



HUPROG NUMBERS

- [Problem](#)
- ☐
- [Submissions](#)
- [Discussion](#)
- [Coming Soon](#)

[Türkçesi için tıklayınız](#)

HUPROG was first organized by *Bilge Çimen* in 2016. Bilge has claimed the **2** and **6** as *HUPROG's digits* for the importance of this date.

The 2021 members of *HUPROG* team, Berat and Şura, have decided to set up and play a game about these numbers. As they like the *HUPROG digits*. The $M(x)$ function returns the total number of *HUPROG digits* in a given number.

For example, the function $M(123486628)$ returns 4 because there are two 2s and two 6s, so a total of 4 HUPROG numbers.

In this game, they start counting from a number, **A**, to the number, **A+T**. Then, they send those numbers (*e.g. $A, A+1, A+2 \dots A+T-1$ ($A+T$ not included)*) into the function $M(x)$, and they record the outputs. The purpose of the game is to find the number **B**. The number **B** is described as:

- The $M(x)$ outputs of the numbers from **B** to **(B+T)** should be in the same order and the same value with *the outputs of function $M(x)$ of the numbers from **A** to **(A+T)***,
- and **B** should be the smallest number greater than **A**.

The first to find the number **B** wins. But Şura asks for help because she counts slowly. Can you help Şura?

Input Format

The first line contains two integers, *A* and *T*.

Output Format

Print the number *B*

Constraints

$1 \leq A, T \leq 10^9$

Sample Input 1

6 2

Sample Output 1

12

Explanation 1

Our inputs are 6 and 2, so the initial number is 6. For 6 and 7 $M(6)=1, M(7)=0$. The smallest B number that will output 1 and 0 for the numbers to be given to the M function is 12. Because $M(12)=1, M(13)=0$. No number less than 12 or greater than 6 satisfies this condition.

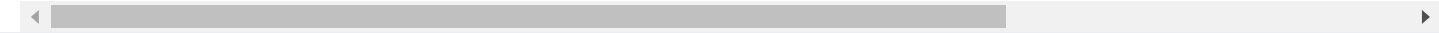
C++

Bright

Memory Limit (kB) : 256000 Time Limit (s) : 1

```
1 //Brace your keyboard
2 //inzva community built algoleague for every algorithm enthusiast hungry for self-improvement and fri
3
4 #include <bits/stdc++.h>
5
```

```
5
6  using namespace std;
7
8  int main() {
9      // write your code here
10
11      return 0;
12  }
13  |
```



 Upload File

Run Code

Submit