{81} + x^{74} + x^{73} + x^{70} + x^{69} + x^{64} + x^{63} + x^{62} + x^{61} + x^{58} \\
& + x^{57} + x^{42} + x^{41} + x^{36} + x^{35} + x^{30} + x^{29} + x^{24} + x^{23} + x^{18} + x^{17} \\
& + x^{12} + x^{11} + x^{10} + x^9 + x^8 + x^7 + x^4 + x^3,
\end{aligned}$$

$$\begin{aligned}
p_{12}(x) = & x^{129} + x^{128} + x^{126} + x^{125} + x^{122} + x^{121} + x^{118} + x^{116} + x^{113} + x^{112} \\
& + x^{110} + x^{109} + x^{106} + x^{105} + x^{102} + x^{101} + x^{98} + x^{97} + x^{94} + x^{93} \\
& + x^{90} + x^{89} + x^{86} + x^{85} + x^{82} + x^{80} + x^{69} + x^{68} + x^{66} + x^{65} + x^{62} \\
& + x^{61} + x^{58} + x^{57} + x^{54} + x^{52} + x^{37} + x^{36} + x^{34} + x^{33} + x^{30} + x^{29} \\
& + x^{26} + x^{25} + x^{22} + x^{20} + x^5 + x^4 + x^2 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = & x^{114} + x^{108} + x^{106} + x^{104} + x^{94} + x^{88} + x^{86} + x^{82} + x^{78} + x^{76} + x^{74} \\
& + x^{72} + x^{66} + x^{60} + x^{54} + x^{52} + x^{50} + x^{46} + x^{44} + x^{42} + x^{40} + x^{36} \\
& + x^{34} + x^{32} + x^{30} + x^{28} + x^{24}, \\
p_3(x) = & x^{112} + x^{102} + x^{92} + x^{90} + x^{86} + x^{84} + x^{80} + x^{74} + x^{66} + x^{62} + x^{58} \\
& + x^{54} + x^{44} + x^{36} + x^{26} + x^{24} + x^{22} + x^{20} + x^{18} + x^{16} + x^{12} + x^6, \\
p_6(x) = & x^{112} + x^{106} + x^{102} + x^{96} + x^{92} + x^{88} + x^{86} + x^{74} + x^{72} + x^{64} + x^{62} \\
& + x^{60} + x^{58} + x^{54} + x^{52} + x^{48} + x^{34} + x^{28} + x^{26} + x^{22} + x^{20} + x^{16} \\
& + x^{12} + x^6 + x^2 + 1, \\
p_9(x) = & x^{112} + x^{104} + x^{102} + x^{98} + x^{94} + x^{92} + x^{88} + x^{84} + x^{80} + x^{70} + x^{68} \\
& + x^{62} + x^{56} + x^{54} + x^{42} + x^{40} + x^{34} + x^{32} + x^{30} + x^{28} + x^{26} + x^{24} \\
& + x^{22} + x^{18} + x^6 + x^2, \\
p_{12}(x) = & x^{114} + x^{112} + x^{108} + x^{106} + x^{100} + x^{98} + x^{92} + x^{90} + x^{84} + x^{82} + x^{76} \\
& + x^{74} + x^{68} + x^{64} + x^{50} + x^{48} + x^{44} + x^{42} + x^{36} + x^{32} + x^{18} + x^{16} \\
& + x^{12} + x^{10} + x^4 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = & x^{129} + x^{128} + x^{127} + x^{124} + x^{121} + x^{119} + x^{116} + x^{113} + x^{110} + x^{109} \\
& + x^{108} + x^{105} + x^{104} + x^{102} + x^{96} + x^{95} + x^{94} + x^{93} + x^{92} + x^{90} \\
& + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{74} + x^{73} + x^{72} + x^{71} \\
& + x^{70} + x^{69} + x^{67} + x^{65} + x^{63} + x^{62} + x^{61} + x^{58} + x^{56} + x^{55} + x^{54} \\
& + x^{53} + x^{50} + x^{49} + x^{47} + x^{46} + x^{43} + x^{42} + x^{39} + x^{38} + x^{37} + x^{36} \\
& + x^{35} + x^{34} + x^{33} + x^{27} + x^{25} + x^{24} + x^{21} + x^{20} + x^{18} + x^{17} + x^{16} \\
& + x^{12}, \\
p_3(x) = & x^{125} + x^{124} + x^{123} + x^{121} + x^{119} + x^{113} + x^{112} + x^{111} + x^{108} + x^{107} \\
& + x^{105} + x^{104} + x^{101} + x^{99} + x^{98} + x^{94} + x^{91} + x^{90} + x^{89} + x^{88} + x^{85} \\
& + x^{80} + x^{78} + x^{75} + x^{74} + x^{69} + x^{67} + x^{66} + x^{65} + x^{64} + x^{61} + x^{60} \\
& + x^{58} + x^{57} + x^{56} + x^{55} + x^{54} + x^{51} + x^{50} + x^{47} + x^{45} + x^{44} + x^{43} \\
& + x^{41} + x^{38} + x^{37} + x^{30} + x^{28} + x^{27} + x^{25} + x^{23} + x^{20} + x^{18} + x^{16}
\end{aligned}$$

$$\begin{aligned}
& + x^{13} + x^8, \\
p_6(x) &= x^{127} + x^{126} + x^{125} + x^{124} + x^{122} + x^{119} + x^{118} + x^{116} + x^{113} + x^{112} \\
& + x^{111} + x^{110} + x^{107} + x^{106} + x^{105} + x^{104} + x^{103} + x^{98} + x^{95} + x^{94} \\
& + x^{92} + x^{91} + x^{90} + x^{89} + x^{88} + x^{87} + x^{83} + x^{82} + x^{81} + x^{80} + x^{79} \\
& + x^{78} + x^{77} + x^{76} + x^{75} + x^{74} + x^{73} + x^{72} + x^{71} + x^{70} + x^{68} + x^{67} \\
& + x^{65} + x^{64} + x^{60} + x^{59} + x^{57} + x^{55} + x^{51} + x^{49} + x^{48} + x^{47} + x^{46} \\
& + x^{45} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{38} + x^{37} + x^{34} + x^{33} + x^{30} \\
& + x^{28} + x^{25} + x^{23} + x^{22} + x^{21} + x^{20} + x^{19} + x^{16} + x^{14} + x^{12} + x^9 \\
& + x^5 + x^2 + 1, \\
p_9(x) &= x^{125} + x^{124} + x^{122} + x^{121} + x^{118} + x^{117} + x^{114} + x^{113} + x^{110} + x^{108} \\
& + x^{101} + x^{100} + x^{98} + x^{97} + x^{94} + x^{92} + x^{85} + x^{84} + x^{82} + x^{81} + x^{78} \\
& + x^{77} + x^{74} + x^{73} + x^{70} + x^{68} + x^{61} + x^{60} + x^{58} + x^{57} + x^{54} + x^{53} \\
& + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{36} + x^{29} + x^{28} + x^{26} \\
& + x^{25} + x^{22} + x^{21} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10} + x^9 + x^6 + x^4, \\
p_{12}(x) &= x^{129} + x^{128} + x^{126} + x^{124} + x^{117} + x^{116} + x^{114} + x^{112} + x^{109} + x^{108} \\
& + x^{106} + x^{105} + x^{102} + x^{100} + x^{93} + x^{92} + x^{90} + x^{89} + x^{86} + x^{84} \\
& + x^{81} + x^{80} + x^{78} + x^{77} + x^{74} + x^{73} + x^{70} + x^{69} + x^{66} + x^{65} + x^{62} \\
& + x^{60} + x^{53} + x^{52} + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{37} \\
& + x^{34} + x^{33} + x^{30} + x^{28} + x^{21} + x^{20} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10} \\
& + x^9 + x^6 + x^5 + x^2 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{144} + x^{141} + x^{137} + x^{136} + x^{134} + x^{133} + x^{132} + x^{131} + x^{128} + x^{127} \\
& + x^{125} + x^{123} + x^{122} + x^{121} + x^{120} + x^{119} + x^{116} + x^{115} + x^{113} \\
& + x^{111} + x^{108} + x^{107} + x^{106} + x^{103} + x^{98} + x^{90} + x^{89} + x^{88} + x^{86} \\
& + x^{85} + x^{76} + x^{75} + x^{74} + x^{73} + x^{71} + x^{70} + x^{68} + x^{66} + x^{65} + x^{59} \\
& + x^{57} + x^{56} + x^{55} + x^{52} + x^{49} + x^{48} + x^{46} + x^{45} + x^{44} + x^{43} + x^{42} \\
& + x^{41} + x^{40} + x^{37} + x^{36} + x^{35} + x^{33} + x^{31} + x^{27}, \\
p_3(x) &= x^{135} + x^{132} + x^{128} + x^{124} + x^{121} + x^{120} + x^{119} + x^{118} + x^{115} + x^{114} \\
& + x^{113} + x^{112} + x^{109} + x^{108} + x^{106} + x^{104} + x^{102} + x^{101} + x^{100} \\
& + x^{97} + x^{96} + x^{95} + x^{94} + x^{93} + x^{91} + x^{88} + x^{87} + x^{83} + x^{80} + x^{79} \\
& + x^{77} + x^{75} + x^{74} + x^{73} + x^{72} + x^{68} + x^{65} + x^{64} + x^{62} + x^{60} + x^{59} \\
& + x^{58} + x^{57} + x^{53} + x^{50} + x^{49} + x^{47} + x^{45} + x^{44} + x^{43} + x^{42} + x^{38} \\
& + x^{35} + x^{34} + x^{32} + x^{31} + x^{30} + x^{29} + x^{27} + x^{24} + x^{23} + x^{19} + x^{16} \\
& + x^{13} + x^{12} + x^{11} + x^{10} + x^9,
\end{aligned}$$

$$\begin{aligned}
p_6(x) &= x^{138} + x^{134} + x^{132} + x^{130} + x^{128} + x^{120} + x^{118} + x^{114} + x^{108} + x^{100} \\
&\quad + x^{92} + x^{84} + x^{82} + x^{78} + x^{74} + x^{72} + x^{68} + x^{66} + x^{64} + x^{62} + x^{58} \\
&\quad + x^{52} + x^{50} + x^{22} + x^{18} + x^{16} + x^{12} + x^{10} + x^8 + x^6, \\
p_9(x) &= x^{141} + x^{138} + x^{135} + x^{134} + x^{133} + x^{132} + x^{128} + x^{127} + x^{117} + x^{114} \\
&\quad + x^{113} + x^{111} + x^{109} + x^{108} + x^{107} + x^{106} + x^{105} + x^{103} + x^{101} \\
&\quad + x^{100} + x^{99} + x^{98} + x^{97} + x^{95} + x^{92} + x^{91} + x^{89} + x^{86} + x^{83} + x^{82} \\
&\quad + x^{81} + x^{80} + x^{76} + x^{75} + x^{73} + x^{70} + x^{69} + x^{67} + x^{64} + x^{63} + x^{61} \\
&\quad + x^{58} + x^{55} + x^{54} + x^{52} + x^{50} + x^{49} + x^{48} + x^{44} + x^{43} + x^{41} + x^{38} \\
&\quad + x^{37} + x^{35} + x^{32} + x^{31} + x^{29} + x^{26} + x^{23} + x^{22} + x^{20} + x^{18} + x^{17} \\
&\quad + x^{16} + x^{13} + x^{12} + x^{11} + x^{10} + x^9 + x^7 + x^4 + x^3, \\
p_{12}(x) &= x^{144} + x^{140} + x^{128} + x^{120} + x^{116} + x^{104} + x^{92} + x^{88} + x^{80} + x^{76} \\
&\quad + x^{68} + x^{64} + x^{60} + x^{56} + x^{52} + x^{44} + x^{36} + x^{32} + x^{28} + x^{24} + x^{20} \\
&\quad + x^{16} + x^4 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{122} + x^{120} + x^{119} + x^{117} + x^{116} + x^{115} + x^{113} + x^{109} + x^{108} + x^{104} \\
&\quad + x^{102} + x^{99} + x^{98} + x^{96} + x^{93} + x^{91} + x^{90} + x^{85} + x^{81} + x^{80} + x^{72} \\
&\quad + x^{68} + x^{65} + x^{64} + x^{62} + x^{59} + x^{58} + x^{57} + x^{56} + x^{55} + x^{54} + x^{52} \\
&\quad + x^{51} + x^{46} + x^{45} + x^{43} + x^{42} + x^{39} + x^{38} + x^{37} + x^{34} + x^{33} + x^{32} \\
&\quad + x^{31} + x^{29} + x^{26} + x^{23} + x^{22} + x^{21} + x^{20} + x^{18}, \\
p_3(x) &= x^{113} + x^{111} + x^{110} + x^{108} + x^{106} + x^{105} + x^{104} + x^{103} + x^{101} + x^{98} \\
&\quad + x^{95} + x^{94} + x^{92} + x^{90} + x^{88} + x^{86} + x^{85} + x^{84} + x^{80} + x^{79} + x^{77} \\
&\quad + x^{74} + x^{73} + x^{57} + x^{55} + x^{54} + x^{52} + x^{50} + x^{49} + x^{48} + x^{47} + x^{45} \\
&\quad + x^{42} + x^{41} + x^{33} + x^{31} + x^{30} + x^{28} + x^{26} + x^{24} + x^{22} + x^{21} + x^{20} \\
&\quad + x^{16} + x^{15} + x^{13} + x^{10} + x^9, \\
p_6(x) &= x^{116} + x^{114} + x^{112} + x^{108} + x^{106} + x^{104} + x^{102} + x^{100} + x^{98} + x^{90} \\
&\quad + x^{68} + x^{66} + x^{62} + x^{60} + x^{54} + x^{52} + x^{48} + x^{44} + x^{42} + x^{40} + x^{38} \\
&\quad + x^{36} + x^{34} + x^{28} + x^{22} + x^{18} + x^{16} + x^{14} + x^{10} + x^6, \\
p_9(x) &= x^{119} + x^{117} + x^{116} + x^{114} + x^{113} + x^{112} + x^{111} + x^{107} + x^{105} + x^{104} \\
&\quad + x^{103} + x^{102} + x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{91} + x^{89} + x^{88} + x^{87} \\
&\quad + x^{86} + x^{83} + x^{82} + x^{81} + x^{80} + x^{79} + x^{75} + x^{73} + x^{72} + x^{70} + x^{69} \\
&\quad + x^{68} + x^{67} + x^{55} + x^{53} + x^{52} + x^{50} + x^{49} + x^{48} + x^{47} + x^{43} + x^{41} \\
&\quad + x^{40} + x^{38} + x^{37} + x^{36} + x^{35} + x^{23} + x^{21} + x^{20} + x^{18} + x^{17} + x^{16} \\
&\quad + x^{15} + x^{11} + x^9 + x^8 + x^6 + x^5 + x^4 + x^3, \\
p_{12}(x) &= x^{122} + x^{120} + x^{118} + x^{116} + x^{114} + x^{112} + x^{102} + x^{100} + x^{86} + x^{84}
\end{aligned}$$

$$\begin{aligned}
& + x^{74} + x^{72} + x^{66} + x^{64} + x^{58} + x^{56} + x^{54} + x^{52} + x^{50} + x^{48} + x^{42} \\
& + x^{40} + x^{34} + x^{32} + x^{26} + x^{24} + x^{22} + x^{20} + x^{18} + x^{16} + x^{10} + x^8 \\
& + x^2 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) = & x^{129} + x^{128} + x^{127} + x^{125} + x^{123} + x^{120} + x^{118} + x^{109} + x^{108} + x^{107} \\
& + x^{106} + x^{105} + x^{104} + x^{103} + x^{101} + x^{100} + x^{99} + x^{97} + x^{91} + x^{88} \\
& + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{80} + x^{79} + x^{78} + x^{76} + x^{75} \\
& + x^{72} + x^{69} + x^{68} + x^{67} + x^{66} + x^{64} + x^{62} + x^{61} + x^{60} + x^{59} + x^{58} \\
& + x^{57} + x^{56} + x^{55} + x^{53} + x^{52} + x^{51} + x^{46} + x^{43} + x^{39} + x^{38} + x^{37} \\
& + x^{36} + x^{33},
\end{aligned}$$

$$\begin{aligned}
p_3(x) = & x^{125} + x^{124} + x^{123} + x^{120} + x^{117} + x^{116} + x^{115} + x^{114} + x^{111} + x^{106} \\
& + x^{105} + x^{102} + x^{101} + x^{96} + x^{95} + x^{94} + x^{93} + x^{91} + x^{90} + x^{89} + x^{87} \\
& + x^{86} + x^{83} + x^{82} + x^{81} + x^{79} + x^{77} + x^{76} + x^{75} + x^{74} + x^{72} + x^{69} \\
& + x^{67} + x^{66} + x^{63} + x^{59} + x^{55} + x^{54} + x^{52} + x^{49} + x^{46} + x^{43} + x^{39} \\
& + x^{38} + x^{36} + x^{35} + x^{34} + x^{31} + x^{30} + x^{29} + x^{28} + x^{27} + x^{25} + x^{24} \\
& + x^{22} + x^{21} + x^{20} + x^{19} + x^{17} + x^{15} + x^{14} + x^{12},
\end{aligned}$$

$$\begin{aligned}
p_6(x) = & x^{127} + x^{126} + x^{123} + x^{122} + x^{119} + x^{116} + x^{115} + x^{114} + x^{113} + x^{111} \\
& + x^{109} + x^{108} + x^{107} + x^{104} + x^{101} + x^{100} + x^{98} + x^{97} + x^{94} + x^{92} \\
& + x^{91} + x^{89} + x^{88} + x^{87} + x^{85} + x^{84} + x^{83} + x^{80} + x^{79} + x^{76} + x^{74} \\
& + x^{73} + x^{72} + x^{70} + x^{67} + x^{66} + x^{62} + x^{61} + x^{60} + x^{59} + x^{58} + x^{57} \\
& + x^{56} + x^{54} + x^{52} + x^{49} + x^{47} + x^{45} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} \\
& + x^{39} + x^{37} + x^{36} + x^{35} + x^{34} + x^{30} + x^{29} + x^{28} + x^{27} + x^{24} + x^{23} \\
& + x^{22} + x^{21} + x^{18} + x^{17} + x^{16} + x^{15} + x^{13} + x^{11} + x^{10} + x^8 + x^5 + x^4 \\
& + x^2 + 1,
\end{aligned}$$

$$\begin{aligned}
p_9(x) = & x^{125} + x^{124} + x^{122} + x^{121} + x^{118} + x^{117} + x^{114} + x^{113} + x^{110} + x^{108} \\
& + x^{101} + x^{100} + x^{98} + x^{97} + x^{94} + x^{92} + x^{85} + x^{84} + x^{82} + x^{81} + x^{78} \\
& + x^{77} + x^{74} + x^{73} + x^{70} + x^{68} + x^{61} + x^{60} + x^{58} + x^{57} + x^{54} + x^{53} \\
& + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{36} + x^{29} + x^{28} + x^{26} \\
& + x^{25} + x^{22} + x^{21} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10} + x^9 + x^6 + x^4,
\end{aligned}$$

$$\begin{aligned}
p_{12}(x) = & x^{129} + x^{128} + x^{126} + x^{124} + x^{117} + x^{116} + x^{114} + x^{112} + x^{109} + x^{108} \\
& + x^{106} + x^{105} + x^{102} + x^{100} + x^{93} + x^{92} + x^{90} + x^{89} + x^{86} + x^{84} \\
& + x^{81} + x^{80} + x^{78} + x^{77} + x^{74} + x^{73} + x^{70} + x^{69} + x^{66} + x^{65} + x^{62} \\
& + x^{60} + x^{53} + x^{52} + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{37} \\
& + x^{34} + x^{33} + x^{30} + x^{28} + x^{21} + x^{20} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10}
\end{aligned}$$

$$+ x^9 + x^6 + x^5 + x^2 + 1,$$

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

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

$$\begin{aligned} p_0(x) = & x^{129} + x^{128} + x^{127} + x^{124} + x^{121} + x^{119} + x^{116} + x^{113} + x^{110} + x^{109} \\ & + x^{108} + x^{105} + x^{104} + x^{102} + x^{96} + x^{95} + x^{94} + x^{93} + x^{92} + x^{90} \\ & + x^{87} + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{74} + x^{73} + x^{72} + x^{71} \\ & + x^{70} + x^{69} + x^{67} + x^{65} + x^{63} + x^{62} + x^{61} + x^{58} + x^{56} + x^{55} + x^{54} \\ & + x^{53} + x^{50} + x^{49} + x^{47} + x^{46} + x^{43} + x^{42} + x^{39} + x^{38} + x^{37} + x^{36} \\ & + x^{35} + x^{34} + x^{33} + x^{27} + x^{25} + x^{24} + x^{21} + x^{20} + x^{18} + x^{17} + x^{16} \\ & + x^{12}, \end{aligned}$$

$$\begin{aligned} p_3(x) = & x^{125} + x^{124} + x^{123} + x^{121} + x^{119} + x^{113} + x^{112} + x^{111} + x^{108} + x^{107} \\ & + x^{105} + x^{104} + x^{101} + x^{99} + x^{98} + x^{94} + x^{91} + x^{90} + x^{89} + x^{88} + x^{85} \\ & + x^{80} + x^{78} + x^{75} + x^{74} + x^{69} + x^{67} + x^{66} + x^{65} + x^{64} + x^{61} + x^{60} \\ & + x^{58} + x^{57} + x^{56} + x^{55} + x^{54} + x^{51} + x^{50} + x^{47} + x^{45} + x^{44} + x^{43} \\ & + x^{41} + x^{38} + x^{37} + x^{30} + x^{28} + x^{27} + x^{25} + x^{23} + x^{20} + x^{18} + x^{16} \\ & + x^{13} + x^8, \end{aligned}$$

$$\begin{aligned} p_6(x) = & x^{127} + x^{126} + x^{125} + x^{124} + x^{122} + x^{119} + x^{118} + x^{116} + x^{113} + x^{112} \\ & + x^{111} + x^{110} + x^{107} + x^{106} + x^{105} + x^{104} + x^{103} + x^{98} + x^{95} + x^{94} \\ & + x^{92} + x^{91} + x^{90} + x^{89} + x^{88} + x^{87} + x^{83} + x^{82} + x^{81} + x^{80} + x^{79} \\ & + x^{78} + x^{77} + x^{76} + x^{75} + x^{74} + x^{73} + x^{72} + x^{71} + x^{70} + x^{68} + x^{67} \\ & + x^{65} + x^{64} + x^{60} + x^{59} + x^{57} + x^{55} + x^{51} + x^{49} + x^{48} + x^{47} + x^{46} \\ & + x^{45} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} + x^{38} + x^{37} + x^{34} + x^{33} + x^{30} \\ & + x^{28} + x^{25} + x^{23} + x^{22} + x^{21} + x^{20} + x^{19} + x^{16} + x^{14} + x^{12} + x^9 \\ & + x^5 + x^2 + 1, \end{aligned}$$

$$\begin{aligned} p_9(x) = & x^{125} + x^{124} + x^{122} + x^{121} + x^{118} + x^{117} + x^{114} + x^{113} + x^{110} + x^{108} \\ & + x^{101} + x^{100} + x^{98} + x^{97} + x^{94} + x^{92} + x^{85} + x^{84} + x^{82} + x^{81} + x^{78} \\ & + x^{77} + x^{74} + x^{73} + x^{70} + x^{68} + x^{61} + x^{60} + x^{58} + x^{57} + x^{54} + x^{53} \\ & + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{36} + x^{29} + x^{28} + x^{26} \\ & + x^{25} + x^{22} + x^{21} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10} + x^9 + x^6 + x^4, \end{aligned}$$

$$\begin{aligned} p_{12}(x) = & x^{129} + x^{128} + x^{126} + x^{124} + x^{117} + x^{116} + x^{114} + x^{112} + x^{109} + x^{108} \\ & + x^{106} + x^{105} + x^{102} + x^{100} + x^{93} + x^{92} + x^{90} + x^{89} + x^{86} + x^{84} \\ & + x^{81} + x^{80} + x^{78} + x^{77} + x^{74} + x^{73} + x^{70} + x^{69} + x^{66} + x^{65} + x^{62} \\ & + x^{60} + x^{53} + x^{52} + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{37} \\ & + x^{34} + x^{33} + x^{30} + x^{28} + x^{21} + x^{20} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10} \\ & + x^9 + x^6 + x^5 + x^2 + 1, \end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{122} + x^{120} + x^{119} + x^{117} + x^{116} + x^{115} + x^{113} + x^{109} + x^{108} + x^{104} \\
&\quad + x^{102} + x^{99} + x^{98} + x^{96} + x^{93} + x^{91} + x^{90} + x^{85} + x^{81} + x^{80} + x^{72} \\
&\quad + x^{68} + x^{65} + x^{64} + x^{62} + x^{59} + x^{58} + x^{57} + x^{56} + x^{55} + x^{54} + x^{52} \\
&\quad + x^{51} + x^{46} + x^{45} + x^{43} + x^{42} + x^{39} + x^{38} + x^{37} + x^{34} + x^{33} + x^{32} \\
&\quad + x^{31} + x^{29} + x^{26} + x^{23} + x^{22} + x^{21} + x^{20} + x^{18}, \\
p_3(x) &= x^{113} + x^{111} + x^{110} + x^{108} + x^{106} + x^{105} + x^{104} + x^{103} + x^{101} + x^{98} \\
&\quad + x^{95} + x^{94} + x^{92} + x^{90} + x^{88} + x^{86} + x^{85} + x^{84} + x^{80} + x^{79} + x^{77} \\
&\quad + x^{74} + x^{73} + x^{57} + x^{55} + x^{54} + x^{52} + x^{50} + x^{49} + x^{48} + x^{47} + x^{45} \\
&\quad + x^{42} + x^{41} + x^{33} + x^{31} + x^{30} + x^{28} + x^{26} + x^{24} + x^{22} + x^{21} + x^{20} \\
&\quad + x^{16} + x^{15} + x^{13} + x^{10} + x^9, \\
p_6(x) &= x^{116} + x^{114} + x^{112} + x^{108} + x^{106} + x^{104} + x^{102} + x^{100} + x^{98} + x^{90} \\
&\quad + x^{68} + x^{66} + x^{62} + x^{60} + x^{54} + x^{52} + x^{48} + x^{44} + x^{42} + x^{40} + x^{38} \\
&\quad + x^{36} + x^{34} + x^{28} + x^{22} + x^{18} + x^{16} + x^{14} + x^{10} + x^6, \\
p_9(x) &= x^{119} + x^{117} + x^{116} + x^{114} + x^{113} + x^{112} + x^{111} + x^{107} + x^{105} + x^{104} \\
&\quad + x^{103} + x^{102} + x^{99} + x^{98} + x^{97} + x^{96} + x^{95} + x^{91} + x^{89} + x^{88} + x^{87} \\
&\quad + x^{86} + x^{83} + x^{82} + x^{81} + x^{80} + x^{79} + x^{75} + x^{73} + x^{72} + x^{70} + x^{69} \\
&\quad + x^{68} + x^{67} + x^{55} + x^{53} + x^{52} + x^{50} + x^{49} + x^{48} + x^{47} + x^{43} + x^{41} \\
&\quad + x^{40} + x^{38} + x^{37} + x^{36} + x^{35} + x^{23} + x^{21} + x^{20} + x^{18} + x^{17} + x^{16} \\
&\quad + x^{15} + x^{11} + x^9 + x^8 + x^6 + x^5 + x^4 + x^3, \\
p_{12}(x) &= x^{122} + x^{120} + x^{118} + x^{116} + x^{114} + x^{112} + x^{102} + x^{100} + x^{86} + x^{84} \\
&\quad + x^{74} + x^{72} + x^{66} + x^{64} + x^{58} + x^{56} + x^{54} + x^{52} + x^{50} + x^{48} + x^{42} \\
&\quad + x^{40} + x^{34} + x^{32} + x^{26} + x^{24} + x^{22} + x^{20} + x^{18} + x^{16} + x^{10} + x^8 \\
&\quad + x^2 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{144} + x^{141} + x^{137} + x^{136} + x^{134} + x^{133} + x^{132} + x^{131} + x^{128} + x^{127} \\
&\quad + x^{125} + x^{123} + x^{122} + x^{121} + x^{120} + x^{119} + x^{116} + x^{115} + x^{113} \\
&\quad + x^{111} + x^{108} + x^{107} + x^{106} + x^{103} + x^{98} + x^{90} + x^{89} + x^{88} + x^{86} \\
&\quad + x^{85} + x^{76} + x^{75} + x^{74} + x^{73} + x^{71} + x^{70} + x^{68} + x^{66} + x^{65} + x^{59} \\
&\quad + x^{57} + x^{56} + x^{55} + x^{52} + x^{49} + x^{48} + x^{46} + x^{45} + x^{44} + x^{43} + x^{42} \\
&\quad + x^{41} + x^{40} + x^{37} + x^{36} + x^{35} + x^{33} + x^{31} + x^{27}, \\
p_3(x) &= x^{135} + x^{132} + x^{128} + x^{124} + x^{121} + x^{120} + x^{119} + x^{118} + x^{115} + x^{114} \\
&\quad + x^{113} + x^{112} + x^{109} + x^{108} + x^{106} + x^{104} + x^{102} + x^{101} + x^{100}
\end{aligned}$$

$$\begin{aligned}
& + x^{97} + x^{96} + x^{95} + x^{94} + x^{93} + x^{91} + x^{88} + x^{87} + x^{83} + x^{80} + x^{79} \\
& + x^{77} + x^{75} + x^{74} + x^{73} + x^{72} + x^{68} + x^{65} + x^{64} + x^{62} + x^{60} + x^{59} \\
& + x^{58} + x^{57} + x^{53} + x^{50} + x^{49} + x^{47} + x^{45} + x^{44} + x^{43} + x^{42} + x^{38} \\
& + x^{35} + x^{34} + x^{32} + x^{31} + x^{30} + x^{29} + x^{27} + x^{24} + x^{23} + x^{19} + x^{16} \\
& + x^{13} + x^{12} + x^{11} + x^{10} + x^9, \\
p_6(x) &= x^{138} + x^{134} + x^{132} + x^{130} + x^{128} + x^{120} + x^{118} + x^{114} + x^{108} + x^{100} \\
& + x^{92} + x^{84} + x^{82} + x^{78} + x^{74} + x^{72} + x^{68} + x^{66} + x^{64} + x^{62} + x^{58} \\
& + x^{52} + x^{50} + x^{22} + x^{18} + x^{16} + x^{12} + x^{10} + x^8 + x^6, \\
p_9(x) &= x^{141} + x^{138} + x^{135} + x^{134} + x^{133} + x^{132} + x^{128} + x^{127} + x^{117} + x^{114} \\
& + x^{113} + x^{111} + x^{109} + x^{108} + x^{107} + x^{106} + x^{105} + x^{103} + x^{101} \\
& + x^{100} + x^{99} + x^{98} + x^{97} + x^{95} + x^{92} + x^{91} + x^{89} + x^{86} + x^{83} + x^{82} \\
& + x^{81} + x^{80} + x^{76} + x^{75} + x^{73} + x^{70} + x^{69} + x^{67} + x^{64} + x^{63} + x^{61} \\
& + x^{58} + x^{55} + x^{54} + x^{52} + x^{50} + x^{49} + x^{48} + x^{44} + x^{43} + x^{41} + x^{38} \\
& + x^{37} + x^{35} + x^{32} + x^{31} + x^{29} + x^{26} + x^{23} + x^{22} + x^{20} + x^{18} + x^{17} \\
& + x^{16} + x^{13} + x^{12} + x^{11} + x^{10} + x^9 + x^7 + x^4 + x^3, \\
p_{12}(x) &= x^{144} + x^{140} + x^{128} + x^{120} + x^{116} + x^{104} + x^{92} + x^{88} + x^{80} + x^{76} \\
& + x^{68} + x^{64} + x^{60} + x^{56} + x^{52} + x^{44} + x^{36} + x^{32} + x^{28} + x^{24} + x^{20} \\
& + x^{16} + x^4 + 1,
\end{aligned}$$

