

## 6. Magical Number

Timelimit: 1000MS Memorylimit: 64M

### Problem Description:

We consider a natural number  $p$  with  $k$  digits,  $\overline{a_1 a_2 \dots a_k}$ , is magical only when it satisfies:

Every number composed by leading digits of  $p$  can be divisible by the number of its digits.

More formally,  $\forall i \in [1, k], i | \overline{a_1 a_2 \dots a_i}$ .

For example, 123 is magical, because  $1|1, 2|12, 3|123$ .

However, 124 is not magical, because  $3 \nmid 124$ .

Every digit can be composed with match sticks in the following ways.



What is the largest possible magical number you can compose with exactly  $n$  match sticks?

### Input requirements:

The input contains a integer  $n (1 \leq n \leq 10^{100})$ , the number of match sticks you have .

Output requirements:

Print the largest possible magical number  $x$  that can be possibly composed with exactly  $n$  match sticks.

If the number doesn't exist, print -1.

### Sample input1:

3

### Sample output1:

7

### Sample input2:

7

### Sample output2:

74

### Sample input3:

10000

### Sample output3:

-1