

# LQDNUMBERS

During a meeting with professors in the Asian Confederation of Mathematics, a Russian professor came up with a problem:

He choose a number  $N$  ( $1 \leq N \leq 10^{18}$ ), then write all the numbers from 1 to  $N$  to form a continuous string of digits. Next he replaced substrings of identical digits with a single digit. For example string fragment "14445556677666" would be changed to "145676". Then he asked his fellow professors: given a length of string  $S$  determine the number  $N$  which results in that kind of string  $S$ . Can you help the professors?

**Your task:** write a program to help your country's mathematicians.

## Input

A single number  $M$ , length of the string  $S$  ( $1 \leq M \leq 10^{18}$ .)

## Output

A single number  $N$ , the number which Russian professor selected.

## Example

**Input:**

13

**Output:**

12

## Explanation:

With  $N = 12$ , we get the string: 123456789101112.

Because there are three consecutive number ones, we delete the first two numbers, then we have: 1234567891012. The length of this string is 13