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

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

$$\begin{aligned}
p_0(x) &= x^{129} + x^{128} + x^{127} + x^{125} + x^{123} + x^{120} + x^{118} + x^{109} + x^{108} + x^{107} \\
& + x^{106} + x^{105} + x^{104} + x^{103} + x^{101} + x^{100} + x^{99} + x^{97} + x^{91} + x^{88} \\
& + x^{86} + x^{85} + x^{84} + x^{83} + x^{82} + x^{81} + x^{80} + x^{79} + x^{78} + x^{76} + x^{75} \\
& + x^{72} + x^{69} + x^{68} + x^{67} + x^{66} + x^{64} + x^{62} + x^{61} + x^{60} + x^{59} + x^{58} \\
& + x^{57} + x^{56} + x^{55} + x^{53} + x^{52} + x^{51} + x^{46} + x^{43} + x^{39} + x^{38} + x^{37} \\
& + x^{36} + x^{33}, \\
p_3(x) &= x^{125} + x^{124} + x^{123} + x^{120} + x^{117} + x^{116} + x^{115} + x^{114} + x^{111} + x^{106} \\
& + x^{105} + x^{102} + x^{101} + x^{96} + x^{95} + x^{94} + x^{93} + x^{91} + x^{90} + x^{89} + x^{87} \\
& + x^{86} + x^{83} + x^{82} + x^{81} + x^{79} + x^{77} + x^{76} + x^{75} + x^{74} + x^{72} + x^{69} \\
& + x^{67} + x^{66} + x^{63} + x^{59} + x^{55} + x^{54} + x^{52} + x^{49} + x^{46} + x^{43} + x^{39} \\
& + x^{38} + x^{36} + x^{35} + x^{34} + x^{31} + x^{30} + x^{29} + x^{28} + x^{27} + x^{25} + x^{24} \\
& + x^{22} + x^{21} + x^{20} + x^{19} + x^{17} + x^{15} + x^{14} + x^{12}, \\
p_6(x) &= x^{127} + x^{126} + x^{123} + x^{122} + x^{119} + x^{116} + x^{115} + x^{114} + x^{113} + x^{111} \\
& + x^{109} + x^{108} + x^{107} + x^{104} + x^{101} + x^{100} + x^{98} + x^{97} + x^{94} + x^{92} \\
& + x^{91} + x^{89} + x^{88} + x^{87} + x^{85} + x^{84} + x^{83} + x^{80} + x^{79} + x^{76} + x^{74}
\end{aligned}$$

$$\begin{aligned}
& + x^{73} + x^{72} + x^{70} + x^{67} + x^{66} + x^{62} + x^{61} + x^{60} + x^{59} + x^{58} + x^{57} \\
& + x^{56} + x^{54} + x^{52} + x^{49} + x^{47} + x^{45} + x^{44} + x^{43} + x^{42} + x^{41} + x^{40} \\
& + x^{39} + x^{37} + x^{36} + x^{35} + x^{34} + x^{30} + x^{29} + x^{28} + x^{27} + x^{24} + x^{23} \\
& + x^{22} + x^{21} + x^{18} + x^{17} + x^{16} + x^{15} + x^{13} + x^{11} + x^{10} + x^8 + x^5 + x^4 \\
& + x^2 + 1, \\
p_9(x) &= x^{125} + x^{124} + x^{122} + x^{121} + x^{118} + x^{117} + x^{114} + x^{113} + x^{110} + x^{108} \\
& + x^{101} + x^{100} + x^{98} + x^{97} + x^{94} + x^{92} + x^{85} + x^{84} + x^{82} + x^{81} + x^{78} \\
& + x^{77} + x^{74} + x^{73} + x^{70} + x^{68} + x^{61} + x^{60} + x^{58} + x^{57} + x^{54} + x^{53} \\
& + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{36} + x^{29} + x^{28} + x^{26} \\
& + x^{25} + x^{22} + x^{21} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10} + x^9 + x^6 + x^4, \\
p_{12}(x) &= x^{129} + x^{128} + x^{126} + x^{124} + x^{117} + x^{116} + x^{114} + x^{112} + x^{109} + x^{108} \\
& + x^{106} + x^{105} + x^{102} + x^{100} + x^{93} + x^{92} + x^{90} + x^{89} + x^{86} + x^{84} \\
& + x^{81} + x^{80} + x^{78} + x^{77} + x^{74} + x^{73} + x^{70} + x^{69} + x^{66} + x^{65} + x^{62} \\
& + x^{60} + x^{53} + x^{52} + x^{50} + x^{49} + x^{46} + x^{45} + x^{42} + x^{41} + x^{38} + x^{37} \\
& + x^{34} + x^{33} + x^{30} + x^{28} + x^{21} + x^{20} + x^{18} + x^{17} + x^{14} + x^{13} + x^{10} \\
& + x^9 + x^6 + x^5 + x^2 + 1,
\end{aligned}$$

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

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

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]	1545	[2530, 2531]	3090	[4406, 2282]	4635	[3094, 5523]
1	[3, 4]	1546	[2532, 1991]	3091	[4407, 4408]	4636	[5524, 5525]
2	[5, 6]	1547	[2533, 870]	3092	[4145, 2410]	4637	[5018, 5526]
3	[7, 8]	1548	[2534, 2320]	3093	[4054, 4096]	4638	[5527, 5528]
4	[9, 10]	1549	[517, 2535]	3094	[1978, 4219]	4639	[5529, 5530]
5	[11, 12]	1550	[1673, 712]	3095	[4277, 4243]	4640	[5531, 5532]
6	[13, 14]	1551	[2536, 2537]	3096	[787, 2536]	4641	[5533, 5468]
7	[15, 16]	1552	[2538, 2539]	3097	[1701, 4409]	4642	[1473, 5534]
8	[17, 18]	1553	[2540, 639]	3098	[539, 1687]	4643	[5535, 2736]
9	[19, 20]	1554	[885, 2541]	3099	[49, 2058]	4644	[5536, 5537]
10	[21, 22]	1555	[2542, 2543]	3100	[571, 1907]	4645	[101, 2927]
11	[23, 24]	1556	[544, 2544]	3101	[4132, 1776]	4646	[1220, 5538]
12	[25, 26]	1557	[2545, 1668]	3102	[4410, 4411]	4647	[5539, 932]
13	[27, 28]	1558	[1810, 625]	3103	[4066, 4412]	4648	[368, 5540]
14	[29, 30]	1559	[2048, 2044]	3104	[618, 4160]	4649	[5370, 5388]
15	[31, 32]	1560	[2052, 2048]	3105	[4413, 2394]	4650	[5285, 5541]
16	[33, 34]	1561	[1772, 2546]	3106	[4414, 2161]	4651	[3120, 1021]
17	[35, 36]	1562	[2547, 2548]	3107	[4268, 4415]	4652	[3427, 5542]

18	[37, 38]	1563	[2549, 2550]	3108	[4416, 4260]	4653	[5543, 1115]
19	[39, 40]	1564	[2551, 1729]	3109	[4417, 4418]	4654	[5544, 1601]
20	[41, 42]	1565	[1685, 2322]	3110	[4419, 4420]	4655	[5317, 5545]
21	[43, 44]	1566	[2552, 2553]	3111	[2284, 4421]	4656	[5546, 5547]
22	[45, 46]	1567	[2554, 2555]	3112	[4164, 4057]	4657	[3303, 1396]
23	[47, 48]	1568	[2556, 1980]	3113	[1813, 1791]	4658	[5491, 5548]
24	[49, 50]	1569	[2412, 178]	3114	[4422, 4423]	4659	[5549, 5488]
25	[51, 52]	1570	[2557, 2558]	3115	[2593, 4112]	4660	[5550, 3054]
26	[53, 54]	1571	[2559, 2560]	3116	[4235, 4424]	4661	[1144, 5551]
27	[55, 56]	1572	[2561, 1987]	3117	[4425, 4426]	4662	[5552, 5553]
28	[57, 58]	1573	[2562, 2301]	3118	[1745, 4427]	4663	[5554, 2661]
29	[59, 60]	1574	[2563, 672]	3119	[4428, 4429]	4664	[4975, 5]
30	[61, 51]	1575	[2248, 2564]	3120	[587, 2476]	4665	[5555, 5240]
31	[62, 63]	1576	[2565, 2488]	3121	[2049, 1661]	4666	[2737, 5012]
32	[64, 65]	1577	[2457, 613]	3122	[4081, 4307]	4667	[5556, 5305]
33	[66, 67]	1578	[2566, 1723]	3123	[4430, 763]	4668	[6, 5557]
34	[68, 69]	1579	[2378, 1902]	3124	[4431, 4432]	4669	[5489, 5558]
35	[70, 71]	1580	[2567, 2568]	3125	[2468, 4433]	4670	[5355, 29]
36	[72, 73]	1581	[2569, 2570]	3126	[1783, 1664]	4671	[3895, 5559]
37	[74, 75]	1582	[2571, 2572]	3127	[789, 4434]	4672	[5560, 464]
38	[76, 77]	1583	[2573, 2574]	3128	[1726, 1905]	4673	[5072, 5561]
39	[78, 79]	1584	[689, 2575]	3129	[4362, 1800]	4674	[5128, 944]
40	[80, 81]	1585	[2576, 2577]	3130	[4435, 4284]	4675	[3358, 5562]
41	[82, 83]	1586	[2578, 1993]	3131	[4436, 4437]	4676	[5563, 5564]
42	[84, 85]	1587	[495, 2527]	3132	[4438, 729]	4677	[5565, 5566]
43	[86, 87]	1588	[484, 2579]	3133	[4439, 1901]	4678	[5096, 3022]
44	[88, 89]	1589	[2580, 2581]	3134	[2304, 4218]	4679	[1001, 5567]
45	[90, 91]	1590	[2582, 2583]	3135	[1823, 575]	4680	[5437, 3428]
46	[92, 93]	1591	[2291, 2584]	3136	[1906, 572]	4681	[5568, 5356]
47	[94, 95]	1592	[2516, 863]	3137	[145, 2609]	4682	[5569, 5570]
48	[96, 97]	1593	[2585, 2586]	3138	[803, 2383]	4683	[5201, 68]
49	[98, 99]	1594	[2587, 2588]	3139	[4440, 4441]	4684	[5571, 5572]
50	[100, 101]	1595	[784, 2589]	3140	[4184, 2451]	4685	[1127, 5573]
51	[102, 103]	1596	[42, 2590]	3141	[4442, 4372]	4686	[5574, 962]
52	[104, 105]	1597	[2591, 2592]	3142	[4443, 4236]	4687	[1232, 964]
53	[106, 107]	1598	[2593, 611]	3143	[4444, 4445]	4688	[3502, 5575]
54	[108, 109]	1599	[2594, 2595]	3144	[4181, 637]	4689	[5576, 5424]
55	[110, 111]	1600	[2596, 2597]	3145	[2287, 674]	4690	[5577, 3229]
56	[112, 113]	1601	[2233, 2548]	3146	[4446, 756]	4691	[5578, 3370]
57	[114, 115]	1602	[1743, 2598]	3147	[2375, 4447]	4692	[5067, 3024]
58	[116, 117]	1603	[2454, 2032]	3148	[4448, 613]	4693	[5026, 80]
59	[118, 119]	1604	[1753, 1815]	3149	[648, 1900]	4694	[107, 1345]
60	[120, 121]	1605	[857, 2599]	3150	[4449, 1934]	4695	[5579, 5580]
61	[122, 123]	1606	[2600, 2601]	3151	[4197, 4361]	4696	[5581, 5582]

62	[124, 125]	1607	[2602, 2603]	3152	[4064, 4450]	4697	[5583, 5584]
63	[126, 127]	1608	[2072, 732]	3153	[4451, 2427]	4698	[3361, 5585]
64	[128, 129]	1609	[2604, 202]	3154	[243, 672]	4699	[3549, 5586]
65	[130, 131]	1610	[530, 2118]	3155	[4452, 4453]	4700	[2974, 5587]
66	[132, 133]	1611	[2605, 687]	3156	[2459, 546]	4701	[3877, 5588]
67	[134, 135]	1612	[2004, 2606]	3157	[2288, 4454]	4702	[5589, 3621]
68	[136, 137]	1613	[764, 2607]	3158	[2585, 1743]	4703	[5082, 3991]
69	[138, 139]	1614	[716, 2608]	3159	[4455, 1941]	4704	[5590, 5591]
70	[140, 141]	1615	[2609, 2610]	3160	[4311, 4157]	4705	[5592, 3432]
71	[142, 143]	1616	[2611, 2612]	3161	[4082, 4456]	4706	[5528, 5593]
72	[144, 145]	1617	[2613, 2614]	3162	[2253, 4457]	4707	[1343, 3990]
73	[146, 147]	1618	[2615, 2616]	3163	[4458, 1820]	4708	[3144, 5594]
74	[148, 149]	1619	[2260, 2617]	3164	[2376, 4459]	4709	[3369, 2720]
75	[150, 151]	1620	[2618, 1767]	3165	[2643, 4460]	4710	[5595, 4971]
76	[152, 153]	1621	[2619, 2620]	3166	[698, 4461]	4711	[3433, 3049]
77	[154, 155]	1622	[770, 2621]	3167	[4462, 4463]	4712	[5596, 5478]
78	[156, 157]	1623	[2622, 490]	3168	[4464, 2079]	4713	[5597, 5405]
79	[158, 159]	1624	[2147, 855]	3169	[873, 4465]	4714	[5288, 88]
80	[160, 161]	1625	[2623, 1814]	3170	[4466, 4467]	4715	[5598, 3360]
81	[162, 163]	1626	[2624, 39]	3171	[4439, 1797]	4716	[5493, 2765]
82	[164, 165]	1627	[563, 2625]	3172	[2207, 4155]	4717	[5396, 5599]
83	[166, 167]	1628	[2626, 2627]	3173	[4468, 4469]	4718	[5600, 3496]
84	[168, 169]	1629	[1904, 1727]	3174	[2555, 2209]	4719	[1154, 1023]
85	[170, 171]	1630	[2628, 2629]	3175	[4470, 2095]	4720	[5601, 5223]
86	[172, 173]	1631	[2630, 2446]	3176	[4471, 2292]	4721	[5602, 344]
87	[174, 175]	1632	[2631, 2632]	3177	[4138, 4162]	4722	[5603, 1573]
88	[176, 177]	1633	[2276, 2633]	3178	[2157, 512]	4723	[3904, 1236]
89	[178, 179]	1634	[2634, 2601]	3179	[2155, 2191]	4724	[5604, 5236]
90	[180, 181]	1635	[2635, 2636]	3180	[2499, 2560]	4725	[377, 1087]
91	[182, 183]	1636	[2637, 1997]	3181	[4472, 2151]	4726	[3661, 5605]
92	[184, 185]	1637	[2638, 2639]	3182	[4473, 4131]	4727	[5606, 5607]
93	[186, 187]	1638	[2221, 1877]	3183	[179, 4176]	4728	[5502, 5608]
94	[188, 189]	1639	[2101, 844]	3184	[4298, 715]	4729	[5609, 3943]
95	[190, 191]	1640	[2640, 1972]	3185	[2567, 4474]	4730	[5610, 1426]
96	[192, 193]	1641	[1716, 2329]	3186	[4475, 4476]	4731	[4935, 5438]
97	[194, 195]	1642	[2641, 2642]	3187	[4477, 1945]	4732	[919, 5611]
98	[196, 197]	1643	[632, 2201]	3188	[2258, 4478]	4733	[5612, 3799]
99	[198, 199]	1644	[2643, 1830]	3189	[4479, 4480]	4734	[3804, 1454]
100	[200, 201]	1645	[1961, 2644]	3190	[1941, 4340]	4735	[3023, 5613]
101	[202, 203]	1646	[2402, 2645]	3191	[4060, 724]	4736	[5614, 5108]
102	[204, 205]	1647	[1681, 524]	3192	[665, 4481]	4737	[5224, 2815]
103	[206, 207]	1648	[1841, 2646]	3193	[2065, 2023]	4738	[5225, 5615]
104	[208, 209]	1649	[2647, 230]	3194	[2055, 1902]	4739	[2982, 5616]
105	[210, 211]	1650	[2497, 2648]	3195	[1865, 4137]	4740	[5319, 5617]

106	[212, 213]	1651	[2150, 810]	3196	[2019, 743]	4741	[3565, 5504]
107	[214, 215]	1652	[2573, 508]	3197	[898, 4482]	4742	[5530, 1593]
108	[216, 217]	1653	[2649, 2485]	3198	[4483, 2101]	4743	[4979, 3941]
109	[218, 219]	1654	[2650, 1855]	3199	[510, 4484]	4744	[2817, 5618]
110	[220, 221]	1655	[2651, 1805]	3200	[2112, 4237]	4745	[2907, 5619]
111	[222, 223]	1656	[2652, 2653]	3201	[4305, 246]	4746	[1643, 3342]
112	[224, 225]	1657	[1559, 909]	3202	[675, 2505]	4747	[1256, 5513]
113	[226, 176]	1658	[2654, 1005]	3203	[4485, 4486]	4748	[5620, 4933]
114	[227, 228]	1659	[2655, 2656]	3204	[1917, 4427]	4749	[3133, 5621]
115	[229, 230]	1660	[1170, 2657]	3205	[4243, 4487]	4750	[5622, 2794]
116	[231, 232]	1661	[2658, 1003]	3206	[4488, 2087]	4751	[5623, 5624]
117	[233, 234]	1662	[2659, 2660]	3207	[882, 242]	4752	[5339, 2903]
118	[235, 236]	1663	[2661, 2662]	3208	[4489, 4490]	4753	[3259, 2901]
119	[237, 238]	1664	[2663, 2664]	3209	[4303, 4491]	4754	[1326, 1217]
120	[239, 240]	1665	[2665, 2666]	3210	[2100, 4492]	4755	[3622, 5625]
121	[241, 242]	1666	[387, 2667]	3211	[2037, 1840]	4756	[5389, 5583]
122	[243, 244]	1667	[2668, 2669]	3212	[650, 4493]	4757	[2966, 3777]
123	[245, 246]	1668	[2670, 100]	3213	[684, 2606]	4758	[2867, 3065]
124	[247, 248]	1669	[2671, 2672]	3214	[4494, 4161]	4759	[5626, 3445]
125	[249, 250]	1670	[2673, 2674]	3215	[2494, 4409]	4760	[5392, 5627]
126	[251, 252]	1671	[2675, 1414]	3216	[4495, 1802]	4761	[3310, 1597]
127	[253, 254]	1672	[2676, 1416]	3217	[4496, 4497]	4762	[5628, 3742]
128	[255, 256]	1673	[2677, 2678]	3218	[4498, 4499]	4763	[5629, 392]
129	[257, 258]	1674	[1320, 2679]	3219	[1686, 540]	4764	[3859, 3965]
130	[259, 260]	1675	[1542, 1204]	3220	[1688, 4411]	4765	[5630, 5631]
131	[261, 262]	1676	[2680, 2681]	3221	[4153, 1973]	4766	[5632, 5633]
132	[263, 264]	1677	[2682, 1227]	3222	[4466, 4500]	4767	[5634, 3712]
133	[265, 266]	1678	[2683, 2684]	3223	[4501, 2267]	4768	[1337, 5635]
134	[267, 268]	1679	[1288, 2685]	3224	[4502, 1670]	4769	[3534, 925]
135	[269, 270]	1680	[264, 2686]	3225	[4503, 4358]	4770	[5636, 5637]
136	[271, 272]	1681	[2687, 2688]	3226	[4504, 1968]	4771	[2684, 5638]
137	[273, 274]	1682	[2689, 281]	3227	[2259, 53]	4772	[5639, 4994]
138	[275, 276]	1683	[2690, 2691]	3228	[782, 2013]	4773	[5640, 1233]
139	[277, 278]	1684	[2692, 2693]	3229	[4505, 4506]	4774	[3737, 3575]
140	[279, 280]	1685	[1609, 2694]	3230	[757, 1700]	4775	[3185, 1031]
141	[281, 282]	1686	[921, 2695]	3231	[4070, 32]	4776	[5499, 5641]
142	[283, 284]	1687	[2696, 2697]	3232	[4507, 4508]	4777	[5176, 5480]
143	[285, 286]	1688	[1066, 2698]	3233	[4509, 4510]	4778	[5522, 5642]
144	[287, 288]	1689	[1496, 2699]	3234	[4092, 1975]	4779	[3316, 5643]
145	[289, 290]	1690	[2700, 2701]	3235	[2586, 2598]	4780	[1419, 5210]
146	[291, 292]	1691	[2702, 2703]	3236	[2455, 2499]	4781	[5644, 1342]
147	[293, 294]	1692	[2704, 2705]	3237	[2579, 2120]	4782	[5551, 1488]
148	[295, 296]	1693	[2706, 2707]	3238	[748, 4511]	4783	[5645, 5646]
149	[297, 298]	1694	[445, 2708]	3239	[4512, 216]	4784	[5647, 5440]

150	[299, 300]	1695	[2709, 2710]	3240	[4513, 678]	4785	[5648, 3945]
151	[272, 301]	1696	[2711, 2712]	3241	[620, 1810]	4786	[5278, 5246]
152	[302, 303]	1697	[2713, 1556]	3242	[4019, 2472]	4787	[3582, 3283]
153	[304, 305]	1698	[2714, 2715]	3243	[2048, 2053]	4788	[5649, 5650]
154	[306, 307]	1699	[2716, 2717]	3244	[1812, 623]	4789	[5642, 5651]
155	[308, 309]	1700	[2718, 2719]	3245	[1657, 2049]	4790	[5652, 3504]
156	[310, 311]	1701	[2720, 1599]	3246	[4514, 4310]	4791	[5653, 5273]
157	[312, 313]	1702	[2721, 2722]	3247	[4515, 215]	4792	[5654, 5655]
158	[314, 315]	1703	[2703, 2723]	3248	[4516, 4517]	4793	[3774, 283]
159	[316, 317]	1704	[2724, 1408]	3249	[4518, 4183]	4794	[2809, 3377]
160	[318, 319]	1705	[2725, 2726]	3250	[4519, 693]	4795	[3695, 5338]
161	[320, 321]	1706	[2727, 2728]	3251	[2192, 4264]	4796	[951, 5656]
162	[322, 323]	1707	[2729, 2730]	3252	[4415, 4322]	4797	[5657, 5156]
163	[324, 325]	1708	[2731, 2732]	3253	[2111, 2030]	4798	[5658, 2978]
164	[254, 326]	1709	[2733, 2734]	3254	[2030, 4520]	4799	[121, 5221]
165	[327, 328]	1710	[278, 2735]	3255	[629, 4483]	4800	[5659, 5660]
166	[329, 330]	1711	[2736, 2737]	3256	[901, 4521]	4801	[5661, 5662]
167	[331, 332]	1712	[2738, 2739]	3257	[4522, 1962]	4802	[1351, 3803]
168	[333, 334]	1713	[1286, 2740]	3258	[4173, 4523]	4803	[1084, 5663]
169	[24, 335]	1714	[2741, 2742]	3259	[822, 1759]	4804	[5664, 5665]
170	[336, 337]	1715	[2743, 2744]	3260	[4314, 1952]	4805	[5666, 5667]
171	[338, 339]	1716	[2745, 2746]	3261	[4524, 4278]	4806	[5324, 5485]
172	[340, 341]	1717	[1038, 2747]	3262	[2598, 4525]	4807	[3889, 5668]
173	[342, 343]	1718	[2748, 2749]	3263	[4526, 4376]	4808	[274, 5550]
174	[344, 345]	1719	[2750, 2751]	3264	[4238, 43]	4809	[3298, 5346]
175	[346, 347]	1720	[1387, 2752]	3265	[4527, 2173]	4810	[3328, 5669]
176	[348, 349]	1721	[2753, 2754]	3266	[524, 140]	4811	[425, 2700]
177	[350, 351]	1722	[2755, 1111]	3267	[4528, 2352]	4812	[3594, 5017]
178	[352, 353]	1723	[2756, 2706]	3268	[1978, 4065]	4813	[5670, 1610]
179	[354, 355]	1724	[2757, 2758]	3269	[4529, 4530]	4814	[5671, 5672]
180	[356, 357]	1725	[414, 21]	3270	[2538, 2306]	4815	[5673, 329]
181	[250, 358]	1726	[2759, 2760]	3271	[4531, 4416]	4816	[5674, 5604]
182	[359, 360]	1727	[2761, 2762]	3272	[4319, 4532]	4817	[5675, 3440]
183	[361, 362]	1728	[2763, 2764]	3273	[2393, 4533]	4818	[5650, 5676]
184	[363, 364]	1729	[2765, 2766]	3274	[4318, 2217]	4819	[1455, 5677]
185	[365, 366]	1730	[2767, 2768]	3275	[1762, 4508]	4820	[5678, 3932]
186	[367, 368]	1731	[943, 2769]	3276	[764, 4534]	4821	[5679, 5680]
187	[369, 370]	1732	[2770, 2771]	3277	[2152, 1851]	4822	[5599, 5681]
188	[371, 372]	1733	[1572, 2772]	3278	[4535, 4536]	4823	[5682, 5683]
189	[373, 374]	1734	[2773, 2774]	3279	[4537, 4538]	4824	[3542, 1234]
190	[375, 376]	1735	[2775, 1625]	3280	[1758, 823]	4825	[3911, 5576]
191	[4, 377]	1736	[2776, 2777]	3281	[4539, 4540]	4826	[5684, 3038]
192	[378, 379]	1737	[2778, 310]	3282	[739, 4506]	4827	[5685, 5569]
193	[380, 381]	1738	[2779, 312]	3283	[4541, 4542]	4828	[1193, 3414]

194	[382, 383]	1739	[2780, 2781]	3284	[4543, 4544]	4829	[3866, 1007]
195	[384, 385]	1740	[2782, 2783]	3285	[2486, 4545]	4830	[5686, 3587]
196	[386, 387]	1741	[2784, 404]	3286	[208, 875]	4831	[5687, 3651]
197	[388, 389]	1742	[2785, 2786]	3287	[4546, 4547]	4832	[5584, 5688]
198	[390, 391]	1743	[2787, 2788]	3288	[2089, 2609]	4833	[5132, 1646]
199	[392, 393]	1744	[2789, 2790]	3289	[2380, 4170]	4834	[5572, 5689]
200	[394, 395]	1745	[284, 2791]	3290	[4505, 2392]	4835	[5011, 3569]
201	[396, 397]	1746	[2792, 2793]	3291	[4545, 2268]	4836	[73, 5597]
202	[398, 399]	1747	[2794, 2795]	3292	[4548, 4549]	4837	[5498, 5690]
203	[400, 401]	1748	[2796, 2797]	3293	[1945, 1889]	4838	[5046, 1541]
204	[402, 403]	1749	[2798, 2799]	3294	[1814, 41]	4839	[5562, 3738]
205	[404, 405]	1750	[2800, 2801]	3295	[676, 4491]	4840	[3717, 5165]
206	[406, 407]	1751	[2802, 936]	3296	[213, 4550]	4841	[5264, 5581]
207	[65, 408]	1752	[2803, 2804]	3297	[4551, 4519]	4842	[5691, 5565]
208	[409, 410]	1753	[2805, 2806]	3298	[2194, 4552]	4843	[5692, 5693]
209	[411, 412]	1754	[2807, 2808]	3299	[4553, 4321]	4844	[5694, 3680]
210	[413, 414]	1755	[1389, 2809]	3300	[1717, 2330]	4845	[3493, 1456]
211	[415, 386]	1756	[2810, 2811]	3301	[4554, 1910]	4846	[5695, 5696]
212	[416, 417]	1757	[1348, 2812]	3302	[4555, 1775]	4847	[465, 5697]
213	[418, 419]	1758	[2813, 948]	3303	[2551, 4381]	4848	[3166, 5434]
214	[420, 421]	1759	[2814, 1329]	3304	[4556, 1741]	4849	[1570, 5698]
215	[422, 423]	1760	[2815, 346]	3305	[860, 4557]	4850	[5505, 5699]
216	[424, 425]	1761	[2816, 2817]	3306	[4558, 4467]	4851	[3619, 3227]
217	[426, 427]	1762	[2818, 2819]	3307	[4254, 177]	4852	[5085, 5700]
218	[428, 429]	1763	[2820, 2821]	3308	[4346, 4559]	4853	[3666, 5701]
219	[430, 431]	1764	[2822, 2810]	3309	[4560, 1685]	4854	[5702, 5703]
220	[432, 433]	1765	[2823, 333]	3310	[768, 4561]	4855	[3111, 5200]
221	[434, 435]	1766	[2824, 2825]	3311	[2315, 4562]	4856	[5704, 5705]
222	[436, 437]	1767	[2826, 2827]	3312	[4165, 4563]	4857	[5061, 1149]
223	[438, 439]	1768	[2828, 2829]	3313	[1704, 535]	4858	[2742, 5706]
224	[440, 441]	1769	[2830, 2831]	3314	[2060, 2458]	4859	[1252, 5579]
225	[442, 443]	1770	[2832, 2833]	3315	[4328, 4564]	4860	[1645, 293]
226	[444, 445]	1771	[1588, 2834]	3316	[4203, 4565]	4861	[5404, 5707]
227	[446, 447]	1772	[2835, 2836]	3317	[2464, 4504]	4862	[1415, 5708]
228	[448, 449]	1773	[2837, 2838]	3318	[569, 2608]	4863	[5709, 5386]
229	[450, 428]	1774	[2839, 2840]	3319	[4179, 4566]	4864	[5291, 3499]
230	[405, 451]	1775	[2841, 2842]	3320	[2507, 155]	4865	[993, 5710]
231	[452, 453]	1776	[2843, 2844]	3321	[126, 1920]	4866	[1513, 5711]
232	[454, 455]	1777	[2845, 2846]	3322	[695, 2346]	4867	[1464, 411]
233	[456, 457]	1778	[1226, 2682]	3323	[1752, 551]	4868	[1402, 5712]
234	[458, 459]	1779	[1046, 2847]	3324	[4094, 2347]	4869	[5593, 3668]
235	[460, 461]	1780	[2848, 2849]	3325	[4567, 44]	4870	[5101, 3087]
236	[462, 463]	1781	[2850, 2851]	3326	[4568, 4569]	4871	[2913, 5544]
237	[464, 465]	1782	[2852, 1143]	3327	[4570, 2557]	4872	[3999, 5428]

