



$M$      $N$      $|M| = m$      $|N| = n, m > n$   
 $f: M \rightarrow N, \dots$      $x, y \in N, x \neq y$   
 $f(x) = f(y), (|X|)$      $|X|$ .

3. 367

$M$      $N$   
 $|N| \leq 366$      $f: M \rightarrow N$   
 $|M| > |N|$ ,

$f$      $\dots$

4.  $n+1$

$b_1, b_2, \dots, b_{n+1}$      $n$   
 $b_i = c_i n + r_i, i = 1, 2, \dots, n+1, 0 \leq r_i < n$      $n+1$   
 $r_1, r_2, \dots, r_{n+1},$      $n$      $p, q, p < q$

$r_p = r_q$  .

$b_q - b_p = n(c_q - c_p) \dots n | (b_q - b_p) . \blacklozenge$

5. 3

0001.

$a_i = 3^i, i = 1, 2, 3, \dots$     4

$10^4 | (3^p - 3^q), \dots 10^4 | 3^q (3^{p-q} - 1)$ .

$10^4 \nmid 3^q, 10^4 | (3^{p-q} - 1)$      $n$

$3^{p-q} - 1 = 10^4 n$      $3^{p-q} = 10^4 n + 1$      $3^{p-q}$

0001.  $\blacklozenge$

6.

1)

2)

1), 1, 2, 3, ...,  $n-1$      $n$

2).

(0)

7.  $n-1$   $1,2,3,\dots$   $n-2,$   
 $2n$   $1,2,3,\dots,2n$   $n+1$   
 $:$

- 1)
- 2)
- 3)  $2n$   $n.$

1)  $b_1, b_2, \dots, b_{n+1}.$   
 $2^r k, r \geq 0, r$   $k \in \{1,3,5,\dots,2n-1\}, \dots k$   
 $n$   $\{b_1, b_2, \dots, b_{n+1}\}$

$b_i$   $b_j$

$$b_i = 2^r k \quad b_j = 2^s k.$$

2)  $n+1$   $2n$

3)  $(1,2n-1), (2,2n-2), \dots, (n-1, n+1).$

$\{1,2,3,\dots,2n\}$   $n+1$   $n,$

$kn+1$

8.

$k+1$

40

3

7

?

$kn+1$

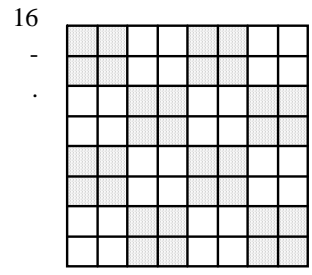
$n$

(

...)

9.

.  
 2 2. ,  
 ,  
 16. ♦  
 :  
 M



$M = A_1 \cup \dots \cup A_k,$   
 $A_i$   
**(XXVI)** . 11

(0,1).  
 $x_1 = 0, a_1^{(1)} a_2^{(1)} a_3^{(1)} \dots a_k^{(1)} \dots$   
 $x_2 = 0, a_1^{(2)} a_2^{(2)} a_3^{(2)} \dots a_k^{(2)} \dots$   
 .....  
 $x_{11} = 0, a_1^{(11)} a_2^{(11)} a_3^{(11)} \dots a_k^{(11)} \dots$   
 $a_1^{(1)}, \dots, a_1^{(11)}$   
 $\{0, 1, 2, \dots, 9\},$   
 $a_k^{(1)}, a_k^{(2)}, \dots, a_k^{(11)}$  ,

k

$S_{ij} = \{ n \in \mathbb{N} \mid a_n^{(i)} = a_n^{(j)} \} \quad i < j, \quad i, j = 1, 2, \dots, 11$   
 $\mathbf{N} = \cup S_{ij}.$   $S_{ij}$   
 $x_i \quad x_j$  . ♦

- ( ) .
- I.**  $n \quad b_1, b_2, \dots, b_n \quad a \quad \dots \sum_{i=1}^n b_i = a, \quad -$
- $b_i, i = 1, 2, \dots, n \quad ( ) \quad \frac{a}{n}.$
- II.**  $F_1, F_2, \dots, F_n \quad -$
- $F,$   $F.$
- II

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(VI)  $S$   $P$   
 $\frac{P}{S}$

1. 31 , 423 .  
20 , 280.
2. 1 1992
3. 0,0011.  
1990 53 , 53.