Problem A. Undoubtedly Lucky Numbers

Time limit 2000 ms
Mem limit 262144 kB

Polycarpus loves lucky numbers. Everybody knows that lucky numbers are positive integers, whose decimal representation (without leading zeroes) contain only the lucky digits x and y. For example, if $x = 4$, and $y = 7$, then numbers 47, 744, 4 are lucky.

Let's call a positive integer *a undoubtedly lucky*, if there are such digits x and y $(0 \le x, y \le 9)$, that the decimal representation of number a (without leading zeroes) contains only digits x and y.

Polycarpus has integer n. He wants to know how many positive integers that do not exceed n, are undoubtedly lucky. Help him, count this number.

Input

The first line contains a single integer n $(1 \le n \le 10^9)$ — Polycarpus's number.

Output

Print a single integer that says, how many positive integers that do not exceed n are undoubtedly lucky.

Sample 1

Input	Output
10	10

Sample 2

Input	Output
123	113

Note

In the first test sample all numbers that do not exceed 10 are undoubtedly lucky.

In the second sample numbers 102, 103, 104, 105, 106, 107, 108, 109, 120, 123 are not undoubtedly lucky.