238	[466, 467]	1783	[2853, 2665]	3328	[4571, 2182]	4873	[3762, 5713]
239	[468, 469]	1784	[2844, 289]	3329	[4572, 2056]	4874	[2694, 5429]
240	[470, 471]	1785	[2854, 2855]	3330	[2080, 4573]	4875	[5714, 3275]
241	[472, 473]	1786	[2856, 960]	3331	[4574, 2206]	4876	[1134, 1525]
242	[474, 475]	1787	[2857, 2858]	3332	[1822, 1711]	4877	[5302, 5715]
243	[476, 108]	1788	[2859, 2860]	3333	[4468, 791]	4878	[3679, 5716]
244	[477, 478]	1789	[2861, 2862]	3334	[815, 4575]	4879	[1341, 5717]
245	[479, 480]	1790	[2863, 2864]	3335	[4382, 4333]	4880	[5295, 5718]
246	[481, 482]	1791	[1442, 2865]	3336	[4431, 4445]	4881	[5719, 1043]
247	[483, 484]	1792	[2866, 2867]	3337	[4288, 4339]	4882	[5720, 3448]
248	[485, 486]	1793	[2868, 2869]	3338	[4112, 4067]	4883	[5672, 3980]
249	[487, 238]	1794	[2870, 2871]	3339	[2329, 2278]	4884	[5251, 5623]
250	[488, 489]	1795	[2872, 2873]	3340	[2122, 4565]	4885	[5721, 2995]
251	[34, 490]	1796	[2874, 2875]	3341	[4196, 2524]	4886	[3910, 5679]
252	[491, 492]	1797	[2876, 2877]	3342	[1662, 4043]	4887	[4997, 1026]
253	[493, 494]	1798	[2878, 2879]	3343	[546, 2506]	4888	[5722, 5289]
254	[495, 496]	1799	[2880, 2881]	3344	[4018, 1658]	4889	[2840, 5723]
255	[497, 498]	1800	[2882, 2883]	3345	[1719, 2542]	4890	[2938, 5724]
256	[499, 500]	1801	[2884, 1413]	3346	[4075, 548]	4891	[5725, 5726]
257	[501, 502]	1802	[2885, 2886]	3347	[751, 4094]	4892	[4967, 3923]
258	[503, 504]	1803	[2887, 438]	3348	[4377, 1976]	4893	[1214, 5029]
259	[505, 506]	1804	[2888, 2889]	3349	[4485, 4032]	4894	[5727, 5343]
260	[507, 508]	1805	[1089, 1157]	3350	[2038, 4552]	4895	[319, 5728]
261	[509, 510]	1806	[2890, 2891]	3351	[4262, 1822]	4896	[5729, 5590]
262	[511, 512]	1807	[2892, 2893]	3352	[4576, 4092]	4897	[5167, 5329]
263	[513, 210]	1808	[2894, 2895]	3353	[4310, 1939]	4898	[5730, 1367]
264	[514, 515]	1809	[1502, 2896]	3354	[1891, 4200]	4899	[5228, 5731]
265	[516, 517]	1810	[911, 322]	3355	[4401, 2442]	4900	[3497, 5732]
266	[518, 519]	1811	[1162, 1410]	3356	[2293, 4577]	4901	[3464, 5733]
267	[520, 521]	1812	[2897, 1167]	3357	[4578, 136]	4902	[3638, 3979]
268	[522, 523]	1813	[2898, 2866]	3358	[1877, 4575]	4903	[5734, 5161]
269	[524, 525]	1814	[2899, 2900]	3359	[788, 4579]	4904	[3268, 5735]
270	[526, 527]	1815	[2901, 2902]	3360	[4397, 4580]	4905	[5736, 396]
271	[528, 529]	1816	[2903, 2904]	3361	[4351, 728]	4906	[5129, 5501]
272	[530, 531]	1817	[2905, 331]	3362	[4024, 4581]	4907	[5411, 5737]
273	[532, 533]	1818	[2906, 2907]	3363	[1877, 162]	4908	[5738, 3825]
274	[534, 535]	1819	[2908, 2909]	3364	[46, 1958]	4909	[5332, 3607]
275	[536, 537]	1820	[2910, 2911]	3365	[1692, 4582]	4910	[5739, 5466]
276	[538, 52]	1821	[2912, 2738]	3366	[2175, 1967]	4911	[3551, 5307]
277	[539, 540]	1822	[2873, 2913]	3367	[191, 2323]	4912	[5525, 5740]
278	[541, 175]	1823	[2914, 2915]	3368	[4477, 1888]	4913	[1373, 5741]
279	[542, 543]	1824	[2916, 2917]	3369	[4458, 2594]	4914	[5742, 5661]
280	[544, 545]	1825	[2918, 2919]	3370	[4079, 4368]	4915	[5676, 3727]
281	[182, 546]	1826	[2920, 2727]	3371	[4583, 2554]	4916	[5743, 3460]

282	[547, 548]	1827	[2921, 2922]	3372	[2090, 4584]	4917	[71, 5744]
283	[549, 550]	1828	[2923, 2924]	3373	[4585, 4586]	4918	[1443, 3952]
284	[497, 551]	1829	[2925, 2926]	3374	[2273, 660]	4919	[3476, 5745]
285	[552, 553]	1830	[2927, 2928]	3375	[1841, 868]	4920	[1404, 2899]
286	[554, 555]	1831	[2929, 2930]	3376	[2371, 681]	4921	[5746, 5747]
287	[556, 557]	1832	[2931, 2932]	3377	[4276, 1970]	4922	[1140, 5748]
288	[558, 559]	1833	[2933, 78]	3378	[4587, 4253]	4923	[3122, 5749]
289	[560, 561]	1834	[2934, 2935]	3379	[2353, 49]	4924	[3329, 5750]
290	[562, 127]	1835	[2936, 2713]	3380	[1853, 762]	4925	[5751, 976]
291	[563, 564]	1836	[2937, 2938]	3381	[514, 4588]	4926	[5752, 2472]
292	[565, 566]	1837	[2939, 2940]	3382	[4545, 2515]	4927	[4193, 5753]
293	[567, 568]	1838	[2941, 2942]	3383	[4560, 190]	4928	[1909, 4884]
294	[569, 570]	1839	[2804, 2943]	3384	[4589, 4097]	4929	[1676, 1822]
295	[571, 572]	1840	[1618, 2944]	3385	[864, 4590]	4930	[4914, 2523]
296	[573, 541]	1841	[2945, 2946]	3386	[670, 4424]	4931	[896, 1792]
297	[574, 575]	1842	[2947, 2931]	3387	[2642, 4591]	4932	[4667, 43]
298	[576, 577]	1843	[2948, 2949]	3388	[4592, 2438]	4933	[5754, 645]
299	[578, 579]	1844	[1010, 257]	3389	[1931, 561]	4934	[4553, 664]
300	[580, 581]	1845	[2950, 2951]	3390	[4593, 2343]	4935	[725, 2546]
301	[582, 583]	1846	[2952, 2953]	3391	[4594, 4157]	4936	[5755, 4581]
302	[584, 585]	1847	[2954, 2955]	3392	[675, 2349]	4937	[787, 2626]
303	[586, 587]	1848	[1535, 2956]	3393	[2587, 4595]	4938	[4793, 1885]
304	[588, 589]	1849	[2957, 2958]	3394	[4422, 4596]	4939	[5756, 2219]
305	[590, 591]	1850	[2710, 2959]	3395	[1820, 2595]	4940	[2440, 4162]
306	[592, 593]	1851	[1375, 2960]	3396	[4597, 4191]	4941	[2032, 2499]
307	[491, 594]	1852	[2723, 2961]	3397	[4598, 165]	4942	[535, 1853]
308	[595, 549]	1853	[2657, 2962]	3398	[4599, 2168]	4943	[4557, 529]
309	[596, 597]	1854	[2963, 2964]	3399	[4531, 4259]	4944	[13, 2076]
310	[598, 209]	1855	[2965, 2966]	3400	[2162, 4600]	4945	[4522, 2644]
311	[599, 600]	1856	[2967, 2968]	3401	[2495, 2264]	4946	[4537, 2478]
312	[601, 602]	1857	[115, 2969]	3402	[4601, 1956]	4947	[4313, 4277]
313	[603, 604]	1858	[2970, 2971]	3403	[4602, 4603]	4948	[4889, 4776]
314	[167, 605]	1859	[1324, 2972]	3404	[4604, 2183]	4949	[5757, 1885]
315	[565, 606]	1860	[2973, 2974]	3405	[4605, 872]	4950	[5758, 5759]
316	[607, 608]	1861	[1076, 1266]	3406	[4606, 4178]	4951	[2285, 499]
317	[609, 610]	1862	[2975, 2910]	3407	[4168, 4149]	4952	[2021, 2108]
318	[611, 612]	1863	[2976, 2977]	3408	[4501, 4545]	4953	[1866, 4825]
319	[613, 614]	1864	[2978, 320]	3409	[4607, 2223]	4954	[5760, 2439]
320	[615, 616]	1865	[2979, 2980]	3410	[4575, 163]	4955	[582, 4561]
321	[617, 618]	1866	[1333, 2981]	3411	[4091, 1974]	4956	[4723, 858]
322	[619, 620]	1867	[2693, 2982]	3412	[1977, 655]	4957	[1738, 4200]
323	[621, 622]	1868	[2983, 2984]	3413	[4608, 195]	4958	[2013, 4613]
324	[623, 624]	1869	[2985, 2986]	3414	[708, 134]	4959	[2386, 654]
325	[625, 626]	1870	[2987, 2988]	3415	[4136, 1866]	4960	[5761, 4723]

326	[494, 212]	1871	[2989, 2990]	3416	[509, 2576]	4961	[696, 5762]
327	[627, 628]	1872	[2991, 2992]	3417	[2571, 4563]	4962	[5763, 32]
328	[629, 630]	1873	[276, 2993]	3418	[4609, 4610]	4963	[2582, 2299]
329	[631, 517]	1874	[2994, 2878]	3419	[4611, 4140]	4964	[2554, 192]
330	[632, 633]	1875	[2995, 2996]	3420	[4612, 218]	4965	[513, 841]
331	[634, 635]	1876	[2997, 2998]	3421	[2148, 856]	4966	[1868, 4420]
332	[636, 637]	1877	[2999, 3000]	3422	[4514, 1938]	4967	[5764, 4301]
333	[638, 639]	1878	[3001, 3002]	3423	[2410, 600]	4968	[5765, 1916]
334	[640, 641]	1879	[3003, 3004]	3424	[4503, 1805]	4969	[4765, 2028]
335	[642, 643]	1880	[1062, 3005]	3425	[4447, 4459]	4970	[4580, 589]
336	[644, 645]	1881	[3006, 3007]	3426	[4077, 4613]	4971	[644, 5766]
337	[646, 647]	1882	[3008, 3009]	3427	[2086, 4614]	4972	[2129, 2345]
338	[648, 649]	1883	[3010, 3011]	3428	[4615, 4132]	4973	[1999, 1922]
339	[650, 651]	1884	[3012, 3013]	3429	[4616, 4257]	4974	[4791, 2390]
340	[652, 653]	1885	[1417, 1276]	3430	[2282, 4142]	4975	[4680, 5767]
341	[654, 655]	1886	[3014, 3015]	3431	[4617, 2082]	4976	[4022, 2282]
342	[170, 656]	1887	[3016, 3017]	3432	[752, 4057]	4977	[2157, 4871]
343	[657, 658]	1888	[935, 3018]	3433	[679, 501]	4978	[5768, 4593]
344	[659, 660]	1889	[3019, 3020]	3434	[4618, 864]	4979	[1915, 5769]
345	[661, 662]	1890	[931, 3021]	3435	[4619, 1720]	4980	[4848, 5770]
346	[663, 664]	1891	[3022, 3023]	3436	[2319, 4605]	4981	[2136, 4230]
347	[665, 666]	1892	[3024, 3025]	3437	[761, 2495]	4982	[742, 2020]
348	[667, 668]	1893	[3026, 3027]	3438	[4050, 189]	4983	[4819, 592]
349	[669, 670]	1894	[3028, 1209]	3439	[4098, 2555]	4984	[4160, 4874]
350	[671, 185]	1895	[1298, 3029]	3440	[1711, 656]	4985	[186, 4822]
351	[672, 673]	1896	[3030, 352]	3441	[642, 577]	4986	[2035, 137]
352	[674, 675]	1897	[1383, 3031]	3442	[618, 4494]	4987	[1988, 56]
353	[676, 677]	1898	[3032, 3033]	3443	[584, 4109]	4988	[4867, 5771]
354	[678, 679]	1899	[3034, 3035]	3444	[4620, 1772]	4989	[4844, 2230]
355	[680, 681]	1900	[3036, 3037]	3445	[4497, 772]	4990	[226, 4254]
356	[682, 683]	1901	[3038, 3001]	3446	[4621, 4622]	4991	[4486, 4760]
357	[684, 685]	1902	[3039, 3040]	3447	[4623, 4624]	4992	[2561, 1960]
358	[686, 687]	1903	[2855, 3041]	3448	[4625, 492]	4993	[4887, 4821]
359	[688, 689]	1904	[3042, 3043]	3449	[4626, 4365]	4994	[4444, 4432]
360	[690, 691]	1905	[2911, 3044]	3450	[4556, 2083]	4995	[1744, 5772]
361	[692, 693]	1906	[3045, 3046]	3451	[594, 785]	4996	[4044, 1918]
362	[694, 695]	1907	[1359, 3047]	3452	[4627, 1976]	4997	[1933, 4726]
363	[696, 697]	1908	[1265, 1497]	3453	[1905, 4168]	4998	[1914, 2475]
364	[698, 699]	1909	[1466, 3048]	3454	[2569, 1778]	4999	[200, 2126]
365	[700, 701]	1910	[3049, 3050]	3455	[4628, 4429]	5000	[4633, 608]
366	[702, 703]	1911	[3051, 2741]	3456	[1930, 4629]	5001	[4231, 2576]
367	[709, 704]	1912	[3052, 2743]	3457	[4630, 831]	5002	[4293, 5773]
368	[705, 706]	1913	[1427, 3053]	3458	[4436, 4631]	5003	[5774, 4184]
369	[707, 708]	1914	[3054, 3055]	3459	[4632, 4580]	5004	[237, 5775]

370	[709, 710]	1915	[3056, 3057]	3460	[777, 819]	5005	[786, 4703]
371	[711, 712]	1916	[3058, 1484]	3461	[4633, 640]	5006	[2302, 1723]
372	[54, 713]	1917	[2871, 1191]	3462	[2183, 4077]	5007	[1808, 2022]
373	[714, 715]	1918	[1243, 1652]	3463	[1689, 4547]	5008	[826, 4463]
374	[716, 570]	1919	[3059, 3060]	3464	[191, 4634]	5009	[4570, 2379]
375	[717, 125]	1920	[3061, 3062]	3465	[2198, 4635]	5010	[4748, 2554]
376	[718, 719]	1921	[3063, 3064]	3466	[4636, 885]	5011	[2373, 1913]
377	[8, 720]	1922	[3065, 3066]	3467	[2490, 4637]	5012	[2630, 1930]
378	[196, 721]	1923	[3067, 3068]	3468	[4638, 4639]	5013	[900, 4557]
379	[722, 720]	1924	[3069, 3070]	3469	[2430, 4568]	5014	[2022, 5776]
380	[723, 724]	1925	[3071, 3072]	3470	[500, 1740]	5015	[5777, 2524]
381	[725, 726]	1926	[3073, 3074]	3471	[2340, 2450]	5016	[2540, 1821]
382	[727, 728]	1927	[3075, 3076]	3472	[692, 4640]	5017	[4714, 4499]
383	[729, 730]	1928	[3077, 3078]	3473	[561, 4641]	5018	[4716, 2134]
384	[731, 732]	1929	[3079, 3080]	3474	[2053, 4018]	5019	[1895, 4325]
385	[733, 650]	1930	[3081, 3082]	3475	[799, 4642]	5020	[4378, 487]
386	[734, 735]	1931	[2942, 3083]	3476	[801, 2362]	5021	[4678, 4510]
387	[736, 737]	1932	[3084, 3085]	3477	[4643, 1808]	5022	[2311, 4623]
388	[737, 555]	1933	[3040, 3086]	3478	[2256, 4644]	5023	[4245, 2107]
389	[738, 739]	1934	[3087, 3088]	3479	[55, 1989]	5024	[4569, 4709]
390	[740, 741]	1935	[1270, 3089]	3480	[4645, 4646]	5025	[2119, 4582]
391	[742, 743]	1936	[3090, 3091]	3481	[4647, 4174]	5026	[535, 761]
392	[744, 745]	1937	[3092, 3093]	3482	[4341, 2566]	5027	[4399, 837]
393	[746, 747]	1938	[1114, 3094]	3483	[231, 4648]	5028	[2308, 1770]
394	[748, 749]	1939	[3095, 3096]	3484	[4649, 4650]	5029	[2113, 4238]
395	[750, 751]	1940	[3097, 1364]	3485	[4651, 4652]	5030	[5778, 5779]
396	[752, 753]	1941	[3098, 3099]	3486	[2115, 4562]	5031	[1805, 5780]
397	[754, 709]	1942	[3100, 3101]	3487	[4541, 4273]	5032	[5781, 888]
398	[755, 756]	1943	[3102, 3103]	3488	[4287, 1785]	5033	[5782, 4740]
399	[757, 758]	1944	[3104, 3059]	3489	[184, 4653]	5034	[5783, 2070]
400	[759, 760]	1945	[3105, 3106]	3490	[485, 161]	5035	[5784, 4600]
401	[761, 762]	1946	[99, 3107]	3491	[4654, 4655]	5036	[4200, 5785]
402	[763, 764]	1947	[3108, 3109]	3492	[2160, 4656]	5037	[4349, 51]
403	[765, 766]	1948	[3110, 3111]	3493	[4657, 149]	5038	[202, 4839]
404	[488, 767]	1949	[3112, 3113]	3494	[594, 4514]	5039	[4782, 5786]
405	[768, 583]	1950	[3114, 3115]	3495	[2298, 219]	5040	[1829, 4460]
406	[769, 770]	1951	[3116, 3117]	3496	[4215, 2350]	5041	[5760, 4293]
407	[771, 772]	1952	[3118, 2872]	3497	[1836, 4156]	5042	[5787, 1868]
408	[773, 774]	1953	[3119, 3120]	3498	[4286, 4658]	5043	[2083, 5788]
409	[775, 776]	1954	[3000, 3121]	3499	[1720, 2543]	5044	[4491, 809]
410	[777, 778]	1955	[2715, 3122]	3500	[4638, 4659]	5045	[1880, 4624]
411	[779, 780]	1956	[2686, 3123]	3501	[4120, 4660]	5046	[4851, 751]
412	[781, 782]	1957	[3124, 3125]	3502	[2229, 4661]	5047	[750, 2033]
413	[783, 675]	1958	[3126, 912]	3503	[2237, 4662]	5048	[4823, 4074]

414	[784, 45]	1959	[3127, 1529]	3504	[2061, 1884]	5049	[885, 4912]
415	[492, 785]	1960	[3128, 2733]	3505	[1860, 2269]	5050	[2638, 665]
416	[786, 787]	1961	[965, 1301]	3506	[2179, 881]	5051	[5789, 2632]
417	[788, 789]	1962	[3129, 3130]	3507	[4663, 205]	5052	[4555, 573]
418	[790, 791]	1963	[3131, 3132]	3508	[1664, 4664]	5053	[4589, 653]
419	[792, 793]	1964	[1116, 3133]	3509	[4665, 2336]	5054	[2094, 4248]
420	[794, 795]	1965	[3134, 3135]	3510	[4061, 1823]	5055	[771, 5790]
421	[796, 797]	1966	[3136, 3137]	3511	[2057, 50]	5056	[4032, 5791]
422	[798, 799]	1967	[3138, 3139]	3512	[657, 4666]	5057	[4719, 5792]
423	[800, 801]	1968	[2669, 3140]	3513	[4237, 4667]	5058	[2201, 5793]
424	[802, 803]	1969	[3141, 1648]	3514	[4668, 4669]	5059	[5794, 1949]
425	[804, 805]	1970	[3142, 466]	3515	[4670, 4671]	5060	[4470, 2026]
426	[806, 807]	1971	[3143, 3144]	3516	[904, 60]	5061	[4437, 4806]
427	[808, 167]	1972	[3086, 454]	3517	[4672, 2174]	5062	[4343, 4554]
428	[809, 810]	1973	[3145, 3030]	3518	[2156, 511]	5063	[738, 4505]
429	[811, 812]	1974	[3146, 1291]	3519	[1867, 4419]	5064	[1853, 2495]
430	[813, 814]	1975	[1101, 1100]	3520	[2243, 4673]	5065	[1751, 497]
431	[815, 162]	1976	[3147, 3148]	3521	[4674, 4266]	5066	[5795, 4474]
432	[816, 817]	1977	[2752, 3149]	3522	[4580, 1995]	5067	[2524, 4361]
433	[818, 819]	1978	[3150, 361]	3523	[4675, 202]	5068	[4736, 2453]
434	[820, 821]	1979	[2719, 3151]	3524	[641, 4676]	5069	[1826, 5792]
435	[822, 823]	1980	[3152, 3153]	3525	[4677, 4441]	5070	[4128, 2428]
436	[824, 825]	1981	[3154, 3155]	3526	[2639, 666]	5071	[2488, 4083]
437	[826, 827]	1982	[1095, 3156]	3527	[158, 506]	5072	[2258, 4457]
438	[828, 829]	1983	[3157, 3158]	3528	[4678, 4679]	5073	[5796, 2471]
439	[830, 831]	1984	[3159, 3160]	3529	[4680, 4681]	5074	[4785, 2504]
440	[832, 833]	1985	[3161, 3162]	3530	[661, 4682]	5075	[4064, 5797]
441	[834, 835]	1986	[3163, 3164]	3531	[4193, 4202]	5076	[4857, 5798]
442	[836, 837]	1987	[3072, 1614]	3532	[4683, 4085]	5077	[4392, 4873]
443	[838, 839]	1988	[3165, 3166]	3533	[4615, 1912]	5078	[4911, 828]
444	[840, 841]	1989	[3167, 1393]	3534	[4684, 4584]	5079	[4056, 4269]
445	[842, 843]	1990	[1633, 3168]	3535	[602, 4685]	5080	[4734, 4206]
446	[834, 844]	1991	[2717, 3169]	3536	[4686, 4687]	5081	[4428, 5799]
447	[845, 846]	1992	[3170, 3171]	3537	[2166, 4688]	5082	[1787, 4520]
448	[847, 848]	1993	[1014, 3172]	3538	[4689, 4347]	5083	[503, 2582]
449	[849, 850]	1994	[3173, 3174]	3539	[4690, 225]	5084	[2558, 2625]
450	[851, 852]	1995	[3175, 1200]	3540	[2231, 2413]	5085	[527, 2463]
451	[853, 854]	1996	[1216, 3176]	3541	[1837, 628]	5086	[1859, 2356]
452	[855, 856]	1997	[3177, 3178]	3542	[4691, 2140]	5087	[2456, 4642]
453	[857, 858]	1998	[3179, 1035]	3543	[4692, 217]	5088	[573, 174]
454	[859, 860]	1999	[3180, 3181]	3544	[4693, 824]	5089	[5800, 4744]
455	[501, 861]	2000	[3182, 3183]	3545	[4694, 34]	5090	[4916, 5762]
456	[862, 863]	2001	[3184, 3185]	3546	[2144, 4695]	5091	[1831, 4771]
457	[150, 864]	2002	[3186, 3187]	3547	[4217, 2279]	5092	[2647, 1757]

458	[183, 865]	2003	[3188, 3189]	3548	[4696, 1952]	5093	[4885, 4392]
459	[866, 867]	2004	[2955, 3190]	3549	[4694, 2622]	5094	[5801, 5802]
460	[125, 868]	2005	[3191, 3192]	3550	[2527, 4186]	5095	[686, 4364]
461	[869, 870]	2006	[1182, 3193]	3551	[217, 2139]	5096	[4475, 2592]
462	[871, 872]	2007	[1174, 3194]	3552	[2195, 1875]	5097	[4775, 4890]
463	[873, 874]	2008	[3195, 3077]	3553	[1704, 1852]	5098	[2269, 4330]
464	[598, 875]	2009	[1353, 3196]	3554	[4697, 2189]	5099	[5803, 5804]
465	[876, 877]	2010	[992, 2675]	3555	[504, 2583]	5100	[5805, 5806]
466	[878, 879]	2011	[3197, 3198]	3556	[493, 707]	5101	[214, 738]
467	[880, 881]	2012	[3199, 3200]	3557	[4300, 136]	5102	[4859, 2144]
468	[882, 883]	2013	[3201, 1499]	3558	[4698, 602]	5103	[2589, 46]
469	[884, 885]	2014	[266, 1000]	3559	[1859, 4699]	5104	[4414, 4656]
470	[602, 886]	2015	[353, 3202]	3560	[4092, 2503]	5105	[5807, 4236]
471	[887, 888]	2016	[3203, 3204]	3561	[705, 4405]	5106	[151, 4590]
472	[889, 890]	2017	[1027, 3141]	3562	[1739, 4270]	5107	[4516, 5808]
473	[891, 803]	2018	[3205, 3206]	3563	[2269, 4700]	5108	[4320, 4208]
474	[574, 892]	2019	[3207, 422]	3564	[1752, 498]	5109	[728, 5809]
475	[893, 894]	2020	[2959, 3208]	3565	[41, 2169]	5110	[581, 5810]
476	[895, 896]	2021	[3209, 3210]	3566	[1892, 4701]	5111	[5811, 4526]
477	[897, 898]	2022	[2681, 3211]	3567	[706, 1879]	5112	[4502, 2411]
478	[899, 900]	2023	[2895, 3212]	3568	[2534, 4439]	5113	[4071, 4591]
479	[901, 902]	2024	[3213, 3214]	3569	[1727, 4148]	5114	[5812, 4832]
480	[903, 699]	2025	[2801, 3215]	3570	[4702, 2413]	5115	[5813, 1839]
481	[904, 905]	2026	[2672, 3216]	3571	[2320, 1901]	5116	[1776, 5814]
482	[906, 907]	2027	[3217, 3218]	3572	[4703, 2536]	5117	[4711, 4336]
483	[908, 909]	2028	[3219, 3220]	3573	[2542, 4704]	5118	[4473, 2085]
484	[910, 911]	2029	[3171, 3221]	3574	[4705, 4706]	5119	[2488, 4456]
485	[912, 913]	2030	[3222, 1109]	3575	[2081, 2007]	5120	[4888, 1685]
486	[914, 915]	2031	[3223, 3224]	3576	[4491, 2150]	5121	[4386, 5815]
487	[916, 917]	2032	[3187, 3225]	3577	[4672, 1848]	5122	[5816, 4237]
488	[918, 919]	2033	[3226, 23]	3578	[4707, 787]	5123	[4568, 2141]
489	[920, 921]	2034	[3227, 3228]	3579	[2496, 484]	5124	[2065, 5776]
490	[67, 922]	2035	[3229, 3230]	3580	[2316, 4708]	5125	[5817, 4848]
491	[923, 924]	2036	[3231, 3232]	3581	[2141, 4709]	5126	[1921, 2232]
492	[925, 926]	2037	[2799, 3233]	3582	[845, 2187]	5127	[45, 1957]
493	[927, 416]	2038	[3234, 3235]	3583	[669, 4235]	5128	[2377, 2055]
494	[928, 929]	2039	[3210, 3236]	3584	[205, 1663]	5129	[4876, 5818]
495	[930, 931]	2040	[3237, 3097]	3585	[4710, 1760]	5130	[5819, 4234]
496	[932, 933]	2041	[3238, 3239]	3586	[4182, 2256]	5131	[5820, 5798]
497	[934, 935]	2042	[3240, 476]	3587	[1856, 843]	5132	[4120, 2633]
498	[936, 937]	2043	[1006, 1165]	3588	[4711, 1886]	5133	[4213, 597]
499	[938, 939]	2044	[3241, 2654]	3589	[188, 4051]	5134	[2502, 736]
500	[940, 941]	2045	[2045, 2045]	3590	[1802, 49]	5135	[4788, 2227]
501	[942, 943]	2046	[3242, 2702]	3591	[4712, 1935]	5136	[4645, 5821]

