

Problem H – Hidden Lists.

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It is relatively easy to create big numbers starting with a list of integer values, suppose you have the list $[1, 2, 3, 5, 123]$ if you concatenate all the numbers in the list you will get the number 1235123. This is an easy method, but, remember that, if a number has an arbitrary amount of leading zeroes, the number has the same value and therefore we could say having the list $[1, 02, 3, 5, 123]$ is considered the same list as before (the values are the same and in the same order, even when the second element is 02). As you can see then, we can create a lot of numbers using the list of values $[1, 2, 3, 5, 123]$ as starting list, for example 01235123, 01000200003050123, etc...

Can you make a program that finds how many distinct lists of increasing values with values between 1 and 10^6 exists that can generate a given number N ? A list of increasing values is a list such that no value is less than the previous values in the list. Two lists are considered to be different if they are of different length or if their values differ at some position.

Input

The input consists of a single line that contains the number N ($1 \leq N \leq 10^{60}$), representing the number to be generated.

Output

Output a single line with an integer indicating the number of distinct lists of increasing values that can generate the number N .

Sample input 1 00001	Sample output 1 1
Sample input 2 123	Sample output 2 3
Sample input 3 10000000	Sample output 3 0