

Sorty Numbers

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

points: 100 · problem code: sortynumbers · author: caneToadCoad

Any non-negative integer (including 0) is sorty if its digits are in a strictly increasing order, from most significant to least significant. In other words, for any digit, any other digit which has lower significance than it must have strictly greater value.

For example, 167 is sorty, since $1 < 6$ and $6 < 7$.

429 is not sorty, since $4 > 2$.

444 is also not sorty, since the digits must be strictly ascending, meaning they cannot be the same.

Given some integer n , output the number of sorty numbers in the range $[0, n]$.

Input

A single integer is given, n .

Output

Output a single integer, which is the number of sorty numbers less than or equal to n .

Constraints

- $0 < n \leq 10^9$

Example 1

Input

12

Output

11

Explanation

The first 11 sorty numbers are: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and 12.

Example 2

Input

244

Output

80

Example 3

Input

214

Output

74