502	[944, 945]	2047	[1166, 2997]	3592	[4250, 197]	5137	[4132, 1714]
503	[946, 947]	2048	[1409, 1560]	3593	[4713, 4714]	5138	[5822, 4517]
504	[948, 949]	2049	[2653, 3243]	3594	[4715, 4716]	5139	[4220, 2468]
505	[950, 951]	2050	[3244, 1163]	3595	[2016, 4504]	5140	[4504, 4290]
506	[952, 953]	2051	[1160, 3244]	3596	[4717, 4718]	5141	[4393, 4360]
507	[954, 955]	2052	[3121, 3241]	3597	[703, 4473]	5142	[4887, 5823]
508	[956, 957]	2053	[3245, 1501]	3598	[4528, 1710]	5143	[1879, 4866]
509	[958, 959]	2054	[1587, 3039]	3599	[737, 2196]	5144	[1817, 4483]
510	[960, 961]	2055	[3246, 3247]	3600	[4719, 1827]	5145	[1744, 4525]
511	[962, 963]	2056	[2860, 3248]	3601	[1927, 4026]	5146	[2400, 1982]
512	[964, 965]	2057	[3249, 3250]	3602	[207, 4189]	5147	[4627, 4378]
513	[966, 967]	2058	[3251, 3252]	3603	[4720, 4696]	5148	[1996, 4102]
514	[968, 969]	2059	[3062, 3253]	3604	[795, 2544]	5149	[4472, 2103]
515	[970, 971]	2060	[3254, 3255]	3605	[4358, 1806]	5150	[2539, 4064]
516	[972, 973]	2061	[3256, 3257]	3606	[4721, 4696]	5151	[4546, 1690]
517	[974, 975]	2062	[3258, 3259]	3607	[4722, 4723]	5152	[4573, 2084]
518	[976, 977]	2063	[3260, 1132]	3608	[549, 897]	5153	[176, 4084]
519	[345, 978]	2064	[1463, 3261]	3609	[550, 2339]	5154	[4902, 565]
520	[979, 980]	2065	[2893, 1147]	3610	[2529, 4405]	5155	[5824, 5755]
521	[981, 982]	2066	[1603, 3262]	3611	[4724, 4725]	5156	[4557, 4150]
522	[288, 983]	2067	[3263, 3264]	3612	[4449, 4726]	5157	[671, 4653]
523	[984, 985]	2068	[3265, 3266]	3613	[2342, 4727]	5158	[4256, 616]
524	[986, 987]	2069	[3267, 3268]	3614	[4242, 4728]	5159	[1788, 5825]
525	[421, 988]	2070	[3269, 3270]	3615	[4729, 2142]	5160	[4486, 5791]
526	[989, 990]	2071	[3271, 3272]	3616	[4272, 4542]	5161	[5826, 4611]
527	[991, 992]	2072	[3273, 3274]	3617	[4730, 2473]	5162	[4265, 4817]
528	[123, 993]	2073	[3275, 3276]	3618	[4731, 4732]	5163	[5827, 4494]
529	[994, 995]	2074	[3021, 3277]	3619	[4604, 782]	5164	[4792, 4400]
530	[996, 997]	2075	[3278, 2830]	3620	[4515, 738]	5165	[4055, 4075]
531	[998, 999]	2076	[3279, 3280]	3621	[4124, 4588]	5166	[708, 213]
532	[1000, 1001]	2077	[985, 1189]	3622	[876, 2424]	5167	[4594, 4312]
533	[949, 1002]	2078	[3281, 3282]	3623	[4112, 612]	5168	[4882, 2042]
534	[1003, 1004]	2079	[3283, 3284]	3624	[4733, 2072]	5169	[2419, 553]
535	[1005, 1006]	2080	[3285, 3286]	3625	[4734, 559]	5170	[4567, 4404]
536	[1007, 1008]	2081	[3287, 1461]	3626	[177, 4735]	5171	[5828, 4680]
537	[1009, 1010]	2082	[3288, 3289]	3627	[2609, 523]	5172	[2218, 2293]
538	[1011, 1012]	2083	[3290, 2923]	3628	[4736, 4737]	5173	[4355, 5829]
539	[1013, 1014]	2084	[3286, 3291]	3629	[4159, 4738]	5174	[1894, 646]
540	[1015, 1016]	2085	[3292, 3293]	3630	[4211, 4421]	5175	[510, 2577]
541	[1017, 1018]	2086	[3294, 3263]	3631	[595, 4228]	5176	[5830, 2098]
542	[1019, 1020]	2087	[3295, 3296]	3632	[2114, 2371]	5177	[4571, 4291]
543	[1021, 1022]	2088	[3297, 3298]	3633	[1972, 231]	5178	[1848, 4328]
544	[1023, 285]	2089	[1203, 3299]	3634	[2241, 2492]	5179	[4148, 5831]
545	[1024, 1025]	2090	[3300, 3301]	3635	[4413, 4533]	5180	[5826, 2619]

546	[1026, 1027]	2091	[3302, 3303]	3636	[4169, 2381]	5181	[5832, 1965]
547	[1028, 442]	2092	[3239, 3304]	3637	[2555, 193]	5182	[2300, 4366]
548	[1029, 1030]	2093	[455, 3305]	3638	[4238, 4567]	5183	[1706, 2279]
549	[1031, 1032]	2094	[3306, 3307]	3639	[4185, 2241]	5184	[2461, 4880]
550	[1033, 1034]	2095	[3308, 3309]	3640	[4115, 2105]	5185	[1730, 4658]
551	[1035, 1036]	2096	[1120, 3310]	3641	[4406, 4023]	5186	[5807, 2466]
552	[1037, 1038]	2097	[401, 1271]	3642	[2439, 4294]	5187	[5833, 4586]
553	[1039, 1040]	2098	[3311, 3312]	3643	[1868, 4739]	5188	[4770, 902]
554	[1041, 1042]	2099	[2834, 3313]	3644	[2623, 1753]	5189	[5834, 4917]
555	[1043, 1044]	2100	[1395, 474]	3645	[596, 4214]	5190	[4509, 4679]
556	[1045, 1046]	2101	[1178, 3314]	3646	[4146, 4740]	5191	[4742, 2060]
557	[1047, 1048]	2102	[3315, 3316]	3647	[4359, 4394]	5192	[4854, 2376]
558	[1049, 413]	2103	[3317, 3318]	3648	[4410, 2255]	5193	[1887, 1795]
559	[1050, 1051]	2104	[3319, 2994]	3649	[782, 4077]	5194	[5835, 5836]
560	[1052, 1053]	2105	[1405, 3320]	3650	[4741, 2086]	5195	[5837, 5838]
561	[1054, 1055]	2106	[1522, 3246]	3651	[798, 2456]	5196	[670, 5839]
562	[1056, 1057]	2107	[3321, 3322]	3652	[2489, 4549]	5197	[4331, 5840]
563	[1058, 1059]	2108	[3323, 3324]	3653	[4742, 2177]	5198	[5841, 5842]
564	[1060, 1061]	2109	[3325, 3326]	3654	[1862, 4743]	5199	[190, 2322]
565	[326, 1062]	2110	[3327, 3328]	3655	[2611, 4744]	5200	[4576, 1974]
566	[1063, 1064]	2111	[1565, 3329]	3656	[2435, 4275]	5201	[4421, 1992]
567	[1065, 1066]	2112	[3330, 3331]	3657	[4301, 679]	5202	[4896, 658]
568	[1067, 1068]	2113	[3332, 3333]	3658	[2137, 710]	5203	[2649, 4878]
569	[1069, 1070]	2114	[3334, 3335]	3659	[4315, 2005]	5204	[5843, 4907]
570	[1071, 1072]	2115	[3336, 3337]	3660	[181, 4745]	5205	[731, 2073]
571	[1073, 1074]	2116	[1314, 3338]	3661	[4310, 4239]	5206	[2446, 5844]
572	[1075, 1076]	2117	[3339, 3340]	3662	[556, 1828]	5207	[4304, 2064]
573	[1077, 1078]	2118	[3341, 1538]	3663	[2303, 4746]	5208	[2251, 4699]
574	[1079, 1080]	2119	[3342, 3343]	3664	[4605, 4747]	5209	[5813, 2037]
575	[1081, 1082]	2120	[3344, 2999]	3665	[4748, 4098]	5210	[2089, 522]
576	[1083, 1084]	2121	[3345, 3346]	3666	[146, 4133]	5211	[5782, 4147]
577	[1085, 1086]	2122	[3347, 2920]	3667	[1965, 4749]	5212	[2054, 2378]
578	[1087, 984]	2123	[3348, 2921]	3668	[4216, 2586]	5213	[4255, 615]
579	[1088, 1089]	2124	[3349, 3350]	3669	[4750, 8]	5214	[4344, 4603]
580	[1090, 1091]	2125	[3351, 1013]	3670	[2043, 621]	5215	[4830, 2302]
581	[1092, 1093]	2126	[1624, 3352]	3671	[1763, 4751]	5216	[2390, 4029]
582	[1094, 1095]	2127	[3353, 3354]	3672	[4752, 1790]	5217	[2036, 1839]
583	[1096, 1097]	2128	[3355, 1520]	3673	[4753, 1753]	5218	[4154, 2208]
584	[933, 1098]	2129	[3356, 3036]	3674	[4754, 2587]	5219	[803, 5845]
585	[973, 1099]	2130	[1586, 3357]	3675	[680, 2372]	5220	[2563, 244]
586	[1100, 1101]	2131	[1053, 3358]	3676	[2528, 2139]	5221	[1858, 2251]
587	[1102, 1103]	2132	[924, 3359]	3677	[628, 4326]	5222	[5846, 4256]
588	[1104, 373]	2133	[1546, 1403]	3678	[133, 1694]	5223	[4126, 4034]
589	[1105, 1106]	2134	[3360, 3361]	3679	[4223, 4450]	5224	[4519, 4640]

590	[1107, 1108]	2135	[2771, 3362]	3680	[2559, 2500]	5225	[704, 502]
591	[1109, 1110]	2136	[3363, 2800]	3681	[4201, 812]	5226	[4618, 151]
592	[1111, 106]	2137	[3364, 1207]	3682	[1955, 4755]	5227	[4707, 4703]
593	[286, 1112]	2138	[3365, 3179]	3683	[525, 4756]	5228	[2557, 563]
594	[1113, 1114]	2139	[3366, 3367]	3684	[4362, 4757]	5229	[775, 4536]
595	[1115, 1116]	2140	[3368, 3369]	3685	[682, 746]	5230	[4513, 4301]
596	[1117, 1118]	2141	[3370, 914]	3686	[4158, 4317]	5231	[4315, 1953]
597	[1119, 1120]	2142	[3371, 3372]	3687	[4292, 4139]	5232	[1984, 142]
598	[1121, 1122]	2143	[913, 3373]	3688	[4758, 1752]	5233	[4222, 2249]
599	[1123, 1124]	2144	[3374, 1185]	3689	[4692, 2528]	5234	[795, 545]
600	[1125, 255]	2145	[2886, 3375]	3690	[2250, 1859]	5235	[4240, 661]
601	[1126, 1127]	2146	[3376, 2868]	3691	[4759, 633]	5236	[4860, 5847]
602	[1128, 1129]	2147	[3377, 3378]	3692	[4684, 2091]	5237	[2601, 5848]
603	[1130, 1131]	2148	[3379, 3098]	3693	[2525, 4099]	5238	[2441, 5849]
604	[1132, 1133]	2149	[3380, 1325]	3694	[4032, 4760]	5239	[5850, 855]
605	[330, 1134]	2150	[3381, 3382]	3695	[2446, 4629]	5240	[5816, 2113]
606	[328, 1135]	2151	[3383, 3384]	3696	[869, 4761]	5241	[5851, 5852]
607	[1136, 1137]	2152	[3385, 3386]	3697	[4762, 234]	5242	[4690, 2399]
608	[385, 1138]	2153	[3387, 3388]	3698	[4763, 2128]	5243	[5853, 1682]
609	[1139, 1140]	2154	[323, 2897]	3699	[4764, 4765]	5244	[5854, 1996]
610	[1141, 1142]	2155	[1164, 1161]	3700	[4766, 4716]	5245	[4037, 5855]
611	[1143, 1144]	2156	[3389, 338]	3701	[4767, 4768]	5246	[4228, 550]
612	[1145, 1146]	2157	[2760, 3390]	3702	[2413, 1717]	5247	[4375, 4910]
613	[1147, 1148]	2158	[3391, 3392]	3703	[4769, 4289]	5248	[2206, 2086]
614	[1149, 1150]	2159	[3393, 2692]	3704	[2322, 4634]	5249	[5856, 1666]
615	[1151, 1152]	2160	[3394, 1179]	3705	[2365, 2044]	5250	[216, 2528]
616	[1153, 1154]	2161	[3395, 3396]	3706	[2472, 2051]	5251	[4826, 4059]
617	[1155, 1156]	2162	[3397, 3095]	3707	[1723, 4746]	5252	[2395, 2432]
618	[1157, 1158]	2163	[3398, 1629]	3708	[4488, 4614]	5253	[4731, 4195]
619	[1159, 1160]	2164	[3399, 3400]	3709	[2359, 573]	5254	[4702, 1716]
620	[1161, 1162]	2165	[3401, 3402]	3710	[4770, 4521]	5255	[5857, 5786]
621	[1163, 324]	2166	[3403, 1287]	3711	[2077, 4771]	5256	[4777, 4071]
622	[1004, 1164]	2167	[3168, 3404]	3712	[2547, 2234]	5257	[4607, 5858]
623	[1165, 1166]	2168	[3405, 3406]	3713	[4772, 176]	5258	[4168, 5831]
624	[1167, 1168]	2169	[2806, 3407]	3714	[1782, 4493]	5259	[1741, 5788]
625	[1169, 1170]	2170	[3408, 2677]	3715	[4773, 4774]	5260	[4241, 4682]
626	[1171, 1172]	2171	[3409, 3410]	3716	[2512, 2480]	5261	[2613, 4355]
627	[1173, 1174]	2172	[3411, 1521]	3717	[4775, 4776]	5262	[2017, 4290]
628	[1175, 1176]	2173	[3005, 1523]	3718	[4777, 2642]	5263	[5859, 4105]
629	[1177, 1178]	2174	[457, 3163]	3719	[4041, 4335]	5264	[4045, 1919]
630	[1179, 1180]	2175	[3053, 3412]	3720	[4778, 4779]	5265	[709, 2138]
631	[1181, 1182]	2176	[2781, 3413]	3721	[4780, 4544]	5266	[4235, 5839]
632	[1183, 1184]	2177	[3414, 66]	3722	[2591, 4476]	5267	[5803, 4706]
633	[1185, 1186]	2178	[3415, 3416]	3723	[4781, 4659]	5268	[156, 5785]

634	[1187, 1188]	2179	[3417, 2934]	3724	[1772, 726]	5269	[5860, 5861]
635	[1189, 1190]	2180	[3418, 3419]	3725	[4683, 2280]	5270	[4378, 237]
636	[1191, 1063]	2181	[3420, 3421]	3726	[4782, 4783]	5271	[2078, 5862]
637	[1192, 1193]	2182	[3422, 2882]	3727	[4784, 4103]	5272	[2351, 166]
638	[1194, 1195]	2183	[1280, 2709]	3728	[4087, 4410]	5273	[2174, 4328]
639	[1196, 1197]	2184	[3093, 3423]	3729	[4057, 1837]	5274	[4253, 4773]
640	[1186, 1198]	2185	[3424, 3425]	3730	[4785, 503]	5275	[4363, 4245]
641	[1199, 384]	2186	[3426, 3427]	3731	[4754, 4365]	5276	[685, 5863]
642	[1200, 1201]	2187	[3428, 94]	3732	[1993, 138]	5277	[4143, 2502]
643	[1202, 1203]	2188	[3164, 3395]	3733	[1944, 1888]	5278	[5864, 4375]
644	[1204, 1205]	2189	[105, 3429]	3734	[4619, 2542]	5279	[1849, 4564]
645	[1135, 1206]	2190	[325, 2724]	3735	[4612, 2298]	5280	[5865, 1671]
646	[1207, 1208]	2191	[1172, 1159]	3736	[627, 2081]	5281	[4759, 2201]
647	[1209, 1210]	2192	[3430, 3431]	3737	[2031, 2455]	5282	[4291, 4362]
648	[1211, 1212]	2193	[3432, 2690]	3738	[4575, 1954]	5283	[2305, 2539]
649	[1213, 1214]	2194	[355, 3433]	3739	[4574, 4741]	5284	[2522, 4915]
650	[1215, 1216]	2195	[3434, 3435]	3740	[1982, 1708]	5285	[1784, 1665]
651	[1217, 1218]	2196	[1369, 3436]	3741	[4786, 4288]	5286	[4185, 2491]
652	[1219, 1220]	2197	[1118, 3437]	3742	[884, 4787]	5287	[61, 538]
653	[1221, 1222]	2198	[3438, 3439]	3743	[4788, 4789]	5288	[5866, 2319]
654	[1223, 1224]	2199	[3440, 3441]	3744	[57, 4768]	5289	[4828, 1897]
655	[1225, 1226]	2200	[3442, 16]	3745	[4790, 2320]	5290	[4108, 585]
656	[1227, 1228]	2201	[3443, 3444]	3746	[492, 4514]	5291	[864, 2460]
657	[1229, 1230]	2202	[3445, 3446]	3747	[4365, 4595]	5292	[140, 4756]
658	[1231, 1232]	2203	[3447, 2776]	3748	[774, 4728]	5293	[4049, 2358]
659	[1233, 1151]	2204	[3448, 3449]	3749	[4791, 4028]	5294	[5867, 5868]
660	[1234, 1235]	2205	[3450, 3451]	3750	[690, 2636]	5295	[4548, 2490]
661	[1236, 1237]	2206	[2791, 3452]	3751	[534, 1852]	5296	[4134, 4725]
662	[403, 1238]	2207	[1072, 3453]	3752	[4792, 2263]	5297	[587, 5869]
663	[1239, 1240]	2208	[3367, 3454]	3753	[4793, 4711]	5298	[4764, 4609]
664	[252, 1241]	2209	[3455, 3456]	3754	[2422, 4794]	5299	[5870, 4497]
665	[1242, 1243]	2210	[1228, 112]	3755	[4602, 4345]	5300	[5871, 4257]
666	[1244, 1245]	2211	[3206, 3457]	3756	[4795, 4796]	5301	[2558, 564]
667	[1246, 1247]	2212	[3458, 3459]	3757	[4797, 4039]	5302	[5872, 4774]
668	[1055, 1248]	2213	[3460, 3461]	3758	[4798, 808]	5303	[2466, 4843]
669	[1249, 1250]	2214	[3009, 3462]	3759	[4799, 4800]	5304	[5873, 1865]
670	[1251, 1252]	2215	[3463, 3464]	3760	[4654, 4801]	5305	[4277, 1971]
671	[1253, 1254]	2216	[3465, 3466]	3761	[4802, 4221]	5306	[5874, 4605]
672	[1255, 1256]	2217	[3467, 3468]	3762	[796, 4453]	5307	[899, 860]
673	[1257, 1258]	2218	[3469, 3470]	3763	[4443, 2466]	5308	[5875, 2127]
674	[1259, 1260]	2219	[3471, 3472]	3764	[4263, 2193]	5309	[5765, 5769]
675	[1261, 981]	2220	[1138, 3473]	3765	[2347, 4492]	5310	[4230, 1750]
676	[1262, 1263]	2221	[3474, 1171]	3766	[4454, 735]	5311	[2328, 4114]
677	[1264, 1265]	2222	[3475, 3476]	3767	[4583, 4098]	5312	[5876, 5861]

678	[1266, 942]	2223	[1398, 3477]	3768	[1820, 4803]	5313	[2010, 129]
679	[1267, 1268]	2224	[103, 3478]	3769	[4804, 2521]	5314	[2475, 5869]
680	[1269, 1270]	2225	[3309, 1564]	3770	[4396, 2434]	5315	[4620, 725]
681	[1271, 1272]	2226	[3479, 3480]	3771	[4805, 4320]	5316	[167, 4913]
682	[303, 1273]	2227	[3481, 3482]	3772	[4631, 4806]	5317	[2626, 2537]
683	[1274, 1275]	2228	[3483, 3484]	3773	[4317, 4807]	5318	[47, 2254]
684	[1276, 1277]	2229	[3485, 3486]	3774	[4808, 734]	5319	[541, 4395]
685	[1278, 1009]	2230	[3487, 1420]	3775	[2098, 4350]	5320	[1682, 140]
686	[1279, 1280]	2231	[3488, 3489]	3776	[1815, 42]	5321	[1847, 4554]
687	[1281, 1282]	2232	[3490, 1052]	3777	[2100, 4369]	5322	[2598, 5772]
688	[1283, 1284]	2233	[3491, 2852]	3778	[4312, 755]	5323	[4157, 4446]
689	[1285, 1286]	2234	[3492, 3493]	3779	[4809, 2220]	5324	[5877, 1713]
690	[1287, 1288]	2235	[3494, 3495]	3780	[4810, 4811]	5325	[4724, 4135]
691	[1289, 1290]	2236	[3496, 3497]	3781	[1769, 4812]	5326	[4497, 5790]
692	[1291, 1292]	2237	[3498, 1576]	3782	[2604, 4813]	5327	[4610, 2029]
693	[1293, 1294]	2238	[3499, 3500]	3783	[4814, 4181]	5328	[2576, 4484]
694	[1295, 1296]	2239	[3501, 3502]	3784	[245, 4306]	5329	[213, 135]
695	[1297, 1298]	2240	[292, 3503]	3785	[4729, 741]	5330	[4059, 2241]
696	[1299, 1300]	2241	[3504, 2721]	3786	[4815, 4673]	5331	[4354, 5878]
697	[1301, 1302]	2242	[3505, 3506]	3787	[2133, 4816]	5332	[5879, 549]
698	[1303, 1304]	2243	[2812, 3507]	3788	[4674, 4817]	5333	[4512, 4692]
699	[1305, 1306]	2244	[3508, 3509]	3789	[4818, 2445]	5334	[4827, 661]
700	[1307, 1308]	2245	[2949, 3510]	3790	[4819, 2146]	5335	[5754, 5766]
701	[1309, 1310]	2246	[3511, 3512]	3791	[4820, 4821]	5336	[4730, 817]
702	[1311, 1312]	2247	[3352, 3513]	3792	[542, 2354]	5337	[2397, 4671]
703	[1313, 1314]	2248	[3514, 3515]	3793	[1666, 4822]	5338	[5880, 2403]
704	[1315, 1316]	2249	[3516, 3517]	3794	[4823, 4081]	5339	[4772, 4254]
705	[1317, 1318]	2250	[3518, 3519]	3795	[4733, 731]	5340	[907, 4579]
706	[1319, 1320]	2251	[447, 3520]	3796	[711, 1674]	5341	[5881, 1964]
707	[1321, 418]	2252	[3521, 3522]	3797	[4773, 4824]	5342	[5882, 4259]
708	[1322, 269]	2253	[337, 3523]	3798	[4471, 2584]	5343	[2518, 2179]
709	[1323, 1324]	2254	[3524, 3525]	3799	[2066, 2293]	5344	[4698, 2421]
710	[1325, 1326]	2255	[1273, 3526]	3800	[4137, 4825]	5345	[4863, 4924]
711	[1327, 1328]	2256	[3527, 3528]	3801	[1992, 1739]	5346	[2128, 4229]
712	[1329, 1330]	2257	[3074, 3529]	3802	[4826, 4185]	5347	[2146, 5883]
713	[990, 1331]	2258	[3530, 1077]	3803	[2082, 674]	5348	[763, 5884]
714	[1332, 1333]	2259	[3113, 991]	3804	[2298, 4327]	5349	[5758, 4172]
715	[1334, 1335]	2260	[3531, 3532]	3805	[4827, 4241]	5350	[5885, 5821]
716	[1336, 1337]	2261	[3533, 3534]	3806	[4828, 2093]	5351	[700, 5886]
717	[1338, 1339]	2262	[313, 3535]	3807	[4371, 4829]	5352	[4798, 166]
718	[1340, 1341]	2263	[311, 3536]	3808	[4830, 2566]	5353	[4234, 1794]
719	[1342, 1343]	2264	[2962, 2655]	3809	[4831, 4832]	5354	[4631, 4417]
720	[16, 1344]	2265	[3537, 3538]	3810	[4166, 4708]	5355	[4278, 4111]
721	[1345, 1346]	2266	[3539, 3540]	3811	[4833, 4834]	5356	[4765, 4610]

722	[1347, 1348]	2267	[3541, 3542]	3812	[239, 38]	5357	[4818, 4247]
723	[1349, 253]	2268	[3543, 3393]	3813	[4835, 2199]	5358	[2530, 5887]
724	[1350, 1351]	2269	[2981, 3544]	3814	[4836, 4596]	5359	[2384, 5771]
725	[1352, 1353]	2270	[3545, 3546]	3815	[801, 4837]	5360	[5888, 2174]
726	[1354, 1355]	2271	[2858, 3547]	3816	[2335, 4838]	5361	[2172, 4911]
727	[1356, 1357]	2272	[3548, 3549]	3817	[4813, 4839]	5362	[5889, 4623]
728	[1358, 342]	2273	[3550, 3551]	3818	[4280, 1834]	5363	[746, 5890]
729	[1020, 1359]	2274	[3470, 3552]	3819	[4840, 4662]	5364	[2213, 4908]
730	[1360, 1361]	2275	[3553, 3554]	3820	[4787, 2541]	5365	[2069, 4849]
731	[399, 1309]	2276	[3555, 390]	3821	[4677, 4841]	5366	[4407, 4232]
732	[1362, 1363]	2277	[3556, 3557]	3822	[4626, 2587]	5367	[4790, 4439]
733	[1364, 1365]	2278	[3558, 3559]	3823	[578, 4407]	5368	[5891, 5892]
734	[1366, 17]	2279	[2726, 3560]	3824	[37, 240]	5369	[235, 5893]
735	[1367, 1338]	2280	[3561, 3562]	3825	[769, 4811]	5370	[4836, 4423]
736	[1368, 1369]	2281	[3506, 3563]	3826	[2095, 4842]	5371	[2580, 5894]
737	[1370, 1371]	2282	[3564, 3565]	3827	[4035, 4415]	5372	[4549, 5895]
738	[1372, 1373]	2283	[3566, 3567]	3828	[2514, 4794]	5373	[4705, 5804]
739	[1374, 1375]	2284	[3568, 3170]	3829	[841, 4052]	5374	[5805, 5896]
740	[1376, 116]	2285	[3569, 2780]	3830	[2252, 2258]	5375	[4713, 4498]
741	[1377, 1378]	2286	[3570, 1448]	3831	[4236, 4843]	5376	[4920, 5897]
742	[1379, 1380]	2287	[2768, 1261]	3832	[4329, 654]	5377	[4296, 4048]
743	[1381, 1382]	2288	[3066, 2991]	3833	[1718, 4745]	5378	[2177, 4042]
744	[478, 1383]	2289	[63, 460]	3834	[623, 1809]	5379	[5795, 2568]
745	[1384, 1385]	2290	[3571, 3572]	3835	[4844, 4661]	5380	[5822, 5808]
746	[1386, 1387]	2291	[1592, 102]	3836	[871, 4747]	5381	[2438, 4293]
747	[1388, 1389]	2292	[3573, 3574]	3837	[4845, 4846]	5382	[4398, 2575]
748	[453, 1390]	2293	[1605, 1255]	3838	[4256, 1722]	5383	[2159, 4367]
749	[1391, 1392]	2294	[3575, 3576]	3839	[519, 4700]	5384	[5764, 678]
750	[1393, 1283]	2295	[3577, 3578]	3840	[4781, 4639]	5385	[4309, 39]
751	[1394, 1395]	2296	[1539, 1041]	3841	[802, 2382]	5386	[2566, 2303]
752	[482, 1173]	2297	[3579, 3580]	3842	[2188, 4847]	5387	[4467, 4203]
753	[1396, 1175]	2298	[3581, 3582]	3843	[2154, 2190]	5388	[4357, 4075]
754	[431, 400]	2299	[3583, 3584]	3844	[2173, 828]	5389	[1819, 2594]
755	[1397, 1398]	2300	[3559, 3467]	3845	[4848, 730]	5390	[1738, 156]
756	[1399, 1400]	2301	[3314, 3585]	3846	[4117, 4849]	5391	[5898, 683]
757	[1401, 1402]	2302	[3586, 2757]	3847	[2606, 4850]	5392	[33, 2622]
758	[1403, 1404]	2303	[3587, 3588]	3848	[1882, 4692]	5393	[2618, 1871]
759	[995, 1405]	2304	[3589, 3590]	3849	[4851, 2033]	5394	[2376, 5899]
760	[1406, 1407]	2305	[3591, 3592]	3850	[4578, 2035]	5395	[2106, 4210]
761	[1408, 1409]	2306	[1637, 3119]	3851	[2239, 4852]	5396	[754, 2137]
762	[1410, 1169]	2307	[3593, 3594]	3852	[4853, 4180]	5397	[53, 527]
763	[1411, 1412]	2308	[410, 3595]	3853	[4454, 1872]	5398	[2496, 2391]
764	[1413, 1231]	2309	[3596, 3597]	3854	[4854, 4447]	5399	[5843, 4107]
765	[1414, 1415]	2310	[3598, 1615]	3855	[4489, 4855]	5400	[4763, 198]

