
Meow Writing Numbers

Input file: `standard input`
Output file: `standard output`
Time limit: 2 seconds
Memory limit: 256 megabytes

Meow is teaching math to kindergarten kittens. He wrote down the numbers from 1 to n in increasing order without any spaces in between digits on the blackboard. For example, if $n = 13$, Meow writes down 12345678910111213.

Miau, a naughty cat, has erased some (possibly none) of the digits from the blackboard. After that, he recopied the digits on the blackboard one by one without any spaces in between digits and erased all the other digits Meow has written. This leaves a string s on the blackboard. For example, when $n = 13$, Miau might erase the digits 6, 8, 0 from the board, and after recopying the remaining string, the string $s = 12345791111213$ remains. When Meow came back, he was angry. He has forgotten the value of n and he asks you to help him determine the minimum possible value of n .

Input

The input contains a single string s ($1 \leq |s| \leq 10^5$), denoting the string that remains on the blackboard. Note that it is possible for s to have leading zeroes.

Output

Output a single integer, the minimum possible value of n .

Examples

standard input	standard output
38011	11
2017	17
000000	60