766	[1416, 1417]	2311	[2667, 3599]	3856	[4668, 4856]	5401	[5900, 1923]
767	[1418, 1419]	2312	[3600, 3601]	3857	[4194, 4732]	5402	[5901, 4611]
768	[1420, 1421]	2313	[1061, 3602]	3858	[4723, 2599]	5403	[2205, 4741]
769	[1422, 1423]	2314	[3337, 3603]	3859	[608, 792]	5404	[51, 4193]
770	[1424, 1425]	2315	[3489, 3604]	3860	[4857, 4858]	5405	[804, 169]
771	[1426, 1427]	2316	[1330, 3605]	3861	[4859, 2312]	5406	[2075, 14]
772	[1428, 1429]	2317	[3125, 3606]	3862	[4244, 4386]	5407	[5834, 4530]
773	[1430, 430]	2318	[3607, 3608]	3863	[4860, 2071]	5408	[729, 5770]
774	[1431, 1432]	2319	[3609, 3610]	3864	[4499, 4861]	5409	[1855, 877]
775	[1433, 1434]	2320	[75, 3424]	3865	[2106, 4862]	5410	[547, 4076]
776	[1435, 1436]	2321	[2790, 3611]	3866	[4753, 1814]	5411	[4520, 5825]
777	[1437, 1438]	2322	[3612, 3613]	3867	[4625, 594]	5412	[4543, 5902]
778	[1439, 1440]	2323	[1158, 3614]	3868	[895, 1791]	5413	[1795, 4837]
779	[1441, 1442]	2324	[3615, 3616]	3869	[2303, 1724]	5414	[866, 1736]
780	[1248, 1443]	2325	[1290, 2773]	3870	[4175, 2015]	5415	[860, 528]
781	[1444, 1445]	2326	[3617, 3618]	3871	[4495, 2353]	5416	[4192, 4217]
782	[1446, 1447]	2327	[437, 3619]	3872	[4863, 2215]	5417	[164, 4902]
783	[1448, 1449]	2328	[1093, 3620]	3873	[2191, 534]	5418	[5865, 2328]
784	[1450, 92]	2329	[3621, 3622]	3874	[4864, 4865]	5419	[2070, 5847]
785	[1451, 25]	2330	[2746, 3623]	3875	[1697, 4866]	5420	[4675, 4813]
786	[1452, 1453]	2331	[3624, 3625]	3876	[536, 4718]	5421	[4815, 2244]
787	[1454, 1455]	2332	[3626, 3483]	3877	[823, 711]	5422	[790, 4469]
788	[1456, 1457]	2333	[3216, 3589]	3878	[4786, 1785]	5423	[2382, 5845]
789	[1458, 1459]	2334	[3627, 3628]	3879	[2226, 4789]	5424	[5903, 701]
790	[1378, 1460]	2335	[3629, 3630]	3880	[4867, 2385]	5425	[781, 2183]
791	[1461, 1462]	2336	[3631, 3632]	3881	[4797, 780]	5426	[4153, 231]
792	[1137, 1463]	2337	[1641, 3633]	3882	[702, 4573]	5427	[4446, 4295]
793	[1198, 1464]	2338	[3634, 3635]	3883	[1833, 4281]	5428	[5811, 4375]
794	[1465, 1466]	2339	[3636, 3637]	3884	[4539, 4868]	5429	[4036, 4906]
795	[69, 1467]	2340	[2881, 3638]	3885	[4869, 4234]	5430	[2533, 4761]
796	[1468, 1469]	2341	[3392, 3639]	3886	[4870, 748]	5431	[4840, 2238]
797	[1470, 1471]	2342	[2865, 3640]	3887	[511, 4871]	5432	[5900, 4319]
798	[1472, 1473]	2343	[3641, 3642]	3888	[855, 4455]	5433	[5904, 2635]
799	[1474, 1475]	2344	[3643, 3644]	3889	[2339, 4482]	5434	[4086, 568]
800	[1106, 1476]	2345	[3200, 3645]	3890	[2008, 1927]	5435	[5789, 5905]
801	[1080, 1477]	2346	[1296, 1638]	3891	[4100, 2369]	5436	[5906, 2531]
802	[1478, 1479]	2347	[3646, 96]	3892	[4380, 4278]	5437	[5885, 4646]
803	[1480, 1481]	2348	[3647, 3648]	3893	[2041, 4872]	5438	[4462, 827]
804	[1222, 1482]	2349	[3649, 3650]	3894	[4873, 2462]	5439	[832, 5907]
805	[1316, 1483]	2350	[3651, 3652]	3895	[2536, 2627]	5440	[4334, 2236]
806	[1484, 1485]	2351	[3653, 1531]	3896	[4494, 4874]	5441	[2404, 5908]
807	[1486, 1487]	2352	[3654, 3655]	3897	[4251, 1782]	5442	[4074, 5909]
808	[1488, 1489]	2353	[3107, 3251]	3898	[2026, 4842]	5443	[5910, 4480]
809	[1263, 1490]	2354	[3656, 3008]	3899	[2310, 4622]	5444	[654, 1978]

810	[1491, 1492]	2355	[3657, 3658]	3900	[4875, 2072]	5445	[1824, 2553]
811	[1493, 1494]	2356	[2971, 3659]	3901	[4876, 4403]	5446	[4667, 4567]
812	[1495, 1496]	2357	[1655, 3660]	3902	[163, 2154]	5447	[2552, 1825]
813	[1497, 1498]	2358	[3247, 3661]	3903	[2481, 4877]	5448	[4498, 5911]
814	[1499, 1500]	2359	[3662, 1017]	3904	[2184, 4388]	5449	[1925, 4119]
815	[1501, 1502]	2360	[3663, 3664]	3905	[2484, 4878]	5450	[2416, 4773]
816	[1503, 1504]	2361	[3665, 3666]	3906	[2253, 4478]	5451	[5861, 4820]
817	[461, 927]	2362	[1476, 3667]	3907	[887, 4879]	5452	[677, 809]
818	[1505, 1506]	2363	[3668, 2983]	3908	[4873, 4880]	5453	[685, 4850]
819	[1494, 1507]	2364	[3669, 1274]	3909	[4881, 4398]	5454	[4551, 692]
820	[1508, 1509]	2365	[1168, 3670]	3910	[2025, 2639]	5455	[2313, 760]
821	[1208, 1510]	2366	[3671, 3672]	3911	[4882, 4872]	5456	[672, 2355]
822	[1511, 1327]	2367	[3673, 3674]	3912	[4518, 4047]	5457	[5912, 5913]
823	[1512, 1513]	2368	[3675, 3676]	3913	[4593, 4727]	5458	[5914, 2342]
824	[1514, 1515]	2369	[3677, 3678]	3914	[4636, 4787]	5459	[5915, 4426]
825	[1516, 1517]	2370	[2864, 3679]	3915	[4448, 1946]	5460	[1801, 2353]
826	[1518, 1519]	2371	[3680, 3681]	3916	[2410, 4068]	5461	[880, 5916]
827	[1520, 74]	2372	[3682, 3401]	3917	[4181, 4883]	5462	[2426, 5917]
828	[1521, 1522]	2373	[3683, 3684]	3918	[1945, 4089]	5463	[4338, 4233]
829	[1523, 1524]	2374	[374, 3332]	3919	[4084, 4735]	5464	[4221, 4433]
830	[1310, 1319]	2375	[3685, 3686]	3920	[4554, 4884]	5465	[5856, 186]
831	[1525, 1526]	2376	[3681, 3687]	3921	[1733, 4644]	5466	[2191, 1704]
832	[1527, 1528]	2377	[3688, 3689]	3922	[2421, 4685]	5467	[2032, 2559]
833	[1529, 1530]	2378	[3235, 958]	3923	[2149, 2137]	5468	[2391, 2579]
834	[1531, 1532]	2379	[3690, 3691]	3924	[2477, 4538]	5469	[1930, 5844]
835	[1180, 1533]	2380	[3692, 3379]	3925	[4885, 2437]	5470	[5918, 763]
836	[1534, 1535]	2381	[3099, 3693]	3926	[4886, 4887]	5471	[5914, 4593]
837	[1536, 1537]	2382	[3350, 3694]	3927	[4507, 1763]	5472	[567, 4087]
838	[1538, 1539]	2383	[1632, 3695]	3928	[2487, 4082]	5473	[2465, 4204]
839	[941, 1540]	2384	[3192, 3696]	3929	[525, 141]	5474	[2616, 749]
840	[1541, 1542]	2385	[3340, 3697]	3930	[4888, 190]	5475	[4421, 499]
841	[1543, 1544]	2386	[3698, 1225]	3931	[2308, 4812]	5476	[4579, 2357]
842	[1545, 1546]	2387	[3699, 3700]	3932	[4045, 2024]	5477	[1799, 4757]
843	[1547, 1548]	2388	[3701, 3665]	3933	[1971, 4487]	5478	[1844, 2106]
844	[987, 1549]	2389	[3578, 3702]	3934	[4374, 1679]	5479	[683, 5890]
845	[1550, 1551]	2390	[3703, 3704]	3935	[4889, 4890]	5480	[2113, 4667]
846	[1552, 1553]	2391	[3705, 3706]	3936	[4891, 4892]	5481	[4031, 4486]
847	[1554, 1555]	2392	[423, 3475]	3937	[2206, 4488]	5482	[2641, 4071]
848	[1556, 1557]	2393	[3707, 3708]	3938	[4302, 704]	5483	[4151, 4865]
849	[1558, 1559]	2394	[3709, 295]	3939	[2589, 1957]	5484	[2391, 4252]
850	[1560, 1558]	2395	[3710, 3711]	3940	[4893, 1972]	5485	[4223, 5797]
851	[1561, 1562]	2396	[3712, 3713]	3941	[4813, 203]	5486	[4104, 5919]
852	[1195, 1563]	2397	[3714, 365]	3942	[59, 905]	5487	[2159, 5878]
853	[1564, 1565]	2398	[3715, 3716]	3943	[4334, 4282]	5488	[4758, 497]

854	[1176, 1566]	2399	[1048, 3717]	3944	[4894, 4895]	5489	[5920, 4348]
855	[1567, 1568]	2400	[3718, 3719]	3945	[4452, 797]	5490	[5877, 2321]
856	[1569, 1570]	2401	[3335, 3380]	3946	[636, 4883]	5491	[4290, 1969]
857	[1571, 1572]	2402	[3720, 2784]	3947	[2596, 2204]	5492	[5906, 5887]
858	[1573, 1295]	2403	[3520, 3721]	3948	[568, 4410]	5493	[4767, 58]
859	[1574, 1575]	2404	[3722, 2779]	3949	[4769, 4225]	5494	[5903, 5886]
860	[1576, 1577]	2405	[3386, 3723]	3950	[1846, 4343]	5495	[4040, 2557]
861	[1578, 1579]	2406	[3724, 1435]	3951	[2437, 4873]	5496	[4802, 2468]
862	[1580, 424]	2407	[3725, 3726]	3952	[4663, 1662]	5497	[5832, 1994]
863	[419, 1581]	2408	[3727, 3728]	3953	[165, 565]	5498	[2388, 4267]
864	[1582, 1583]	2409	[3037, 3729]	3954	[4784, 2333]	5499	[1714, 5814]
865	[360, 1584]	2410	[1390, 3730]	3955	[2306, 4223]	5500	[4599, 223]
866	[1585, 1586]	2411	[1304, 3570]	3956	[4896, 4666]	5501	[762, 2496]
867	[1057, 1587]	2412	[3731, 3732]	3957	[1760, 4245]	5502	[4697, 4847]
868	[248, 1588]	2413	[3733, 3734]	3958	[4897, 2146]	5503	[2324, 2006]
869	[1589, 1590]	2414	[1241, 369]	3959	[4898, 4120]	5504	[4227, 1874]
870	[1591, 1592]	2415	[3735, 2870]	3960	[4716, 4816]	5505	[2169, 2590]
871	[1593, 1594]	2416	[3736, 3737]	3961	[4532, 4899]	5506	[4125, 722]
872	[1595, 1596]	2417	[3738, 1354]	3962	[2622, 4900]	5507	[5921, 1828]
873	[1597, 1598]	2418	[3739, 3740]	3963	[4385, 4093]	5508	[1981, 1707]
874	[1599, 1600]	2419	[3741, 3336]	3964	[2110, 4093]	5509	[4886, 4820]
875	[1601, 923]	2420	[3742, 3292]	3965	[1979, 4901]	5510	[5922, 2310]
876	[1602, 1603]	2421	[983, 3389]	3966	[4598, 4902]	5511	[1970, 4243]
877	[1604, 1605]	2422	[3743, 3744]	3967	[4572, 173]	5512	[807, 2511]
878	[1606, 1607]	2423	[1528, 3745]	3968	[4903, 2444]	5513	[134, 4550]
879	[1608, 1609]	2424	[3746, 3747]	3969	[838, 4904]	5514	[630, 834]
880	[1610, 1611]	2425	[1412, 3748]	3970	[4905, 4130]	5515	[794, 544]
881	[1612, 1613]	2426	[3749, 3750]	3971	[4415, 4906]	5516	[2108, 5810]
882	[1614, 1321]	2427	[2698, 2894]	3972	[4106, 4907]	5517	[5850, 2148]
883	[1615, 1616]	2428	[3277, 2802]	3973	[4241, 662]	5518	[853, 1943]
884	[1617, 1618]	2429	[3751, 3752]	3974	[561, 2131]	5519	[4342, 1847]
885	[1619, 1620]	2430	[3753, 3754]	3975	[727, 4352]	5520	[5923, 2094]
886	[1621, 1622]	2431	[3755, 3756]	3976	[2602, 4908]	5521	[4712, 4184]
887	[1623, 1624]	2432	[3757, 3758]	3977	[4129, 4909]	5522	[125, 2646]
888	[1625, 1626]	2433	[3375, 3481]	3978	[128, 2011]	5523	[2452, 4737]
889	[1627, 1628]	2434	[1551, 3759]	3979	[132, 2350]	5524	[5763, 4387]
890	[1629, 1630]	2435	[3760, 398]	3980	[4526, 4910]	5525	[5889, 1880]
891	[1631, 1632]	2436	[3761, 3762]	3981	[1942, 854]	5526	[4352, 5809]
892	[1335, 1633]	2437	[3763, 3505]	3982	[4795, 4123]	5527	[4508, 4751]
893	[1634, 1635]	2438	[3444, 3764]	3983	[1963, 2635]	5528	[5924, 4216]
894	[1636, 1637]	2439	[3625, 2663]	3984	[4718, 2235]	5529	[5924, 2585]
895	[1638, 248]	2440	[3730, 3765]	3985	[4056, 40]	5530	[5761, 857]
896	[1639, 1474]	2441	[3766, 1543]	3986	[499, 1739]	5531	[2615, 748]
897	[1640, 1641]	2442	[3767, 3438]	3987	[4527, 4911]	5532	[579, 4408]

898	[1032, 1015]	2443	[3768, 3769]	3988	[532, 4390]	5533	[2222, 5858]
899	[1642, 104]	2444	[3770, 3317]	3989	[4787, 4912]	5534	[2439, 5773]
900	[955, 1643]	2445	[3771, 3772]	3990	[2287, 783]	5535	[5925, 1895]
901	[1644, 1645]	2446	[1519, 3527]	3991	[4691, 4568]	5536	[4316, 4159]
902	[1646, 1647]	2447	[3773, 3673]	3992	[4520, 2271]	5537	[5884, 2607]
903	[1648, 1649]	2448	[3630, 3774]	3993	[1864, 4913]	5538	[2549, 4650]
904	[1650, 1651]	2449	[3775, 3776]	3994	[527, 713]	5539	[4778, 5926]
905	[1652, 1653]	2450	[3777, 3778]	3995	[2124, 802]	5540	[2370, 4379]
906	[1654, 1458]	2451	[300, 3779]	3996	[4914, 4915]	5541	[154, 2508]
907	[1380, 1655]	2452	[3780, 3781]	3997	[759, 2314]	5542	[4762, 4923]
908	[1656, 1657]	2453	[2915, 3782]	3998	[766, 4862]	5543	[5880, 2645]
909	[1658, 1659]	2454	[3783, 3784]	3999	[2286, 2082]	5544	[4128, 825]
910	[1660, 621]	2455	[1598, 3558]	4000	[2429, 1741]	5545	[4435, 5927]
911	[1661, 619]	2456	[3785, 3786]	4001	[4587, 2416]	5546	[2490, 5895]
912	[1662, 1663]	2457	[3400, 3787]	4002	[1982, 4296]	5547	[5928, 4332]
913	[1664, 1665]	2458	[3253, 3675]	4003	[2307, 1769]	5548	[5859, 5919]
914	[1666, 187]	2459	[3788, 3789]	4004	[484, 4252]	5549	[4384, 707]
915	[1667, 1668]	2460	[3790, 3791]	4005	[4569, 2483]	5550	[4601, 4755]
916	[1669, 1670]	2461	[3792, 3793]	4006	[4722, 857]	5551	[5837, 5779]
917	[1671, 1672]	2462	[3794, 3385]	4007	[4808, 4454]	5552	[613, 1947]
918	[1673, 1674]	2463	[3255, 3197]	4008	[4916, 697]	5553	[4804, 5929]
919	[1675, 606]	2464	[3795, 3600]	4009	[4529, 4917]	5554	[5852, 4024]
920	[1676, 1677]	2465	[3796, 3797]	4010	[4918, 4919]	5555	[4508, 4383]
921	[1678, 1679]	2466	[2836, 3798]	4011	[4920, 4921]	5556	[2318, 5874]
922	[133, 1680]	2467	[3799, 3800]	4012	[4651, 4922]	5557	[903, 4461]
923	[1681, 1682]	2468	[3801, 3802]	4013	[233, 4923]	5558	[5888, 1848]
924	[1683, 1684]	2469	[3803, 3804]	4014	[2017, 1968]	5559	[5930, 2405]
925	[1685, 191]	2470	[3805, 3806]	4015	[2214, 4924]	5560	[4053, 2328]
926	[1686, 1687]	2471	[2664, 3807]	4016	[2388, 4925]	5561	[5931, 4490]
927	[906, 788]	2472	[2656, 910]	4017	[4926, 3245]	5562	[4864, 4152]
928	[568, 1688]	2473	[1649, 3808]	4018	[3670, 2658]	5563	[4628, 5799]
929	[1689, 1690]	2474	[3797, 3809]	4019	[3243, 3344]	5564	[4230, 2401]
930	[163, 1691]	2475	[441, 3785]	4020	[4927, 4928]	5565	[2634, 4199]
931	[1692, 1693]	2476	[3810, 3237]	4021	[4929, 4930]	5566	[5932, 5767]
932	[1694, 1695]	2477	[3811, 934]	4022	[1544, 3566]	5567	[5933, 4892]
933	[1696, 767]	2478	[3812, 3813]	4023	[4931, 4932]	5568	[4903, 4818]
934	[1697, 1698]	2479	[3814, 3368]	4024	[4933, 302]	5569	[4897, 592]
935	[1699, 1700]	2480	[3815, 3816]	4025	[4934, 4935]	5570	[5884, 4534]
936	[1701, 1702]	2481	[3817, 3818]	4026	[3416, 4936]	5571	[1901, 5934]
937	[1703, 1704]	2482	[1628, 3819]	4027	[1218, 3490]	5572	[2511, 4373]
938	[1705, 1706]	2483	[3156, 3820]	4028	[926, 3654]	5573	[1994, 4749]
939	[1707, 1708]	2484	[1553, 2863]	4029	[3702, 4937]	5574	[4750, 722]
940	[1709, 1710]	2485	[3704, 3821]	4030	[4938, 2756]	5575	[5853, 524]
941	[1711, 171]	2486	[3822, 3543]	4031	[4939, 4940]	5576	[2276, 4660]

942	[1712, 1713]	2487	[3823, 1293]	4032	[3230, 3487]	5577	[4833, 5935]
943	[1714, 1715]	2488	[79, 3824]	4033	[3747, 2954]	5578	[2414, 1666]
944	[1716, 1717]	2489	[3825, 3826]	4034	[3190, 4941]	5579	[1899, 649]
945	[807, 142]	2490	[379, 3827]	4035	[4942, 3409]	5580	[774, 4299]
946	[180, 1718]	2491	[3828, 3829]	4036	[4943, 2659]	5581	[4524, 4110]
947	[1719, 1720]	2492	[3830, 3831]	4037	[4944, 4945]	5582	[718, 4324]
948	[1721, 543]	2493	[3832, 3136]	4038	[4946, 4947]	5583	[799, 5936]
949	[615, 1722]	2494	[3833, 76]	4039	[1292, 4948]	5584	[879, 153]
950	[1723, 1724]	2495	[2961, 3705]	4040	[4949, 1058]	5585	[5932, 4681]
951	[828, 1725]	2496	[2896, 3834]	4041	[4950, 3701]	5586	[1761, 4246]
952	[1726, 1727]	2497	[3212, 3835]	4042	[4951, 3985]	5587	[1924, 4899]
953	[1728, 1729]	2498	[3836, 3837]	4043	[4952, 4953]	5588	[4718, 4334]
954	[1730, 1731]	2499	[1312, 3838]	4044	[4954, 3019]	5589	[2650, 876]
955	[1732, 1733]	2500	[3734, 1554]	4045	[429, 4955]	5590	[4416, 5937]
956	[152, 1734]	2501	[3839, 3840]	4046	[4956, 477]	5591	[4817, 5938]
957	[1735, 1736]	2502	[3841, 3267]	4047	[3599, 4957]	5592	[592, 5883]
958	[1737, 1738]	2503	[3842, 3843]	4048	[2730, 318]	5593	[2297, 218]
959	[1739, 1740]	2504	[3507, 3583]	4049	[3729, 1384]	5594	[5939, 682]
960	[1741, 1742]	2505	[1260, 3844]	4050	[4958, 3836]	5595	[5940, 2009]
961	[1743, 1744]	2506	[3845, 3846]	4051	[4959, 340]	5596	[5861, 4887]
962	[1745, 1746]	2507	[3847, 3848]	4052	[967, 3564]	5597	[145, 522]
963	[722, 1747]	2508	[3849, 3850]	4053	[4960, 3145]	5598	[5941, 4351]
964	[1748, 201]	2509	[3851, 3146]	4054	[4961, 1104]	5599	[2033, 4094]
965	[1749, 1750]	2510	[1098, 3852]	4055	[4962, 1029]	5600	[4455, 1836]
966	[1751, 1752]	2511	[3158, 3853]	4056	[4963, 3355]	5601	[5942, 4519]
967	[1753, 41]	2512	[1510, 3854]	4057	[4964, 3134]	5602	[5921, 557]
968	[1754, 221]	2513	[3605, 3855]	4058	[4965, 3828]	5603	[4252, 2120]
969	[1755, 1756]	2514	[3856, 3857]	4059	[1421, 3794]	5604	[1923, 4532]
970	[229, 1757]	2515	[3732, 3858]	4060	[4966, 4967]	5605	[215, 739]
971	[1758, 1759]	2516	[317, 3859]	4061	[978, 4968]	5606	[580, 2108]
972	[1760, 1761]	2517	[3174, 3860]	4062	[4969, 4970]	5607	[2614, 5829]
973	[1762, 1763]	2518	[3861, 3862]	4063	[3211, 2761]	5608	[4226, 1876]
974	[1764, 1765]	2519	[3863, 3864]	4064	[4971, 1608]	5609	[1797, 5934]
975	[1766, 1767]	2520	[3865, 3866]	4065	[4972, 4973]	5610	[4171, 5759]
976	[1768, 590]	2521	[3867, 3868]	4066	[4974, 4975]	5611	[4894, 4800]
977	[1769, 1770]	2522	[3869, 3870]	4067	[4976, 4977]	5612	[5824, 4024]
978	[1771, 1772]	2523	[3871, 3692]	4068	[3689, 3766]	5613	[2456, 5936]
979	[1773, 1774]	2524	[2919, 2976]	4069	[4978, 4]	5614	[4714, 5911]
980	[1775, 174]	2525	[3872, 2890]	4070	[3827, 4979]	5615	[2455, 2559]
981	[1776, 1715]	2526	[3873, 3874]	4071	[3776, 3295]	5616	[4059, 2491]
982	[1777, 1778]	2527	[3875, 1130]	4072	[1453, 2820]	5617	[576, 643]
983	[557, 1779]	2528	[3876, 3877]	4073	[1429, 4980]	5618	[4693, 4128]
984	[1780, 1781]	2529	[3878, 3003]	4074	[963, 4981]	5619	[2219, 5943]
985	[1782, 651]	2530	[3879, 3880]	4075	[1515, 4982]	5620	[5944, 130]

986	[667, 603]	2531	[3881, 3882]	4076	[4983, 4984]	5621	[1984, 2511]
987	[1783, 1784]	2532	[2951, 3883]	4077	[2862, 4985]	5622	[5827, 4160]
988	[1785, 1786]	2533	[3884, 1054]	4078	[3513, 4986]	5623	[704, 861]
989	[1787, 1788]	2534	[3885, 2876]	4079	[4987, 4988]	5624	[4312, 4446]
990	[1789, 1738]	2535	[3886, 3887]	4080	[4989, 4990]	5625	[5945, 4070]
991	[1790, 138]	2536	[3888, 3323]	4081	[4991, 1631]	5626	[5922, 4621]
992	[1791, 1792]	2537	[1152, 3889]	4082	[4992, 1591]	5627	[683, 747]
993	[1793, 1794]	2538	[3890, 3891]	4083	[3927, 4993]	5628	[5946, 5897]
994	[800, 1795]	2539	[3892, 3893]	4084	[4994, 1406]	5629	[5898, 746]
995	[1718, 1796]	2540	[3894, 3895]	4085	[1124, 4995]	5630	[4558, 4500]
996	[1797, 1798]	2541	[3232, 3896]	4086	[4996, 4997]	5631	[808, 1864]
997	[1799, 1800]	2542	[1481, 3897]	4087	[4998, 4999]	5632	[5947, 2132]
998	[1801, 1802]	2543	[3898, 3899]	4088	[5000, 472]	5633	[5948, 2444]
999	[1803, 147]	2544	[2953, 3234]	4089	[5001, 5002]	5634	[1932, 4641]
1000	[603, 1804]	2545	[3900, 3374]	4090	[5003, 2816]	5635	[4845, 5949]
1001	[1805, 1806]	2546	[3901, 3902]	4091	[3902, 3842]	5636	[220, 4121]
1002	[1807, 1808]	2547	[3903, 3904]	4092	[5004, 2748]	5637	[4689, 4559]
1003	[621, 623]	2548	[1475, 3114]	4093	[3412, 2859]	5638	[5950, 4919]
1004	[622, 1809]	2549	[3905, 1512]	4094	[5005, 5006]	5639	[4869, 1793]
1005	[1810, 1811]	2550	[3906, 3907]	4095	[5007, 1145]	5640	[4093, 2030]
1006	[1812, 622]	2551	[3908, 1439]	4096	[5008, 5009]	5641	[4440, 4841]
1007	[1813, 896]	2552	[3909, 3845]	4097	[5010, 5011]	5642	[5920, 2510]
1008	[1814, 1815]	2553	[3601, 3910]	4098	[5012, 3455]	5643	[5912, 5842]
1009	[1816, 139]	2554	[1129, 3911]	4099	[1018, 2670]	5644	[4159, 4807]
1010	[1817, 630]	2555	[3912, 3913]	4100	[3560, 989]	5645	[2594, 4803]
1011	[1818, 1718]	2556	[294, 928]	4101	[4995, 5013]	5646	[1948, 5951]
1012	[1819, 1820]	2557	[3914, 3915]	4102	[3519, 5014]	5647	[4579, 4434]
1013	[638, 1821]	2558	[3754, 3916]	4103	[5015, 5016]	5648	[4814, 636]
1014	[1822, 170]	2559	[3784, 3917]	4104	[5017, 5018]	5649	[4535, 776]
1015	[1823, 892]	2560	[3225, 3918]	4105	[5019, 1411]	5650	[4670, 2398]
1016	[1824, 1825]	2561	[3919, 3920]	4106	[3048, 1486]	5651	[1835, 788]
1017	[1826, 1827]	2562	[3921, 3922]	4107	[3050, 5020]	5652	[840, 210]
1018	[1828, 1779]	2563	[3923, 3657]	4108	[3085, 5021]	5653	[4391, 526]
1019	[1829, 1830]	2564	[3924, 3925]	4109	[5022, 5023]	5654	[2179, 5916]
1020	[1831, 1832]	2565	[3926, 3927]	4110	[5024, 974]	5655	[4549, 4637]
1021	[1833, 1834]	2566	[3928, 994]	4111	[5025, 5026]	5656	[5841, 5913]
1022	[1835, 907]	2567	[3929, 1305]	4112	[3635, 5027]	5657	[5835, 5952]
1023	[856, 1836]	2568	[3930, 3100]	4113	[3772, 5028]	5658	[5846, 615]
1024	[753, 1837]	2569	[1361, 3931]	4114	[5029, 19]	5659	[1720, 4704]
1025	[136, 1838]	2570	[3932, 2979]	4115	[5030, 3690]	5660	[5928, 5840]
1026	[1839, 1840]	2571	[3933, 3405]	4116	[5031, 5032]	5661	[5872, 4824]
1027	[717, 1841]	2572	[2831, 3934]	4117	[5033, 3138]	5662	[4918, 5953]
1028	[1842, 1843]	2573	[3935, 348]	4118	[3515, 2912]	5663	[4199, 5848]
1029	[1844, 766]	2574	[3535, 3936]	4119	[5034, 5035]	5664	[745, 5954]

1030	[32, 1845]	2575	[1284, 3937]	4120	[5036, 4992]	5665	[4752, 1993]
1031	[715, 1823]	2576	[1594, 3938]	4121	[2930, 5037]	5666	[5955, 2634]
1032	[168, 805]	2577	[1064, 3939]	4122	[5038, 4946]	5667	[5956, 2308]
1033	[1846, 1847]	2578	[1647, 3940]	4123	[3664, 5039]	5668	[677, 2150]
1034	[1848, 1849]	2579	[909, 3245]	4124	[5040, 3269]	5669	[2437, 2461]
1035	[1850, 1851]	2580	[3941, 3942]	4125	[5041, 5042]	5670	[487, 5775]
1036	[1852, 1853]	2581	[3943, 3944]	4126	[5043, 2854]	5671	[5864, 4526]
1037	[1854, 1855]	2582	[3945, 3946]	4127	[3296, 5044]	5672	[2148, 4455]
1038	[1856, 1857]	2583	[1457, 3921]	4128	[3486, 1347]	5673	[5778, 5838]
1039	[1858, 1859]	2584	[1498, 3947]	4129	[5045, 5046]	5674	[5783, 4860]
1040	[1860, 519]	2585	[3948, 3949]	4130	[5047, 966]	5675	[2556, 4901]
1041	[1861, 48]	2586	[3950, 3951]	4131	[5048, 5049]	5676	[5777, 4197]
1042	[1862, 1863]	2587	[1590, 3075]	4132	[5050, 5051]	5677	[2169, 2290]
1043	[166, 1864]	2588	[1365, 3363]	4133	[5052, 5053]	5678	[5875, 10]
1044	[1684, 179]	2589	[3952, 3126]	4134	[5054, 5055]	5679	[4905, 4909]
1045	[1865, 1866]	2590	[83, 3953]	4135	[5056, 1478]	5680	[2639, 4481]
1046	[1867, 1868]	2591	[3954, 3955]	4136	[1477, 380]	5681	[4214, 2171]
1047	[1869, 1870]	2592	[3070, 3956]	4137	[5057, 1636]	5682	[4609, 2028]
1048	[1766, 1871]	2593	[3957, 3958]	4138	[2728, 3353]	5683	[4198, 4925]
1049	[734, 1872]	2594	[3472, 3959]	4139	[5058, 5059]	5684	[5819, 1793]
1050	[139, 1873]	2595	[3960, 3961]	4140	[5060, 5061]	5685	[5957, 5884]
1051	[1874, 1875]	2596	[3962, 3963]	4141	[3462, 5062]	5686	[5757, 4711]
1052	[1876, 1877]	2597	[3964, 3157]	4142	[3562, 5063]	5687	[5946, 4921]
1053	[847, 1878]	2598	[3965, 3627]	4143	[1548, 1368]	5688	[4585, 5958]
1054	[1879, 1698]	2599	[3083, 3579]	4144	[5064, 3682]	5689	[4831, 5959]
1055	[1842, 1870]	2600	[3966, 3571]	4145	[5065, 1125]	5690	[4811, 2621]
1056	[1880, 1881]	2601	[3967, 3102]	4146	[5066, 5067]	5691	[5828, 5932]
1057	[1882, 216]	2602	[3857, 920]	4147	[1042, 5068]	5692	[4870, 2616]
1058	[1883, 1884]	2603	[3968, 3872]	4148	[5069, 2918]	5693	[5755, 4025]
1059	[1885, 1886]	2604	[3437, 3365]	4149	[2762, 5070]	5694	[851, 5960]
1060	[1887, 801]	2605	[3969, 90]	4150	[1577, 5071]	5695	[207, 2519]
1061	[1888, 1889]	2606	[3015, 3801]	4151	[3346, 5072]	5696	[5794, 5951]
1062	[496, 1890]	2607	[3970, 3971]	4152	[2958, 5073]	5697	[5961, 4687]
1063	[1789, 1891]	2608	[3461, 1580]	4153	[2821, 5074]	5698	[2319, 871]
1064	[1892, 1893]	2609	[3972, 3973]	4154	[953, 4964]	5699	[2140, 4569]
1065	[1894, 1895]	2610	[290, 3974]	4155	[5075, 5076]	5700	[5891, 5962]
1066	[1896, 1897]	2611	[3975, 3976]	4156	[5077, 5078]	5701	[1905, 4148]
1067	[1898, 695]	2612	[3913, 1223]	4157	[469, 1060]	5702	[4257, 4809]
1068	[1899, 1900]	2613	[1086, 3977]	4158	[1467, 1050]	5703	[5787, 4419]
1069	[1901, 1798]	2614	[3978, 1251]	4159	[5079, 3609]	5704	[4647, 4523]
1070	[1902, 1903]	2615	[3979, 1391]	4160	[5080, 1128]	5705	[2436, 4392]
1071	[1904, 1905]	2616	[3980, 3159]	4161	[5081, 3817]	5706	[694, 227]
1072	[1906, 1907]	2617	[3270, 3954]	4162	[109, 5082]	5707	[4741, 4488]
1073	[1849, 1908]	2618	[3981, 2689]	4163	[3765, 5083]	5708	[1891, 156]

1074	[1909, 1910]	2619	[3982, 998]	4164	[30, 3306]	5709	[4893, 4153]
1075	[1911, 1912]	2620	[3983, 3788]	4165	[5084, 5085]	5710	[5963, 5852]
1076	[1773, 1913]	2621	[2940, 3984]	4166	[5086, 3839]	5711	[181, 1796]
1077	[1914, 587]	2622	[3985, 3986]	4167	[3652, 5087]	5712	[2479, 2513]
1078	[1915, 1916]	2623	[3482, 3987]	4168	[3043, 3443]	5713	[4221, 2469]
1079	[1917, 1746]	2624	[1036, 3988]	4169	[999, 5088]	5714	[5957, 764]
1080	[1918, 1919]	2625	[3915, 3989]	4170	[3220, 5089]	5715	[5964, 5962]
1081	[562, 1920]	2626	[3990, 1049]	4171	[5090, 5091]	5716	[194, 5965]
1082	[1921, 1922]	2627	[3991, 3992]	4172	[5092, 5093]	5717	[5830, 2338]
1083	[1923, 1924]	2628	[3993, 3994]	4173	[5094, 2835]	5718	[4447, 5899]
1084	[1925, 1926]	2629	[3995, 3996]	4174	[5095, 5096]	5719	[5866, 5874]
1085	[1927, 1928]	2630	[937, 3997]	4175	[2691, 5079]	5720	[4162, 5849]
1086	[1929, 1930]	2631	[3998, 3999]	4176	[2869, 3325]	5721	[2409, 599]
1087	[1931, 1932]	2632	[395, 4000]	4177	[5097, 3733]	5722	[5944, 2096]
1088	[1933, 1934]	2633	[3554, 1117]	4178	[5098, 5099]	5723	[1677, 1711]
1089	[1935, 1936]	2634	[4001, 4002]	4179	[3372, 1567]	5724	[4608, 5965]
1090	[1937, 1874]	2635	[3011, 952]	4180	[1425, 5100]	5725	[4419, 4739]
1091	[1938, 1939]	2636	[4003, 3780]	4181	[4932, 5101]	5726	[4617, 2287]
1092	[896, 1940]	2637	[3312, 3812]	4182	[5102, 3545]	5727	[4657, 2334]
1093	[856, 1941]	2638	[4004, 273]	4183	[1596, 5103]	5728	[4597, 5966]
1094	[1942, 1943]	2639	[4005, 1619]	4184	[3064, 5104]	5729	[2309, 4621]
1095	[1944, 1945]	2640	[4006, 452]	4185	[5105, 3830]	5730	[849, 849]
1096	[1946, 1947]	2641	[4007, 3888]	4186	[3080, 930]	5731	[4703, 2626]
1097	[1948, 1949]	2642	[1385, 2818]	4187	[3148, 5106]	5732	[900, 528]
1098	[1950, 1951]	2643	[4008, 4009]	4188	[3648, 5107]	5733	[5967, 5896]
1099	[1952, 1953]	2644	[3046, 4010]	4189	[5108, 5109]	5734	[5968, 4265]
1100	[1954, 1691]	2645	[3089, 4011]	4190	[5110, 3867]	5735	[5800, 2612]
1101	[1955, 1956]	2646	[1339, 3334]	4191	[2797, 3731]	5736	[34, 4900]
1102	[1957, 1958]	2647	[4012, 249]	4192	[5111, 2856]	5737	[553, 2315]
1103	[1959, 1960]	2648	[2712, 4013]	4193	[5112, 5113]	5738	[5969, 4118]
1104	[1961, 1962]	2649	[3047, 4014]	4194	[2977, 3012]	5739	[4402, 5818]
1105	[1963, 690]	2650	[3449, 3746]	4195	[372, 5114]	5740	[4387, 1845]
1106	[1964, 1965]	2651	[4015, 4016]	4196	[5115, 2975]	5741	[668, 1804]
1107	[1966, 1967]	2652	[4017, 2048]	4197	[408, 63]	5742	[1864, 605]
1108	[1968, 1969]	2653	[2044, 4018]	4198	[2808, 2987]	5743	[5970, 4669]
1109	[1970, 1971]	2654	[1661, 4019]	4199	[929, 5116]	5744	[5964, 5892]
1110	[1972, 1973]	2655	[2050, 1660]	4200	[1445, 5117]	5745	[5833, 5958]
1111	[1974, 1975]	2656	[4019, 620]	4201	[5118, 462]	5746	[792, 4676]
1112	[1976, 237]	2657	[625, 2050]	4202	[91, 5119]	5747	[5967, 5806]
1113	[1977, 1978]	2658	[1811, 2050]	4203	[2964, 3376]	5748	[5971, 4846]
1114	[1979, 1980]	2659	[4020, 4021]	4204	[5120, 2767]	5749	[5933, 5972]
1115	[1981, 1982]	2660	[507, 2574]	4205	[5121, 5122]	5750	[4361, 4743]
1116	[1983, 1984]	2661	[4022, 4023]	4206	[3992, 5123]	5751	[4805, 2163]
1117	[1852, 761]	2662	[4024, 4025]	4207	[1247, 5124]	5752	[5973, 911]

1118	[1985, 848]	2663	[2009, 4026]	4208	[5125, 3909]	5753	[1012, 3833]
1119	[809, 1986]	2664	[4027, 1999]	4209	[2980, 5126]	5754	[5681, 5600]
1120	[1959, 1987]	2665	[2213, 2603]	4210	[1331, 5127]	5755	[5974, 1202]
1121	[1988, 1989]	2666	[4028, 4029]	4211	[3517, 5128]	5756	[5618, 5563]
1122	[1990, 1991]	2667	[4030, 45]	4212	[2928, 3596]	5757	[5717, 3014]
1123	[1992, 500]	2668	[4031, 4032]	4213	[3843, 5129]	5758	[5975, 5976]
1124	[859, 900]	2669	[4033, 4034]	4214	[1509, 3615]	5759	[3696, 3577]
1125	[1993, 1816]	2670	[4035, 4036]	4215	[5130, 350]	5760	[5977, 4972]
1126	[1964, 1994]	2671	[4037, 4038]	4216	[334, 2789]	5761	[2786, 5533]
1127	[588, 1995]	2672	[2210, 1756]	4217	[3986, 3561]	5762	[5978, 3327]
1128	[1996, 1997]	2673	[779, 4039]	4218	[1108, 5131]	5763	[5979, 2950]
1129	[1998, 1999]	2674	[4040, 2379]	4219	[3149, 5132]	5764	[3404, 1267]
1130	[2000, 2001]	2675	[138, 2370]	4220	[5133, 5134]	5765	[5980, 5230]
1131	[2002, 2003]	2676	[2296, 736]	4221	[1205, 3209]	5766	[5145, 5981]
1132	[2004, 685]	2677	[4041, 2327]	4222	[5135, 5136]	5767	[5982, 5510]
1133	[1952, 2005]	2678	[2060, 4042]	4223	[3891, 1085]	5768	[5983, 4983]
1134	[517, 2006]	2679	[205, 4043]	4224	[2766, 5137]	5769	[307, 2963]
1135	[628, 2007]	2680	[4044, 4045]	4225	[268, 5138]	5770	[5984, 3418]
1136	[2008, 2009]	2681	[4046, 4047]	4226	[3706, 2653]	5771	[3301, 5985]
1137	[2010, 2011]	2682	[560, 1932]	4227	[5139, 3792]	5772	[5340, 5986]
1138	[2012, 719]	2683	[1708, 4048]	4228	[5140, 5141]	5773	[3764, 1561]
1139	[2013, 2014]	2684	[4049, 1903]	4229	[357, 5142]	5774	[5987, 3090]
1140	[179, 2015]	2685	[4050, 4051]	4230	[5143, 3105]	5775	[5281, 5303]
1141	[2016, 2017]	2686	[210, 4052]	4231	[5144, 5145]	5776	[3044, 5634]
1142	[2018, 890]	2687	[4053, 1671]	4232	[3299, 436]	5777	[5988, 5399]
1143	[1699, 758]	2688	[4054, 2266]	4233	[3835, 5146]	5778	[3934, 5989]
1144	[2019, 2020]	2689	[4055, 547]	4234	[3676, 5147]	5779	[5423, 5990]
1145	[2021, 581]	2690	[2624, 4056]	4235	[5148, 3892]	5780	[4016, 5991]
1146	[2022, 2023]	2691	[4057, 627]	4236	[5149, 120]	5781	[5992, 3631]
1147	[1918, 2024]	2692	[217, 1892]	4237	[5150, 5151]	5782	[5473, 5993]
1148	[2025, 665]	2693	[4058, 4059]	4238	[3331, 5152]	5783	[5994, 5995]
1149	[2026, 2027]	2694	[4060, 2092]	4239	[5153, 5154]	5784	[3378, 5996]
1150	[2028, 2029]	2695	[4061, 574]	4240	[5155, 4952]	5785	[349, 5997]
1151	[2030, 1788]	2696	[522, 2610]	4241	[3082, 3492]	5786	[5655, 5998]
1152	[2031, 2032]	2697	[4062, 4063]	4242	[5156, 1582]	5787	[5147, 5999]
1153	[2033, 2034]	2698	[1895, 647]	4243	[5157, 5158]	5788	[5455, 5730]
1154	[2035, 1838]	2699	[2306, 4064]	4244	[3610, 5159]	5789	[6000, 5529]
1155	[2036, 2037]	2700	[655, 4065]	4245	[3592, 5160]	5790	[6001, 1229]
1156	[2038, 2039]	2701	[4066, 4063]	4246	[2842, 2929]	5791	[3686, 6002]
1157	[2040, 1841]	2702	[624, 2052]	4247	[5161, 5162]	5792	[5999, 6003]
1158	[2041, 2042]	2703	[1659, 619]	4248	[5141, 3511]	5793	[3931, 6004]
1159	[2043, 1812]	2704	[611, 4067]	4249	[5163, 3213]	5794	[6005, 1213]
1160	[2044, 1657]	2705	[633, 2202]	4250	[3495, 3422]	5795	[6006, 6007]
1161	[2045, 2046]	2706	[599, 4068]	4251	[1517, 5164]	5796	[6008, 3150]

1162	[2047, 2048]	2707	[4069, 4070]	4252	[3834, 3474]	5797	[5582, 1527]
1163	[1657, 1658]	2708	[4071, 4072]	4253	[3264, 3391]	5798	[5205, 375]
1164	[626, 2043]	2709	[4073, 4074]	4254	[5165, 3345]	5799	[3035, 4960]
1165	[2049, 1659]	2710	[4075, 4076]	4255	[4000, 3294]	5800	[5181, 1621]
1166	[622, 624]	2711	[4077, 2014]	4256	[5166, 5167]	5801	[339, 5543]
1167	[2050, 2043]	2712	[4078, 1725]	4257	[3897, 5168]	5802	[2838, 6009]
1168	[2051, 1811]	2713	[4079, 4080]	4258	[5169, 5170]	5803	[6010, 3849]
1169	[2051, 625]	2714	[4073, 4081]	4259	[5091, 1221]	5804	[3057, 3450]
1170	[1809, 2052]	2715	[4082, 4083]	4260	[5171, 4974]	5805	[6011, 5364]
1171	[1809, 2047]	2716	[4084, 2121]	4261	[5172, 5173]	5806	[3694, 3052]
1172	[2053, 1657]	2717	[2279, 4085]	4262	[5174, 336]	5807	[6012, 5692]
1173	[2054, 2055]	2718	[4086, 4087]	4263	[5175, 2850]	5808	[3390, 4998]
1174	[907, 789]	2719	[2018, 4088]	4264	[1240, 5176]	5809	[1449, 6013]
1175	[172, 2056]	2720	[1888, 4089]	4265	[5177, 5178]	5810	[1091, 6014]
1176	[2057, 2058]	2721	[2642, 4072]	4266	[3172, 5179]	5811	[5608, 448]
1177	[2059, 2060]	2722	[4090, 1760]	4267	[5180, 5181]	5812	[6015, 1011]
1178	[2061, 2062]	2723	[2052, 2365]	4268	[1355, 5182]	5813	[6016, 5172]
1179	[2063, 668]	2724	[624, 2047]	4269	[3988, 5064]	5814	[6017, 114]
1180	[206, 2064]	2725	[4091, 4092]	4270	[939, 5183]	5815	[5540, 6018]
1181	[1808, 2065]	2726	[4093, 1787]	4271	[5184, 3715]	5816	[5009, 3067]
1182	[2066, 2067]	2727	[4094, 2100]	4272	[5185, 5186]	5817	[6019, 1360]
1183	[2068, 2069]	2728	[4030, 2589]	4273	[3343, 5187]	5818	[2678, 6020]
1184	[2070, 2071]	2729	[4095, 611]	4274	[5188, 5189]	5819	[2851, 5640]
1185	[2072, 2073]	2730	[2180, 1784]	4275	[5190, 3207]	5820	[6021, 6022]
1186	[2074, 824]	2731	[2265, 4096]	4276	[5191, 3381]	5821	[3920, 6023]
1187	[2075, 2076]	2732	[841, 211]	4277	[5192, 5193]	5822	[6024, 5326]
1188	[2077, 1832]	2733	[652, 4097]	4278	[1651, 259]	5823	[5051, 1505]
1189	[2078, 2079]	2734	[4098, 192]	4279	[3752, 3873]	5824	[3959, 1081]
1190	[2080, 703]	2735	[893, 4099]	4280	[5194, 2798]	5825	[2829, 6025]
1191	[1837, 2081]	2736	[4100, 4101]	4281	[3233, 1279]	5826	[6026, 3983]
1192	[2082, 783]	2737	[2637, 4102]	4282	[3620, 388]	5827	[5420, 5081]
1193	[2083, 1742]	2738	[2332, 4103]	4283	[5195, 3914]	5828	[6027, 5982]
1194	[2084, 2085]	2739	[1677, 170]	4284	[5196, 5197]	5829	[3807, 1303]
1195	[2086, 2087]	2740	[4104, 4105]	4285	[2986, 5198]	5830	[5484, 5257]
1196	[2088, 2089]	2741	[4106, 4107]	4286	[3384, 5199]	5831	[6028, 1437]
1197	[2090, 2091]	2742	[4108, 4109]	4287	[5200, 5201]	5832	[6029, 3026]
1198	[723, 2092]	2743	[2366, 2448]	4288	[961, 5144]	5833	[6030, 3964]
1199	[1896, 2093]	2744	[4110, 4111]	4289	[3135, 5202]	5834	[381, 3881]
1200	[2094, 590]	2745	[4095, 4112]	4290	[3204, 4991]	5835	[5297, 481]
1201	[2095, 2027]	2746	[4113, 670]	4291	[2984, 3469]	5836	[3532, 6031]
1202	[2096, 131]	2747	[1671, 4114]	4292	[5203, 3763]	5837	[5016, 3948]
1203	[2097, 1749]	2748	[4020, 36]	4293	[5204, 5205]	5838	[5258, 6032]
1204	[2098, 2099]	2749	[4115, 4116]	4294	[1224, 5206]	5839	[5028, 6033]
1205	[2034, 2100]	2750	[2068, 4117]	4295	[3691, 2704]	5840	[3672, 1465]

1206	[630, 2101]	2751	[4118, 4119]	4296	[3719, 3387]	5841	[3813, 1313]
1207	[2102, 2103]	2752	[2275, 4120]	4297	[5207, 5208]	5842	[3162, 6034]
1208	[2104, 2105]	2753	[1754, 4121]	4298	[5209, 2914]	5843	[3858, 1123]
1209	[765, 2106]	2754	[4122, 4123]	4299	[3402, 1430]	5844	[3874, 5603]
1210	[1761, 2107]	2755	[707, 212]	4300	[3410, 1244]	5845	[3977, 3724]
1211	[2108, 2109]	2756	[4124, 515]	4301	[5210, 5211]	5846	[3850, 1153]
1212	[2110, 2111]	2757	[2325, 879]	4302	[5212, 1578]	5847	[5995, 382]
1213	[2112, 2113]	2758	[2256, 2270]	4303	[5213, 3143]	5848	[2902, 6035]
1214	[2114, 680]	2759	[4125, 8]	4304	[3218, 3863]	5849	[1524, 6036]
1215	[2115, 2116]	2760	[4126, 4127]	4305	[5214, 3398]	5850	[5705, 5361]
1216	[2117, 2118]	2761	[2074, 4128]	4306	[1506, 5215]	5851	[6037, 5974]
1217	[2119, 1693]	2762	[4129, 4130]	4307	[4980, 5216]	5852	[5315, 4934]
1218	[2120, 1876]	2763	[2084, 4131]	4308	[5217, 1079]	5853	[6038, 279]
1219	[177, 2121]	2764	[4078, 829]	4309	[1245, 1516]	5854	[6039, 3177]
1220	[2122, 2123]	2765	[1911, 4132]	4310	[5218, 5219]	5855	[3942, 3568]
1221	[2124, 891]	2766	[1803, 4133]	4311	[5220, 1397]	5856	[3868, 3494]
1222	[1678, 2125]	2767	[2360, 2629]	4312	[5221, 1399]	5857	[6040, 946]
1223	[1771, 725]	2768	[1912, 1776]	4313	[5222, 5157]	5858	[280, 6041]
1224	[1748, 2126]	2769	[4134, 4135]	4314	[1148, 3191]	5859	[6042, 6043]
1225	[9, 2127]	2770	[4136, 4137]	4315	[5223, 5224]	5860	[6044, 5313]
1226	[2128, 199]	2771	[4138, 2441]	4316	[1487, 5225]	5861	[3261, 6017]
1227	[2129, 2130]	2772	[1950, 4139]	4317	[1025, 3541]	5862	[3196, 5687]
1228	[1932, 2131]	2773	[2619, 4140]	4318	[443, 5226]	5863	[1277, 6045]
1229	[2132, 2069]	2774	[2215, 4141]	4319	[5227, 5228]	5864	[1272, 5739]
1230	[2133, 2134]	2775	[4023, 4142]	4320	[3756, 72]	5865	[2777, 2676]
1231	[1828, 2135]	2776	[4143, 2296]	4321	[3963, 2725]	5866	[3632, 4951]
1232	[2136, 1749]	2777	[4144, 2371]	4322	[5182, 3032]	5867	[6046, 1088]
1233	[2137, 2138]	2778	[4145, 599]	4323	[5229, 3770]	5868	[4981, 5309]
1234	[2139, 1893]	2779	[2063, 603]	4324	[5230, 3822]	5869	[3055, 3751]
1235	[2140, 2141]	2780	[4146, 4147]	4325	[3958, 5231]	5870	[6047, 1428]
1236	[740, 2142]	2781	[4148, 4149]	4326	[1423, 5232]	5871	[6048, 3471]
1237	[2002, 2143]	2782	[823, 1673]	4327	[3580, 4004]	5872	[5475, 1278]
1238	[2144, 2145]	2783	[1847, 1909]	4328	[5233, 5234]	5873	[6049, 5057]
1239	[2146, 593]	2784	[528, 4150]	4329	[5235, 3978]	5874	[20, 1595]
1240	[2147, 2148]	2785	[4151, 4152]	4330	[5236, 5237]	5875	[4986, 5446]
1241	[2149, 709]	2786	[2221, 815]	4331	[5238, 5239]	5876	[6050, 5678]
1242	[2150, 1986]	2787	[2640, 4153]	4332	[5240, 3420]	5877	[4930, 1394]
1243	[2102, 2151]	2788	[2379, 2558]	4333	[3917, 5241]	5878	[5170, 6051]
1244	[2152, 2153]	2789	[4154, 4155]	4334	[1008, 4931]	5879	[5254, 1640]
1245	[2154, 2155]	2790	[641, 793]	4335	[5242, 5243]	5880	[6052, 1297]
1246	[2156, 2157]	2791	[550, 898]	4336	[1485, 3550]	5881	[3590, 3287]
1247	[2158, 2159]	2792	[1941, 4156]	4337	[5244, 5080]	5882	[6053, 5171]
1248	[2160, 2161]	2793	[4157, 755]	4338	[5245, 3982]	5883	[5677, 6054]
1249	[2162, 11]	2794	[4158, 4159]	4339	[5246, 5247]	5884	[5335, 3530]

1250	[2163, 2164]	2795	[4160, 4161]	4340	[3266, 5248]	5885	[5206, 4989]
1251	[557, 2135]	2796	[4162, 4163]	4341	[5249, 3124]	5886	[3018, 5030]
1252	[2165, 774]	2797	[4164, 753]	4342	[3304, 5250]	5887	[1562, 5508]
1253	[2166, 2167]	2798	[1680, 1695]	4343	[3938, 5251]	5888	[6055, 5233]
1254	[222, 2168]	2799	[4165, 2572]	4344	[5252, 5253]	5889	[5074, 3006]
1255	[1815, 2169]	2800	[4166, 2317]	4345	[1438, 5254]	5890	[1068, 6056]
1256	[2170, 503]	2801	[162, 1954]	4346	[3614, 3516]	5891	[6057, 5105]
1257	[753, 627]	2802	[2190, 1703]	4347	[3870, 5255]	5892	[6058, 6059]
1258	[597, 2171]	2803	[1694, 4167]	4348	[358, 3981]	5893	[2764, 6060]
1259	[2172, 2173]	2804	[2117, 531]	4349	[5256, 5112]	5894	[1070, 6061]
1260	[2174, 1849]	2805	[1727, 4168]	4350	[5257, 2898]	5895	[5449, 6062]
1261	[2175, 2176]	2806	[4169, 4170]	4351	[3987, 3649]	5896	[1275, 5979]
1262	[2059, 2177]	2807	[4171, 4172]	4352	[3333, 5258]	5897	[3637, 6063]
1263	[842, 1857]	2808	[2532, 2228]	4353	[3284, 5192]	5898	[5706, 1388]
1264	[2178, 2179]	2809	[4173, 4174]	4354	[5259, 3254]	5899	[5703, 6064]
1265	[2180, 1664]	2810	[4175, 4176]	4355	[3806, 5260]	5900	[5701, 84]
1266	[1912, 1714]	2811	[4177, 4178]	4356	[1479, 3501]	5901	[6065, 6066]
1267	[2181, 2182]	2812	[4179, 4180]	4357	[5261, 3641]	5902	[5750, 6067]
1268	[2183, 2013]	2813	[2247, 4181]	4358	[3613, 1067]	5903	[6068, 3063]
1269	[2184, 2185]	2814	[4182, 1733]	4359	[1142, 5262]	5904	[6069, 1289]
1270	[2186, 2187]	2815	[586, 2475]	4360	[5179, 5263]	5905	[6070, 3735]
1271	[2188, 2189]	2816	[4046, 4183]	4361	[1156, 5264]	5906	[6071, 3071]
1272	[2190, 2191]	2817	[4184, 1936]	4362	[5134, 5265]	5907	[5477, 6072]
1273	[2192, 2193]	2818	[4058, 4185]	4363	[362, 3321]	5908	[6073, 6074]
1274	[2194, 2039]	2819	[2339, 2337]	4364	[5266, 5267]	5909	[3750, 6075]
1275	[8, 1747]	2820	[496, 4186]	4365	[5268, 5149]	5910	[6076, 3112]
1276	[1937, 2195]	2821	[2418, 554]	4366	[1059, 5269]	5911	[3289, 5746]
1277	[554, 2196]	2822	[1971, 4187]	4367	[2883, 5270]	5912	[6077, 1264]
1278	[597, 2197]	2823	[2331, 802]	4368	[5271, 5272]	5913	[6078, 6079]
1279	[2198, 2199]	2824	[2374, 4188]	4369	[5273, 5274]	5914	[6080, 5606]
1280	[2200, 799]	2825	[2565, 4082]	4370	[5275, 5022]	5915	[6081, 5384]
1281	[2201, 2202]	2826	[2064, 4189]	4371	[5276, 5277]	5916	[3862, 6082]
1282	[2203, 2204]	2827	[4190, 4191]	4372	[2849, 5278]	5917	[5260, 1334]
1283	[2205, 2206]	2828	[4192, 1706]	4373	[3160, 2792]	5918	[6083, 3249]
1284	[1759, 1673]	2829	[538, 4193]	4374	[5279, 3725]	5919	[3973, 2841]
1285	[2207, 2208]	2830	[4194, 4195]	4375	[119, 3417]	5920	[6084, 4005]
1286	[192, 2209]	2831	[4196, 4197]	4376	[3033, 4942]	5921	[6085, 5536]
1287	[2210, 2211]	2832	[2387, 4198]	4377	[5280, 916]	5922	[6086, 5511]
1288	[2088, 145]	2833	[2600, 4199]	4378	[5186, 5281]	5923	[4014, 1107]
1289	[2212, 2213]	2834	[1985, 1878]	4379	[3597, 5282]	5924	[1471, 3950]
1290	[2214, 2215]	2835	[4200, 157]	4380	[3313, 5025]	5925	[6087, 4976]
1291	[1869, 1843]	2836	[4201, 2225]	4381	[5283, 5284]	5926	[1074, 6088]
1292	[2216, 2217]	2837	[52, 4202]	4382	[1549, 5285]	5927	[2705, 6089]
1293	[2218, 2067]	2838	[4203, 2123]	4383	[2819, 5286]	5928	[6090, 6070]

1294	[2219, 2220]	2839	[714, 4061]	4384	[5287, 5288]	5929	[1212, 5111]
1295	[2120, 2221]	2840	[609, 4204]	4385	[1190, 2857]	5930	[3721, 3586]
1296	[2222, 2223]	2841	[1898, 227]	4386	[1258, 327]	5931	[6091, 5549]
1297	[1957, 2224]	2842	[4205, 2277]	4387	[5289, 5290]	5932	[5359, 3302]
1298	[811, 2225]	2843	[558, 4206]	4388	[3435, 5291]	5933	[6092, 3061]
1299	[2226, 2227]	2844	[130, 4207]	4389	[5292, 5293]	5934	[5344, 5654]
1300	[1990, 2228]	2845	[2132, 4117]	4390	[3793, 5294]	5935	[997, 6093]
1301	[2229, 2230]	2846	[2163, 4208]	4391	[397, 1257]	5936	[5042, 6094]
1302	[2231, 1716]	2847	[1866, 4209]	4392	[3854, 5295]	5937	[6095, 1183]
1303	[1999, 2232]	2848	[766, 4210]	4393	[3318, 5150]	5938	[1268, 6096]
1304	[2233, 2234]	2849	[4211, 2285]	4394	[5219, 5296]	5939	[6097, 2843]
1305	[2235, 2236]	2850	[4212, 2585]	4395	[1078, 5297]	5940	[6098, 1612]
1306	[2237, 2238]	2851	[4213, 4214]	4396	[4973, 3539]	5941	[2739, 1358]
1307	[2239, 2240]	2852	[2491, 2242]	4397	[5298, 5299]	5942	[6099, 5531]
1308	[2241, 2242]	2853	[2389, 4028]	4398	[1568, 297]	5943	[5168, 3714]
1309	[2243, 2244]	2854	[785, 1938]	4399	[4011, 1039]	5944	[6100, 2888]
1310	[2245, 2246]	2855	[4215, 133]	4400	[3291, 5300]	5945	[6101, 64]
1311	[2247, 636]	2856	[4216, 1743]	4401	[5301, 5302]	5946	[5053, 6102]
1312	[2248, 2249]	2857	[1705, 4217]	4402	[5303, 1281]	5947	[3151, 1370]
1313	[2250, 2251]	2858	[703, 2084]	4403	[2996, 5304]	5948	[6103, 6104]
1314	[2252, 2253]	2859	[520, 4218]	4404	[5305, 5306]	5949	[3563, 6105]
1315	[1861, 2254]	2860	[655, 4219]	4405	[2825, 2714]	5950	[6106, 1446]
1316	[1688, 2255]	2861	[4220, 4221]	4406	[5307, 3677]	5951	[5517, 5671]
1317	[1854, 876]	2862	[4222, 2564]	4407	[5308, 5056]	5952	[6007, 6107]
1318	[1883, 2062]	2863	[2539, 4223]	4408	[5309, 5310]	5953	[6108, 6109]
1319	[1732, 2256]	2864	[4224, 4225]	4409	[5311, 5312]	5954	[5159, 6110]
1320	[2257, 2258]	2865	[505, 159]	4410	[5313, 5148]	5955	[1460, 267]
1321	[640, 792]	2866	[1850, 2153]	4411	[4999, 5314]	5956	[6111, 6112]
1322	[2259, 526]	2867	[4226, 2221]	4412	[3250, 5315]	5957	[3523, 5435]
1323	[2101, 835]	2868	[783, 2348]	4413	[5316, 5317]	5958	[3848, 2952]
1324	[2260, 2261]	2869	[4227, 2195]	4414	[1653, 2814]	5959	[6113, 6114]
1325	[2262, 2263]	2870	[4228, 897]	4415	[3282, 1047]	5960	[3183, 6115]
1326	[762, 2264]	2871	[1791, 1940]	4416	[364, 3184]	5961	[6116, 5069]
1327	[2265, 2266]	2872	[198, 4229]	4417	[5318, 5319]	5962	[3922, 6117]
1328	[2267, 2268]	2873	[2097, 4230]	4418	[5320, 5321]	5963	[6118, 378]
1329	[518, 2269]	2874	[4231, 510]	4419	[3853, 367]	5964	[451, 2729]
1330	[1733, 2270]	2875	[579, 4232]	4420	[5322, 5323]	5965	[5290, 5977]
1331	[1788, 2271]	2876	[634, 4233]	4421	[980, 5324]	5966	[5239, 4007]
1332	[2272, 1996]	2877	[4234, 2363]	4422	[1197, 1113]	5967	[5162, 6119]
1333	[2273, 2274]	2878	[4113, 4235]	4423	[1371, 5325]	5968	[5723, 5675]
1334	[2275, 2276]	2879	[4236, 2467]	4424	[5326, 5327]	5969	[6120, 6121]
1335	[1780, 2277]	2880	[4237, 4238]	4425	[5328, 3556]	5970	[6122, 5500]
1336	[1717, 2278]	2881	[4214, 2197]	4426	[5122, 4006]	5971	[6123, 1372]
1337	[2279, 2280]	2882	[552, 2420]	4427	[5329, 5330]	5972	[5726, 3411]

1338	[1876, 815]	2883	[1938, 4239]	4428	[5331, 5332]	5973	[6124, 619]
1339	[2281, 533]	2884	[4240, 4241]	4429	[5333, 3688]	5974	[2368, 4101]
1340	[2282, 2283]	2885	[773, 4242]	4430	[5334, 5335]	5975	[4274, 4688]
1341	[2284, 2285]	2886	[2344, 2130]	4431	[5336, 5337]	5976	[4122, 4796]
1342	[2286, 2287]	2887	[4243, 4187]	4432	[5338, 5339]	5977	[4898, 2276]
1343	[2288, 734]	2888	[4244, 745]	4433	[3421, 1092]	5978	[4464, 5862]
1344	[32, 2289]	2889	[4245, 4246]	4434	[947, 3161]	5979	[2165, 4242]
1345	[42, 2290]	2890	[2444, 4247]	4435	[3852, 3434]	5980	[4317, 4738]
1346	[706, 1697]	2891	[4248, 591]	4436	[3453, 940]	5981	[2504, 504]
1347	[1696, 489]	2892	[4249, 1918]	4437	[3940, 5340]	5982	[5969, 1925]
1348	[2291, 2292]	2893	[4250, 721]	4438	[5341, 5342]	5983	[4070, 4387]
1349	[2293, 2294]	2894	[4251, 650]	4439	[5343, 5344]	5984	[2212, 2602]
1350	[2295, 2296]	2895	[2447, 2367]	4440	[5345, 304]	5985	[5971, 5949]
1351	[2297, 2298]	2896	[2365, 2053]	4441	[5346, 2885]	5986	[4500, 4203]
1352	[504, 2299]	2897	[620, 2051]	4442	[5347, 3058]	5987	[5868, 4407]
1353	[2186, 846]	2898	[4252, 4226]	4443	[5348, 1362]	5988	[2272, 2637]
1354	[2300, 2301]	2899	[1775, 541]	4444	[5349, 5350]	5989	[4197, 1862]
1355	[1691, 2155]	2900	[1966, 2176]	4445	[5351, 5352]	5990	[1777, 2570]
1356	[1683, 178]	2901	[2415, 4253]	4446	[3155, 5353]	5991	[4924, 4141]
1357	[2302, 2303]	2902	[1759, 711]	4447	[3181, 5190]	5992	[4623, 1881]
1358	[2304, 521]	2903	[806, 1984]	4448	[5354, 3108]	5993	[4087, 1688]
1359	[2305, 2306]	2904	[4254, 4084]	4449	[3658, 1602]	5994	[5941, 727]
1360	[2307, 2308]	2905	[4255, 4256]	4450	[3893, 5355]	5995	[5817, 729]
1361	[2309, 2310]	2906	[4257, 2219]	4451	[5356, 5357]	5996	[4573, 4473]
1362	[2311, 1880]	2907	[4258, 2159]	4452	[5358, 5359]	5997	[2324, 2535]
1363	[2312, 2145]	2908	[1768, 4248]	4453	[3883, 5360]	5998	[5915, 6125]
1364	[2264, 484]	2909	[4259, 4260]	4454	[1308, 1028]	5999	[2139, 4701]
1365	[2313, 2314]	2910	[1839, 4261]	4455	[5361, 5077]	6000	[4386, 5954]
1366	[2315, 2116]	2911	[733, 1782]	4456	[5362, 5363]	6001	[4715, 2133]
1367	[2316, 2317]	2912	[4262, 1677]	4457	[5364, 5365]	6002	[4820, 5823]
1368	[2318, 2319]	2913	[4263, 4264]	4458	[3272, 3960]	6003	[2420, 2315]
1369	[2320, 1797]	2914	[4033, 4127]	4459	[4940, 5366]	6004	[4266, 5938]
1370	[1712, 2321]	2915	[2037, 4261]	4460	[3818, 5367]	6005	[2067, 2294]
1371	[2322, 2323]	2916	[4265, 4266]	4461	[5293, 5368]	6006	[52, 5753]
1372	[516, 2324]	2917	[4198, 4267]	4462	[5369, 3311]	6007	[1973, 4648]
1373	[2325, 152]	2918	[2096, 4207]	4463	[975, 5370]	6008	[6126, 198]
1374	[2326, 2327]	2919	[4268, 4036]	4464	[5371, 1323]	6009	[4630, 6127]
1375	[2328, 1672]	2920	[39, 4269]	4465	[5372, 5373]	6010	[2606, 5863]
1376	[2329, 2330]	2921	[500, 4270]	4466	[3674, 1604]	6011	[4881, 689]
1377	[2331, 891]	2922	[1976, 487]	4467	[256, 3348]	6012	[5852, 5755]
1378	[2332, 2333]	2923	[4271, 2001]	4468	[3996, 3841]	6013	[5874, 871]
1379	[148, 2334]	2924	[4272, 4273]	4469	[5116, 5374]	6014	[1874, 2184]
1380	[1818, 181]	2925	[4274, 2167]	4470	[5375, 3217]	6015	[862, 2517]
1381	[546, 865]	2926	[1755, 2211]	4471	[5376, 265]	6016	[2471, 4355]

1382	[2335, 2336]	2927	[820, 4275]	4472	[5377, 3129]	6017	[4442, 4829]
1383	[898, 2337]	2928	[4276, 4277]	4473	[3224, 5378]	6018	[215, 4505]
1384	[2338, 2099]	2929	[4278, 4279]	4474	[3595, 5379]	6019	[6128, 2309]
1385	[897, 2339]	2930	[4280, 4281]	4475	[5284, 3226]	6020	[6129, 2438]
1386	[2340, 2341]	2931	[2235, 4282]	4476	[3025, 5380]	6021	[5784, 11]
1387	[2342, 2343]	2932	[4283, 4284]	4477	[5381, 5001]	6022	[4118, 1926]
1388	[2344, 2345]	2933	[2406, 4285]	4478	[3529, 5382]	6023	[6130, 4465]
1389	[227, 2346]	2934	[2104, 4116]	4479	[5383, 5047]	6024	[4437, 4417]
1390	[2034, 2347]	2935	[4286, 1731]	4480	[5384, 5385]	6025	[4343, 1909]
1391	[2348, 2349]	2936	[4287, 4288]	4481	[3215, 3079]	6026	[5968, 4674]
1392	[2350, 1680]	2937	[4224, 4289]	4482	[5386, 5387]	6027	[6128, 5922]
1393	[2351, 808]	2938	[4290, 2425]	4483	[5388, 5389]	6028	[2631, 5905]
1394	[715, 574]	2939	[2181, 4291]	4484	[959, 5390]	6029	[4717, 537]
1395	[1709, 2352]	2940	[1682, 525]	4485	[5391, 5392]	6030	[2441, 4163]
1396	[2353, 2057]	2941	[160, 486]	4486	[1432, 5393]	6031	[4606, 6131]
1397	[1721, 2354]	2942	[2579, 4226]	4487	[5193, 5394]	6032	[5820, 4858]
1398	[244, 2355]	2943	[4292, 1951]	4488	[3451, 5043]	6033	[4806, 4418]
1399	[878, 152]	2944	[4293, 4294]	4489	[5395, 3240]	6034	[4891, 5972]
1400	[2251, 2356]	2945	[755, 4295]	4490	[3644, 5396]	6035	[526, 54]
1401	[789, 2357]	2946	[4271, 2493]	4491	[5226, 1491]	6036	[4483, 834]
1402	[1902, 2358]	2947	[4296, 4297]	4492	[3228, 5397]	6037	[6132, 2096]
1403	[2359, 1775]	2948	[4298, 4061]	4493	[5164, 5398]	6038	[6133, 544]
1404	[2360, 2361]	2949	[889, 4088]	4494	[5399, 5019]	6039	[4687, 2157]
1405	[1795, 2362]	2950	[4205, 1781]	4495	[5400, 98]	6040	[4853, 4566]
1406	[1793, 2363]	2951	[4242, 4299]	4496	[5401, 5402]	6041	[6134, 5868]
1407	[2364, 682]	2952	[4300, 2035]	4497	[5350, 3767]	6042	[4810, 770]
1408	[626, 1660]	2953	[4301, 4302]	4498	[5403, 5404]	6043	[4259, 5937]
1409	[2047, 2365]	2954	[2418, 737]	4499	[5405, 2696]	6044	[5925, 646]
1410	[2046, 2045]	2955	[4303, 677]	4500	[3324, 1090]	6045	[2195, 2184]
1411	[2040, 125]	2956	[4304, 207]	4501	[5385, 354]	6046	[5774, 1935]
1412	[2366, 2367]	2957	[4305, 4306]	4502	[5406, 5407]	6047	[6135, 2389]
1413	[2368, 2369]	2958	[4288, 1786]	4503	[2833, 5408]	6048	[5942, 692]
1414	[1737, 1891]	2959	[4074, 4307]	4504	[3782, 3970]	6049	[5854, 2637]
1415	[2370, 1873]	2960	[4308, 1865]	4505	[2688, 5409]	6050	[4249, 4045]
1416	[2371, 2372]	2961	[619, 2472]	4506	[1489, 5410]	6051	[553, 2115]
1417	[736, 554]	2962	[1660, 1812]	4507	[3452, 5411]	6052	[5801, 6136]
1418	[144, 2089]	2963	[4309, 4056]	4508	[5265, 2965]	6053	[6135, 4791]
1419	[2373, 1774]	2964	[494, 708]	4509	[5412, 3928]	6054	[2420, 2115]
1420	[2374, 2246]	2965	[785, 4310]	4510	[5413, 5414]	6055	[6133, 795]
1421	[2375, 2376]	2966	[4311, 4312]	4511	[3041, 5415]	6056	[4110, 4279]
1422	[2377, 2378]	2967	[2431, 2396]	4512	[435, 3876]	6057	[2245, 4188]
1423	[2379, 563]	2968	[818, 778]	4513	[5272, 5416]	6058	[879, 1734]
1424	[2380, 2381]	2969	[4313, 1970]	4514	[5417, 5153]	6059	[4665, 4838]
1425	[2382, 2383]	2970	[4314, 4315]	4515	[5418, 1374]	6060	[4649, 2550]

1426	[2384, 2385]	2971	[4316, 4317]	4516	[5035, 5419]	6061	[5812, 5959]
1427	[2386, 1977]	2972	[4318, 2443]	4517	[3140, 5420]	6062	[5911, 4861]
1428	[2387, 2388]	2973	[4319, 1924]	4518	[5247, 3736]	6063	[4451, 5917]
1429	[2389, 2390]	2974	[4320, 2164]	4519	[2946, 5421]	6064	[4809, 5943]
1430	[2264, 2391]	2975	[2449, 2341]	4520	[5422, 5423]	6065	[6137, 4810]
1431	[739, 2392]	2976	[663, 4321]	4521	[5424, 5425]	6066	[6138, 4680]
1432	[2393, 2394]	2977	[4036, 4322]	4522	[5314, 3656]	6067	[4062, 4412]
1433	[2395, 2396]	2978	[4323, 4080]	4523	[2772, 456]	6068	[6139, 6140]
1434	[2397, 2398]	2979	[4027, 1921]	4524	[449, 2785]	6069	[6141, 2214]
1435	[224, 2399]	2980	[2012, 4324]	4525	[2788, 5426]	6070	[5879, 4228]
1436	[2400, 1707]	2981	[646, 4325]	4526	[5427, 3273]	6071	[5970, 4856]
1437	[1749, 2401]	2982	[2081, 4326]	4527	[5428, 1192]	6072	[5930, 5908]
1438	[2402, 2403]	2983	[218, 4327]	4528	[1630, 2805]	6073	[633, 5793]
1439	[1675, 566]	2984	[2586, 1744]	4529	[5429, 5430]	6074	[2520, 5929]
1440	[2404, 2405]	2985	[4328, 1908]	4530	[3684, 5431]	6075	[4600, 12]
1441	[2406, 2407]	2986	[1973, 232]	4531	[5432, 5433]	6076	[581, 2109]
1442	[46, 2224]	2987	[4329, 1977]	4532	[2900, 5075]	6077	[2408, 4904]
1443	[2408, 839]	2988	[2628, 2361]	4533	[5434, 5066]	6078	[1784, 4664]
1444	[2409, 2410]	2989	[519, 4330]	4534	[5435, 5038]	6079	[1735, 867]
1445	[1669, 2411]	2990	[4331, 4332]	4535	[5436, 5437]	6080	[2471, 2614]
1446	[631, 2324]	2991	[813, 4333]	4536	[5438, 3330]	6081	[4023, 2283]
1447	[2257, 2253]	2992	[850, 849]	4537	[5439, 3555]	6082	[2312, 4695]
1448	[2412, 1684]	2993	[537, 4334]	4538	[1583, 954]	6083	[6126, 2128]
1449	[2413, 2329]	2994	[2178, 880]	4539	[5070, 5242]	6084	[6139, 6142]
1450	[2414, 186]	2995	[2326, 4335]	4540	[5440, 5441]	6085	[1668, 2312]
1451	[2415, 2416]	2996	[1885, 4336]	4541	[4948, 2745]	6086	[1983, 807]
1452	[2417, 2338]	2997	[1659, 4019]	4542	[5442, 5443]	6087	[6143, 2065]
1453	[2296, 2418]	2998	[2046, 2046]	4543	[2685, 5444]	6088	[5857, 4783]
1454	[212, 134]	2999	[4018, 2049]	4544	[87, 5445]	6089	[4190, 5966]
1455	[2419, 2420]	3000	[1658, 1661]	4545	[5446, 5169]	6090	[2616, 4511]
1456	[204, 1662]	3001	[244, 673]	4546	[5379, 5140]	6091	[745, 5815]
1457	[601, 2421]	3002	[4337, 618]	4547	[85, 5447]	6092	[2067, 4577]
1458	[2422, 2423]	3003	[4338, 635]	4548	[5448, 5449]	6093	[4799, 4895]
1459	[1855, 2424]	3004	[1785, 4339]	4549	[5160, 5050]	6094	[2614, 4356]
1460	[608, 641]	3005	[674, 2348]	4550	[3068, 5450]	6095	[4496, 771]
1461	[1968, 2425]	3006	[1836, 4340]	4551	[5451, 5362]	6096	[537, 2235]
1462	[2426, 2427]	3007	[2504, 2582]	4552	[3202, 5452]	6097	[6144, 584]
1463	[2009, 1928]	3008	[4341, 2302]	4553	[5453, 308]	6098	[1668, 2144]
1464	[824, 2428]	3009	[4342, 4343]	4554	[5250, 5259]	6099	[5868, 579]
1465	[2429, 2083]	3010	[4344, 4345]	4555	[5454, 3118]	6100	[4696, 4315]
1466	[1790, 1816]	3011	[4346, 4347]	4556	[2992, 5455]	6101	[6132, 130]
1467	[2430, 2140]	3012	[2509, 4348]	4557	[1575, 5456]	6102	[1802, 2057]
1468	[2431, 2432]	3013	[4349, 538]	4558	[1626, 3347]	6103	[6137, 769]
1469	[2433, 2434]	3014	[2285, 1992]	4559	[3708, 5457]	6104	[6145, 2388]

1470	[2435, 821]	3015	[2338, 4350]	4560	[5458, 3612]	6105	[4425, 6125]
1471	[2436, 2437]	3016	[4351, 4352]	4561	[1555, 5459]	6106	[4835, 4635]
1472	[2438, 2439]	3017	[2635, 691]	4562	[1040, 5086]	6107	[830, 6127]
1473	[2440, 2441]	3018	[4353, 2003]	4563	[5460, 979]	6108	[4358, 5780]
1474	[1764, 2442]	3019	[4258, 4354]	4564	[2956, 5461]	6109	[5910, 6146]
1475	[2216, 2443]	3020	[4355, 4356]	4565	[3802, 5322]	6110	[4405, 1879]
1476	[2444, 2445]	3021	[1691, 2190]	4566	[3407, 5462]	6111	[6147, 688]
1477	[1929, 2446]	3022	[4357, 547]	4567	[5151, 3152]	6112	[6148, 2163]
1478	[1998, 1921]	3023	[2651, 4358]	4568	[3115, 5207]	6113	[2421, 886]
1479	[2447, 2448]	3024	[4359, 4360]	4569	[5463, 5464]	6114	[4479, 6146]
1480	[2449, 2450]	3025	[4361, 1863]	4570	[5465, 5463]	6115	[6130, 874]
1481	[1935, 2451]	3026	[1707, 4296]	4571	[3645, 2880]	6116	[6144, 4108]
1482	[891, 2382]	3027	[2182, 4362]	4572	[2988, 3288]	6117	[5931, 4855]
1483	[2452, 2453]	3028	[4363, 1761]	4573	[3466, 5048]	6118	[5768, 2342]
1484	[2417, 2098]	3029	[2605, 4364]	4574	[3557, 2755]	6119	[4611, 2620]
1485	[2111, 1787]	3030	[4365, 2588]	4575	[2998, 3242]	6120	[5955, 2600]
1486	[1816, 2370]	3031	[2350, 1694]	4576	[5466, 3810]	6121	[6149, 1925]
1487	[2454, 2455]	3032	[2155, 1703]	4577	[3262, 5467]	6122	[6150, 4038]
1488	[2200, 2456]	3033	[2562, 4366]	4578	[5468, 2941]	6123	[241, 883]
1489	[2457, 1946]	3034	[4354, 4367]	4579	[1318, 5311]	6124	[6151, 1161]
1490	[2177, 2458]	3035	[2295, 2502]	4580	[4009, 1377]	6125	[5665, 5065]
1491	[2459, 183]	3036	[2578, 1790]	4581	[4968, 5469]	6126	[6152, 2874]
1492	[151, 2460]	3037	[2526, 496]	4582	[3382, 5470]	6127	[6153, 6154]
1493	[2461, 2462]	3038	[4323, 4368]	4583	[5471, 3912]	6128	[3137, 3598]
1494	[54, 2463]	3039	[678, 4302]	4584	[5472, 5473]	6129	[6155, 5204]
1495	[2464, 2017]	3040	[2527, 1890]	4585	[5474, 1350]	6130	[6156, 3142]
1496	[2465, 610]	3041	[2347, 4369]	4586	[5277, 5133]	6131	[3602, 6157]
1497	[2466, 2467]	3042	[4370, 584]	4587	[309, 5475]	6132	[6158, 261]
1498	[1946, 614]	3043	[659, 2274]	4588	[5430, 5287]	6133	[3357, 1024]
1499	[2468, 2469]	3044	[4371, 4372]	4589	[5476, 5477]	6134	[6159, 1199]
1500	[2470, 2471]	3045	[1708, 4297]	4590	[5478, 5479]	6135	[5199, 3703]
1501	[2472, 1810]	3046	[142, 4373]	4591	[5480, 3775]	6136	[4928, 6160]
1502	[1811, 626]	3047	[4374, 2125]	4592	[5481, 1480]	6137	[5989, 3366]
1503	[816, 2473]	3048	[4375, 4376]	4593	[1103, 5095]	6138	[6161, 6162]
1504	[2433, 2474]	3049	[4377, 4378]	4594	[5482, 2731]	6139	[3322, 1547]
1505	[2475, 2476]	3050	[139, 4379]	4595	[5483, 5484]	6140	[3994, 6163]
1506	[2477, 2478]	3051	[4370, 4108]	4596	[5485, 5486]	6141	[95, 3463]
1507	[2479, 2480]	3052	[4380, 4110]	4597	[5487, 5333]	6142	[315, 6164]
1508	[2481, 2482]	3053	[1728, 4381]	4598	[5488, 415]	6143	[3544, 6028]
1509	[2141, 2483]	3054	[1703, 534]	4599	[347, 5489]	6144	[6165, 3886]
1510	[2484, 2485]	3055	[4382, 814]	4600	[5490, 5491]	6145	[6166, 5751]
1511	[2486, 2267]	3056	[1763, 4383]	4601	[5049, 3116]	6146	[3431, 1452]
1512	[2487, 2488]	3057	[4384, 494]	4602	[5492, 5493]	6147	[6102, 2937]
1513	[2489, 2490]	3058	[4385, 2111]	4603	[5494, 5495]	6148	[6167, 3399]

1514	[2491, 2492]	3059	[744, 4386]	4604	[5496, 3201]	6149	[6168, 5034]
1515	[2000, 2493]	3060	[4387, 2289]	4605	[3608, 4956]	6150	[6169, 3308]
1516	[2494, 1702]	3061	[4212, 4216]	4606	[2935, 3147]	6151	[6170, 2047]
1517	[2495, 2496]	3062	[4144, 680]	4607	[5394, 2826]	6152	[5756, 4809]
1518	[2497, 2498]	3063	[1875, 4388]	4608	[5497, 5498]	6153	[4081, 5909]
1519	[2499, 2500]	3064	[4389, 2617]	4609	[5416, 2782]	6154	[5781, 4879]
1520	[836, 2501]	3065	[2281, 4390]	4610	[3949, 5499]	6155	[4875, 731]
1521	[2502, 2418]	3066	[850, 850]	4611	[5500, 5120]	6156	[4780, 5902]
1522	[1974, 2503]	3067	[4391, 53]	4612	[5501, 5502]	6157	[2203, 2597]
1523	[2170, 2504]	3068	[4392, 2461]	4613	[1447, 5503]	6158	[4687, 511]
1524	[2348, 2505]	3069	[4393, 4394]	4614	[5504, 5505]	6159	[5940, 1927]
1525	[183, 2506]	3070	[174, 4395]	4615	[5506, 1386]	6160	[4177, 6131]
1526	[2507, 2508]	3071	[4396, 2474]	4616	[5507, 3972]	6161	[5881, 5832]
1527	[695, 228]	3072	[607, 640]	4617	[5508, 3966]	6162	[6171, 2070]
1528	[2509, 2510]	3073	[4397, 588]	4618	[5509, 3790]	6163	[5950, 5953]
1529	[2511, 143]	3074	[688, 4398]	4619	[5510, 3898]	6164	[4283, 5927]
1530	[2512, 2513]	3075	[4389, 2261]	4620	[81, 3901]	6165	[6143, 2022]
1531	[2514, 2423]	3076	[4399, 2501]	4621	[5211, 3524]	6166	[5923, 1768]
1532	[2267, 2515]	3077	[2158, 4354]	4622	[5511, 5512]	6167	[6172, 2162]
1533	[668, 604]	3078	[4137, 4209]	4623	[370, 5166]	6168	[6172, 5784]
1534	[2516, 2517]	3079	[1954, 2154]	4624	[5513, 5514]	6169	[6150, 5855]
1535	[2518, 880]	3080	[2262, 4400]	4625	[3713, 5417]	6170	[6173, 1409]
1536	[2064, 2519]	3081	[1875, 2185]	4626	[5398, 5483]	6171	[6174, 6175]
1537	[2520, 2521]	3082	[4401, 1765]	4627	[5515, 2957]	6172	[5262, 5490]
1538	[2522, 2523]	3083	[4402, 4403]	4628	[5516, 5517]	6173	[6170, 2052]
1539	[2524, 1862]	3084	[1680, 4167]	4629	[3997, 3553]	6174	[5947, 2068]
1540	[2525, 894]	3085	[35, 4021]	4630	[5518, 986]	6175	[6176, 2213]
1541	[2526, 2527]	3086	[4302, 501]	4631	[5519, 5320]	6176	[6177, 3968]
1542	[751, 2034]	3087	[43, 4404]	4632	[5520, 3175]	6177	[6141, 4863]
1543	[2528, 1892]	3088	[4405, 1697]	4633	[5521, 5308]		
1544	[2529, 706]	3089	[4353, 2143]	4634	[376, 5522]		

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	1030	1	2060	1	3090	1	4120	0	5150	0
1	0	1031	0	2061	1	3091	0	4121	1	5151	0
2	1	1032	0	2062	1	3092	0	4122	1	5152	0
3	0	1033	1	2063	0	3093	0	4123	0	5153	1
4	1	1034	0	2064	1	3094	0	4124	0	5154	1
5	1	1035	1	2065	1	3095	0	4125	1	5155	1
6	0	1036	0	2066	0	3096	1	4126	0	5156	0
7	0	1037	1	2067	0	3097	0	4127	1	5157	1
8	0	1038	1	2068	1	3098	0	4128	1	5158	0
9	1	1039	0	2069	0	3099	0	4129	0	5159	0

10	1	1040	0	2070	0	3100	0	4130	1	5160	0
11	1	1041	0	2071	1	3101	1	4131	1	5161	0
12	1	1042	0	2072	0	3102	0	4132	1	5162	0
13	0	1043	0	2073	0	3103	1	4133	1	5163	0
14	0	1044	1	2074	0	3104	1	4134	0	5164	0
15	0	1045	0	2075	1	3105	1	4135	1	5165	0
16	0	1046	0	2076	1	3106	0	4136	1	5166	0
17	0	1047	1	2077	0	3107	0	4137	0	5167	1
18	0	1048	1	2078	1	3108	0	4138	1	5168	0
19	1	1049	0	2079	0	3109	1	4139	1	5169	0
20	0	1050	0	2080	0	3110	1	4140	0	5170	0
21	1	1051	1	2081	0	3111	0	4141	1	5171	0
22	1	1052	0	2082	1	3112	1	4142	0	5172	1
23	1	1053	1	2083	0	3113	0	4143	0	5173	0
24	0	1054	0	2084	0	3114	1	4144	0	5174	0
25	1	1055	0	2085	0	3115	1	4145	0	5175	1
26	1	1056	0	2086	1	3116	0	4146	0	5176	0
27	0	1057	1	2087	0	3117	0	4147	0	5177	0
28	0	1058	0	2088	1	3118	1	4148	1	5178	0
29	0	1059	0	2089	1	3119	1	4149	0	5179	1
30	1	1060	1	2090	1	3120	1	4150	1	5180	0
31	0	1061	0	2091	1	3121	0	4151	1	5181	1
32	1	1062	0	2092	0	3122	0	4152	0	5182	1
33	0	1063	1	2093	1	3123	0	4153	1	5183	1
34	1	1064	1	2094	0	3124	1	4154	0	5184	0
35	0	1065	0	2095	0	3125	1	4155	0	5185	1
36	0	1066	1	2096	1	3126	0	4156	0	5186	0
37	0	1067	1	2097	1	3127	1	4157	1	5187	1
38	1	1068	1	2098	0	3128	1	4158	1	5188	0
39	1	1069	0	2099	0	3129	1	4159	0	5189	1
40	0	1070	0	2100	1	3130	0	4160	1	5190	0
41	0	1071	0	2101	1	3131	1	4161	1	5191	1
42	0	1072	1	2102	1	3132	1	4162	0	5192	0
43	1	1073	0	2103	1	3133	0	4163	0	5193	1
44	1	1074	0	2104	1	3134	1	4164	1	5194	1
45	1	1075	0	2105	0	3135	1	4165	1	5195	1
46	0	1076	0	2106	0	3136	1	4166	1	5196	1
47	1	1077	0	2107	1	3137	0	4167	1	5197	1
48	0	1078	0	2108	0	3138	0	4168	0	5198	1
49	0	1079	0	2109	0	3139	1	4169	1	5199	0
50	1	1080	1	2110	1	3140	0	4170	1	5200	1
51	1	1081	0	2111	1	3141	1	4171	1	5201	1
52	0	1082	1	2112	0	3142	1	4172	1	5202	1
53	1	1083	1	2113	1	3143	0	4173	1	5203	0

54	1	1084	0	2114	1	3144	0	4174	0	5204	0
55	0	1085	0	2115	1	3145	0	4175	1	5205	1
56	1	1086	1	2116	1	3146	0	4176	1	5206	0
57	0	1087	1	2117	0	3147	1	4177	1	5207	0
58	1	1088	1	2118	0	3148	0	4178	1	5208	0
59	0	1089	1	2119	1	3149	0	4179	1	5209	0
60	1	1090	0	2120	0	3150	0	4180	1	5210	1
61	1	1091	1	2121	1	3151	1	4181	0	5211	1
62	0	1092	1	2122	0	3152	0	4182	0	5212	0
63	1	1093	1	2123	0	3153	0	4183	0	5213	1
64	1	1094	0	2124	0	3154	1	4184	0	5214	0
65	0	1095	1	2125	0	3155	0	4185	0	5215	0
66	0	1096	0	2126	1	3156	1	4186	1	5216	0
67	0	1097	1	2127	0	3157	0	4187	0	5217	1
68	1	1098	1	2128	1	3158	1	4188	0	5218	0
69	0	1099	1	2129	1	3159	0	4189	0	5219	0
70	0	1100	1	2130	1	3160	0	4190	1	5220	0
71	0	1101	0	2131	1	3161	0	4191	1	5221	0
72	0	1102	1	2132	0	3162	1	4192	1	5222	0
73	0	1103	1	2133	0	3163	0	4193	1	5223	0
74	0	1104	1	2134	1	3164	1	4194	0	5224	0
75	1	1105	1	2135	1	3165	1	4195	1	5225	0
76	1	1106	0	2136	0	3166	0	4196	0	5226	0
77	0	1107	1	2137	0	3167	0	4197	1	5227	0
78	1	1108	1	2138	0	3168	0	4198	0	5228	0
79	1	1109	1	2139	0	3169	0	4199	1	5229	0
80	0	1110	0	2140	0	3170	1	4200	0	5230	1
81	0	1111	0	2141	1	3171	0	4201	1	5231	0
82	0	1112	1	2142	0	3172	1	4202	0	5232	0
83	0	1113	0	2143	1	3173	0	4203	1	5233	1
84	0	1114	1	2144	1	3174	1	4204	1	5234	0
85	0	1115	1	2145	0	3175	0	4205	0	5235	1
86	1	1116	0	2146	1	3176	1	4206	1	5236	1
87	0	1117	0	2147	1	3177	1	4207	1	5237	0
88	1	1118	0	2148	0	3178	0	4208	0	5238	1
89	0	1119	0	2149	0	3179	1	4209	1	5239	0
90	1	1120	1	2150	1	3180	0	4210	0	5240	1
91	0	1121	1	2151	0	3181	0	4211	1	5241	0
92	0	1122	1	2152	0	3182	1	4212	1	5242	0
93	1	1123	1	2153	0	3183	0	4213	1	5243	0
94	1	1124	0	2154	1	3184	0	4214	1	5244	0
95	0	1125	1	2155	1	3185	1	4215	1	5245	0
96	0	1126	0	2156	1	3186	1	4216	0	5246	1
97	0	1127	1	2157	0	3187	0	4217	0	5247	1

98	0	1128	0	2158	1	3188	0	4218	1	5248	1
99	0	1129	1	2159	0	3189	0	4219	0	5249	1
100	1	1130	1	2160	1	3190	0	4220	1	5250	1
101	1	1131	1	2161	0	3191	0	4221	0	5251	1
102	1	1132	1	2162	1	3192	1	4222	1	5252	0
103	1	1133	1	2163	1	3193	1	4223	1	5253	1
104	0	1134	0	2164	1	3194	0	4224	1	5254	0
105	1	1135	1	2165	0	3195	0	4225	0	5255	0
106	1	1136	0	2166	1	3196	1	4226	1	5256	0
107	1	1137	0	2167	0	3197	0	4227	1	5257	1
108	1	1138	1	2168	0	3198	1	4228	1	5258	0
109	0	1139	0	2169	1	3199	1	4229	0	5259	1
110	0	1140	0	2170	1	3200	0	4230	0	5260	1
111	0	1141	0	2171	1	3201	0	4231	1	5261	1
112	1	1142	1	2172	0	3202	0	4232	0	5262	0
113	1	1143	0	2173	0	3203	0	4233	0	5263	0
114	0	1144	1	2174	1	3204	0	4234	0	5264	0
115	0	1145	1	2175	0	3205	1	4235	0	5265	1
116	1	1146	0	2176	1	3206	0	4236	0	5266	0
117	1	1147	1	2177	0	3207	1	4237	0	5267	1
118	0	1148	0	2178	1	3208	0	4238	1	5268	1
119	1	1149	1	2179	0	3209	1	4239	1	5269	1
120	1	1150	1	2180	1	3210	1	4240	1	5270	0
121	0	1151	1	2181	1	3211	1	4241	1	5271	1
122	1	1152	1	2182	0	3212	1	4242	0	5272	1
123	1	1153	1	2183	1	3213	0	4243	1	5273	1
124	0	1154	0	2184	0	3214	0	4244	0	5274	1
125	0	1155	1	2185	1	3215	1	4245	1	5275	0
126	1	1156	1	2186	1	3216	0	4246	0	5276	0
127	0	1157	1	2187	1	3217	1	4247	0	5277	0
128	1	1158	1	2188	1	3218	0	4248	0	5278	0
129	1	1159	0	2189	1	3219	1	4249	0	5279	0
130	0	1160	0	2190	0	3220	1	4250	1	5280	0
131	0	1161	0	2191	1	3221	1	4251	0	5281	0
132	0	1162	1	2192	0	3222	1	4252	0	5282	1
133	1	1163	1	2193	0	3223	1	4253	1	5283	1
134	0	1164	1	2194	0	3224	1	4254	0	5284	1
135	1	1165	0	2195	0	3225	1	4255	1	5285	0
136	1	1166	1	2196	1	3226	1	4256	0	5286	0
137	1	1167	0	2197	0	3227	0	4257	0	5287	1
138	0	1168	0	2198	0	3228	0	4258	0	5288	1
139	0	1169	0	2199	1	3229	0	4259	1	5289	0
140	0	1170	1	2200	1	3230	1	4260	0	5290	0
141	0	1171	1	2201	1	3231	1	4261	1	5291	0

142	0	1172	1	2202	0	3232	1	4262	0	5292	0
143	1	1173	0	2203	1	3233	0	4263	1	5293	1
144	0	1174	0	2204	0	3234	1	4264	1	5294	0
145	0	1175	1	2205	0	3235	1	4265	0	5295	0
146	0	1176	1	2206	1	3236	1	4266	1	5296	0
147	0	1177	0	2207	1	3237	1	4267	0	5297	1
148	0	1178	1	2208	1	3238	1	4268	0	5298	1
149	0	1179	0	2209	0	3239	0	4269	1	5299	0
150	1	1180	1	2210	1	3240	1	4270	0	5300	0
151	1	1181	0	2211	0	3241	0	4271	0	5301	1
152	1	1182	0	2212	1	3242	1	4272	1	5302	1
153	1	1183	1	2213	1	3243	1	4273	0	5303	1
154	0	1184	0	2214	0	3244	0	4274	0	5304	0
155	1	1185	0	2215	1	3245	1	4275	0	5305	0
156	1	1186	0	2216	0	3246	0	4276	1	5306	0
157	0	1187	1	2217	1	3247	0	4277	0	5307	1
158	1	1188	0	2218	1	3248	0	4278	1	5308	0
159	0	1189	1	2219	1	3249	1	4279	0	5309	1
160	0	1190	0	2220	1	3250	0	4280	1	5310	0
161	1	1191	1	2221	1	3251	0	4281	0	5311	1
162	0	1192	1	2222	0	3252	1	4282	0	5312	0
163	0	1193	0	2223	0	3253	1	4283	1	5313	0
164	0	1194	0	2224	1	3254	1	4284	1	5314	0
165	0	1195	1	2225	0	3255	0	4285	0	5315	0
166	0	1196	1	2226	0	3256	1	4286	0	5316	1
167	1	1197	1	2227	0	3257	0	4287	1	5317	0
168	0	1198	1	2228	1	3258	1	4288	0	5318	1
169	0	1199	1	2229	1	3259	0	4289	1	5319	1
170	0	1200	0	2230	0	3260	0	4290	0	5320	0
171	0	1201	0	2231	1	3261	1	4291	1	5321	1
172	1	1202	1	2232	1	3262	1	4292	0	5322	1
173	0	1203	1	2233	1	3263	0	4293	0	5323	1
174	0	1204	0	2234	1	3264	1	4294	0	5324	0
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176	1	1206	0	2236	1	3266	1	4296	0	5326	0
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180	1	1210	0	2240	1	3270	0	4300	1	5330	1
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182	0	1212	1	2242	0	3272	0	4302	0	5332	0
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189	1	1219	1	2249	1	3279	1	4309	1	5339	0
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192	0	1222	1	2252	1	3282	1	4312	0	5342	0
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195	1	1225	1	2255	0	3285	0	4315	0	5345	1
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199	1	1229	0	2259	0	3289	0	4319	0	5349	0
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214	1	1244	0	2274	1	3304	0	4334	1	5364	1
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218	0	1248	1	2278	1	3308	0	4338	0	5368	0
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446	0	1476	0	2506	0	3536	0	4566	0	5596	1
447	0	1477	1	2507	1	3537	1	4567	0	5597	0
448	1	1478	1	2508	0	3538	1	4568	1	5598	0
449	1	1479	1	2509	0	3539	0	4569	0	5599	1

450	0	1480	0	2510	1	3540	1	4570	1	5600	0
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452	1	1482	0	2512	1	3542	0	4572	0	5602	1
453	1	1483	0	2513	0	3543	0	4573	0	5603	0
454	0	1484	1	2514	0	3544	1	4574	1	5604	1
455	1	1485	1	2515	1	3545	1	4575	1	5605	0
456	1	1486	1	2516	0	3546	1	4576	1	5606	0
457	1	1487	0	2517	1	3547	0	4577	1	5607	1
458	1	1488	1	2518	0	3548	1	4578	0	5608	1
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460	0	1490	0	2520	0	3550	1	4580	0	5610	1
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470	0	1500	0	2530	0	3560	1	4590	1	5620	1
471	0	1501	1	2531	1	3561	1	4591	1	5621	0
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474	0	1504	1	2534	0	3564	0	4594	1	5624	0
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714	1	1744	0	2774	1	3804	1	4834	1	5864	0
715	0	1745	1	2775	1	3805	0	4835	1	5865	0
716	1	1746	0	2776	0	3806	0	4836	0	5866	1
717	0	1747	1	2777	0	3807	0	4837	1	5867	0
718	0	1748	0	2778	0	3808	0	4838	0	5868	0
719	0	1749	1	2779	0	3809	0	4839	0	5869	0
720	0	1750	1	2780	0	3810	1	4840	1	5870	0
721	0	1751	0	2781	1	3811	0	4841	0	5871	0
722	1	1752	0	2782	1	3812	1	4842	0	5872	1
723	1	1753	0	2783	1	3813	1	4843	1	5873	0
724	1	1754	1	2784	1	3814	0	4844	0	5874	0
725	1	1755	0	2785	1	3815	1	4845	1	5875	0
726	1	1756	1	2786	1	3816	0	4846	0	5876	0
727	0	1757	0	2787	0	3817	0	4847	0	5877	0
728	1	1758	1	2788	1	3818	1	4848	0	5878	0
729	1	1759	0	2789	0	3819	1	4849	0	5879	0
730	0	1760	1	2790	1	3820	0	4850	1	5880	1
731	1	1761	0	2791	1	3821	0	4851	0	5881	1
732	1	1762	0	2792	0	3822	0	4852	0	5882	0
733	1	1763	0	2793	1	3823	1	4853	0	5883	1
734	0	1764	0	2794	1	3824	0	4854	0	5884	1
735	0	1765	1	2795	1	3825	1	4855	0	5885	0
736	0	1766	1	2796	0	3826	0	4856	0	5886	0
737	1	1767	1	2797	1	3827	1	4857	1	5887	0
738	1	1768	1	2798	1	3828	0	4858	0	5888	0
739	1	1769	0	2799	1	3829	0	4859	0	5889	0
740	0	1770	1	2800	1	3830	1	4860	1	5890	1
741	1	1771	1	2801	0	3831	0	4861	1	5891	0
742	0	1772	0	2802	0	3832	1	4862	1	5892	0
743	0	1773	0	2803	0	3833	1	4863	1	5893	0
744	1	1774	1	2804	0	3834	0	4864	0	5894	0
745	1	1775	1	2805	0	3835	0	4865	1	5895	0
746	1	1776	0	2806	1	3836	1	4866	1	5896	0
747	0	1777	0	2807	1	3837	1	4867	0	5897	1
748	1	1778	1	2808	0	3838	0	4868	0	5898	0
749	1	1779	0	2809	1	3839	0	4869	0	5899	1
750	1	1780	1	2810	1	3840	0	4870	1	5900	1
751	0	1781	1	2811	1	3841	1	4871	1	5901	1
752	0	1782	0	2812	1	3842	1	4872	0	5902	1
753	0	1783	0	2813	1	3843	1	4873	1	5903	1
754	1	1784	0	2814	0	3844	0	4874	0	5904	0
755	1	1785	1	2815	1	3845	0	4875	0	5905	0
756	1	1786	0	2816	0	3846	1	4876	0	5906	1
757	1	1787	0	2817	0	3847	1	4877	1	5907	0

758	0	1788	0	2818	0	3848	1	4878	1	5908	0
759	1	1789	1	2819	1	3849	0	4879	0	5909	1
760	1	1790	0	2820	0	3850	0	4880	0	5910	1
761	1	1791	0	2821	1	3851	0	4881	1	5911	0
762	1	1792	1	2822	0	3852	0	4882	0	5912	0
763	1	1793	1	2823	1	3853	1	4883	0	5913	0
764	0	1794	1	2824	1	3854	0	4884	1	5914	0
765	0	1795	0	2825	0	3855	0	4885	1	5915	1
766	1	1796	1	2826	1	3856	0	4886	0	5916	0
767	0	1797	1	2827	1	3857	0	4887	1	5917	1
768	1	1798	0	2828	1	3858	0	4888	1	5918	1
769	1	1799	0	2829	0	3859	1	4889	0	5919	1
770	0	1800	1	2830	0	3860	1	4890	0	5920	1
771	1	1801	1	2831	0	3861	0	4891	1	5921	1
772	1	1802	1	2832	1	3862	0	4892	0	5922	0
773	1	1803	1	2833	1	3863	1	4893	1	5923	0
774	1	1804	0	2834	0	3864	1	4894	1	5924	0
775	0	1805	1	2835	0	3865	0	4895	1	5925	1
776	1	1806	0	2836	1	3866	0	4896	1	5926	0
777	1	1807	0	2837	0	3867	0	4897	1	5927	0
778	0	1808	0	2838	1	3868	1	4898	1	5928	0
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780	1	1810	1	2840	0	3870	1	4900	1	5930	1
781	1	1811	1	2841	1	3871	0	4901	1	5931	1
782	0	1812	0	2842	0	3872	1	4902	1	5932	1
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784	0	1814	1	2844	0	3874	0	4904	0	5934	1
785	1	1815	1	2845	0	3875	1	4905	1	5935	0
786	1	1816	1	2846	1	3876	0	4906	0	5936	1
787	1	1817	1	2847	1	3877	1	4907	1	5937	1
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789	1	1819	1	2849	1	3879	0	4909	0	5939	1
790	1	1820	0	2850	1	3880	0	4910	1	5940	1
791	1	1821	0	2851	1	3881	1	4911	1	5941	0
792	0	1822	1	2852	0	3882	1	4912	0	5942	0
793	1	1823	1	2853	0	3883	0	4913	0	5943	0
794	1	1824	0	2854	1	3884	1	4914	0	5944	1
795	0	1825	1	2855	1	3885	0	4915	1	5945	0
796	1	1826	1	2856	0	3886	1	4916	1	5946	0
797	1	1827	1	2857	0	3887	1	4917	0	5947	1
798	0	1828	0	2858	1	3888	1	4918	0	5948	1
799	0	1829	0	2859	0	3889	1	4919	1	5949	1
800	0	1830	0	2860	1	3890	0	4920	1	5950	1
801	1	1831	1	2861	1	3891	1	4921	0	5951	0

802	1	1832	0	2862	1	3892	0	4922	0	5952	0
803	0	1833	0	2863	0	3893	1	4923	0	5953	0
804	1	1834	1	2864	1	3894	1	4924	0	5954	0
805	1	1835	1	2865	0	3895	1	4925	1	5955	1
806	1	1836	1	2866	1	3896	0	4926	0	5956	1
807	1	1837	1	2867	1	3897	0	4927	1	5957	0
808	1	1838	0	2868	1	3898	1	4928	0	5958	1
809	0	1839	0	2869	1	3899	0	4929	1	5959	1
810	1	1840	0	2870	1	3900	0	4930	0	5960	0
811	0	1841	1	2871	0	3901	0	4931	1	5961	1
812	1	1842	0	2872	0	3902	0	4932	0	5962	1
813	1	1843	0	2873	1	3903	0	4933	1	5963	1
814	1	1844	1	2874	1	3904	0	4934	0	5964	1
815	1	1845	0	2875	1	3905	1	4935	1	5965	0
816	0	1846	1	2876	1	3906	1	4936	0	5966	0
817	0	1847	1	2877	0	3907	0	4937	1	5967	0
818	0	1848	0	2878	0	3908	1	4938	1	5968	0
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820	0	1850	1	2880	0	3910	0	4940	0	5970	1
821	1	1851	1	2881	1	3911	0	4941	0	5971	0
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823	1	1853	0	2883	1	3913	1	4943	0	5973	0
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825	1	1855	1	2885	1	3915	0	4945	0	5975	0
826	1	1856	1	2886	0	3916	0	4946	1	5976	1
827	0	1857	0	2887	1	3917	0	4947	0	5977	1
828	1	1858	0	2888	0	3918	1	4948	0	5978	0
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830	0	1860	0	2890	0	3920	1	4950	0	5980	1
831	1	1861	0	2891	0	3921	0	4951	0	5981	0
832	1	1862	0	2892	0	3922	1	4952	1	5982	1
833	1	1863	1	2893	1	3923	0	4953	1	5983	1
834	0	1864	0	2894	0	3924	0	4954	1	5984	1
835	1	1865	0	2895	1	3925	1	4955	0	5985	0
836	0	1866	1	2896	0	3926	0	4956	0	5986	1
837	1	1867	0	2897	0	3927	1	4957	0	5987	0
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839	1	1869	1	2899	1	3929	1	4959	0	5989	1
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842	0	1872	1	2902	0	3932	0	4962	0	5992	1
843	1	1873	0	2903	1	3933	0	4963	0	5993	0
844	0	1874	1	2904	0	3934	0	4964	1	5994	0
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848	1	1878	0	2908	1	3938	0	4968	1	5998	1
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851	0	1881	1	2911	1	3941	0	4971	0	6001	0
852	1	1882	1	2912	0	3942	0	4972	1	6002	0
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854	1	1884	0	2914	1	3944	1	4974	1	6004	1
855	1	1885	0	2915	1	3945	0	4975	0	6005	0
856	1	1886	0	2916	0	3946	1	4976	0	6006	0
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858	0	1888	0	2918	1	3948	1	4978	1	6008	1
859	0	1889	0	2919	0	3949	0	4979	0	6009	1
860	0	1890	0	2920	1	3950	1	4980	0	6010	1
861	1	1891	1	2921	1	3951	1	4981	0	6011	1
862	1	1892	1	2922	1	3952	0	4982	0	6012	0
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865	1	1895	0	2925	0	3955	1	4985	1	6015	1
866	0	1896	1	2926	0	3956	1	4986	0	6016	0
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868	1	1898	1	2928	1	3958	1	4988	0	6018	0
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870	0	1900	1	2930	1	3960	1	4990	1	6020	0
871	1	1901	0	2931	0	3961	1	4991	0	6021	0
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879	0	1909	0	2939	1	3969	1	4999	1	6029	1
880	1	1910	0	2940	0	3970	1	5000	1	6030	1
881	1	1911	0	2941	0	3971	1	5001	1	6031	0
882	1	1912	0	2942	1	3972	1	5002	0	6032	0
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884	1	1914	0	2944	0	3974	0	5004	1	6034	1
885	1	1915	0	2945	1	3975	0	5005	1	6035	0
886	0	1916	0	2946	0	3976	0	5006	0	6036	1
887	0	1917	0	2947	0	3977	0	5007	0	6037	0
888	1	1918	1	2948	0	3978	1	5008	1	6038	0
889	0	1919	1	2949	0	3979	0	5009	1	6039	0

890	0	1920	1	2950	0	3980	0	5010	1	6040	0
891	0	1921	1	2951	0	3981	0	5011	1	6041	1
892	1	1922	0	2952	1	3982	0	5012	0	6042	0
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894	1	1924	0	2954	1	3984	0	5014	0	6044	1
895	1	1925	0	2955	1	3985	0	5015	1	6045	0
896	1	1926	1	2956	0	3986	0	5016	1	6046	0
897	0	1927	0	2957	0	3987	1	5017	1	6047	0
898	0	1928	1	2958	0	3988	1	5018	1	6048	0
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903	1	1933	1	2963	1	3993	0	5023	1	6053	0
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905	0	1935	1	2965	1	3995	0	5025	1	6055	0
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910	1	1940	0	2970	0	4000	1	5030	0	6060	0
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912	1	1942	0	2972	1	4002	1	5032	1	6062	0
913	1	1943	0	2973	0	4003	0	5033	1	6063	0
914	0	1944	1	2974	0	4004	1	5034	0	6064	0
915	1	1945	1	2975	0	4005	0	5035	0	6065	1
916	0	1946	0	2976	1	4006	0	5036	0	6066	1
917	0	1947	0	2977	0	4007	1	5037	0	6067	0
918	0	1948	1	2978	0	4008	1	5038	1	6068	1
919	0	1949	1	2979	0	4009	0	5039	1	6069	0
920	1	1950	1	2980	1	4010	0	5040	0	6070	0
921	1	1951	0	2981	1	4011	1	5041	1	6071	1
922	1	1952	1	2982	0	4012	1	5042	1	6072	1
923	1	1953	1	2983	0	4013	1	5043	0	6073	0
924	0	1954	1	2984	1	4014	0	5044	0	6074	0
925	1	1955	0	2985	1	4015	0	5045	0	6075	0
926	1	1956	1	2986	0	4016	1	5046	0	6076	1
927	0	1957	1	2987	1	4017	0	5047	1	6077	0
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930	0	1960	1	2990	1	4020	1	5050	1	6080	0
931	0	1961	1	2991	1	4021	1	5051	0	6081	1
932	0	1962	1	2992	0	4022	0	5052	1	6082	0
933	1	1963	1	2993	1	4023	1	5053	0	6083	1

934	1	1964	0	2994	1	4024	1	5054	0	6084	1
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936	0	1966	1	2996	0	4026	0	5056	1	6086	0
937	0	1967	0	2997	0	4027	0	5057	0	6087	1
938	0	1968	1	2998	1	4028	1	5058	1	6088	0
939	0	1969	1	2999	0	4029	1	5059	0	6089	1
940	1	1970	1	3000	1	4030	1	5060	0	6090	0
941	1	1971	0	3001	0	4031	1	5061	1	6091	1
942	1	1972	0	3002	0	4032	1	5062	0	6092	0
943	1	1973	0	3003	0	4033	1	5063	1	6093	0
944	0	1974	0	3004	1	4034	0	5064	0	6094	1
945	1	1975	0	3005	0	4035	1	5065	0	6095	1
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947	1	1977	0	3007	0	4037	0	5067	0	6097	1
948	1	1978	0	3008	1	4038	1	5068	1	6098	1
949	1	1979	1	3009	0	4039	0	5069	1	6099	0
950	0	1980	0	3010	0	4040	0	5070	1	6100	1
951	1	1981	1	3011	0	4041	0	5071	1	6101	0
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953	0	1983	0	3013	0	4043	1	5073	1	6103	1
954	1	1984	0	3014	0	4044	1	5074	0	6104	0
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956	1	1986	0	3016	1	4046	0	5076	1	6106	1
957	1	1987	0	3017	0	4047	1	5077	0	6107	0
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960	1	1990	1	3020	0	4050	0	5080	1	6110	0
961	0	1991	0	3021	0	4051	0	5081	1	6111	1
962	1	1992	1	3022	1	4052	0	5082	0	6112	0
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964	0	1994	0	3024	1	4054	0	5084	1	6114	0
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966	0	1996	0	3026	0	4056	0	5086	1	6116	1
967	0	1997	1	3027	0	4057	1	5087	1	6117	1
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971	1	2001	0	3031	0	4061	1	5091	1	6121	0
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973	0	2003	0	3033	0	4063	1	5093	1	6123	0
974	0	2004	1	3034	1	4064	0	5094	1	6124	0
975	1	2005	0	3035	1	4065	1	5095	0	6125	0
976	1	2006	0	3036	1	4066	1	5096	1	6126	1
977	0	2007	0	3037	1	4067	0	5097	1	6127	0

978	1	2008	0	3038	0	4068	0	5098	1	6128	0
979	0	2009	1	3039	0	4069	1	5099	1	6129	0
980	1	2010	0	3040	1	4070	1	5100	1	6130	1
981	0	2011	0	3041	0	4071	1	5101	1	6131	0
982	0	2012	1	3042	0	4072	0	5102	0	6132	0
983	1	2013	0	3043	0	4073	0	5103	0	6133	0
984	1	2014	1	3044	0	4074	1	5104	0	6134	1
985	0	2015	0	3045	1	4075	1	5105	0	6135	0
986	1	2016	0	3046	0	4076	0	5106	1	6136	0
987	0	2017	0	3047	0	4077	1	5107	0	6137	1
988	1	2018	1	3048	1	4078	0	5108	0	6138	1
989	0	2019	1	3049	0	4079	1	5109	1	6139	1
990	1	2020	1	3050	0	4080	0	5110	1	6140	0
991	0	2021	1	3051	0	4081	0	5111	1	6141	0
992	0	2022	0	3052	0	4082	0	5112	1	6142	1
993	1	2023	1	3053	0	4083	1	5113	1	6143	1
994	0	2024	0	3054	0	4084	0	5114	1	6144	1
995	1	2025	0	3055	0	4085	0	5115	0	6145	0
996	1	2026	1	3056	0	4086	1	5116	0	6146	1
997	0	2027	1	3057	1	4087	0	5117	1	6147	1
998	1	2028	1	3058	0	4088	1	5118	1	6148	0
999	1	2029	0	3059	1	4089	1	5119	1	6149	0
1000	1	2030	1	3060	0	4090	0	5120	1	6150	1
1001	1	2031	1	3061	1	4091	0	5121	0	6151	0
1002	0	2032	0	3062	0	4092	1	5122	1	6152	1
1003	1	2033	1	3063	1	4093	0	5123	1	6153	0
1004	1	2034	0	3064	0	4094	1	5124	1	6154	1
1005	1	2035	0	3065	0	4095	0	5125	0	6155	0
1006	0	2036	1	3066	0	4096	1	5126	1	6156	1
1007	0	2037	1	3067	1	4097	1	5127	1	6157	1
1008	1	2038	1	3068	0	4098	0	5128	1	6158	0
1009	1	2039	1	3069	0	4099	0	5129	0	6159	1
1010	1	2040	1	3070	0	4100	1	5130	1	6160	1
1011	0	2041	1	3071	0	4101	0	5131	0	6161	1
1012	1	2042	1	3072	0	4102	0	5132	0	6162	1
1013	0	2043	0	3073	1	4103	1	5133	1	6163	1
1014	1	2044	0	3074	0	4104	1	5134	1	6164	1
1015	1	2045	0	3075	0	4105	0	5135	1	6165	1
1016	0	2046	1	3076	1	4106	1	5136	1	6166	0
1017	1	2047	1	3077	1	4107	0	5137	1	6167	0
1018	0	2048	1	3078	0	4108	0	5138	1	6168	0
1019	0	2049	0	3079	1	4109	1	5139	1	6169	1
1020	1	2050	0	3080	1	4110	0	5140	1	6170	0
1021	0	2051	0	3081	1	4111	1	5141	0	6171	1

1022	1	2052	0	3082	1	4112	1	5142	1	6172	0
1023	1	2053	1	3083	1	4113	0	5143	0	6173	0
1024	0	2054	0	3084	1	4114	1	5144	1	6174	1
1025	1	2055	0	3085	0	4115	0	5145	0	6175	0
1026	0	2056	1	3086	0	4116	1	5146	0	6176	0
1027	0	2057	1	3087	1	4117	1	5147	1	6177	0
1028	0	2058	0	3088	0	4118	1	5148	0		
1029	1	2059	0	3089	0	4119	0	5149	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`