BOI 2013

Rostock, Germany
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Day 1
ENG
numbers
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Palindrome-Free Numbers

A string is a palindrome if it remains the same when it is read backwards. A number is palindrome-free if it does not contain a palindrome with a length greater than 1 as a substring. For example, the number 16276 is palindrome-free whereas the number 17276 is not because it contains the palindrome 727.

Your task is to calculate the total number of palindrome-free numbers in a given range.

Input

The input contains two integers, a and b.

Output

The output should contain one integer: the total number of palindrome-free numbers in the range $a, \ldots, b$ (including a and b).

Constraints

$0 \leq a \leq b \leq 10^{18}$

In test cases worth 25 points: $b - a \leq 100\,000$.

Examples

Input	Output
123 321	153
123456789 987654321	167386971

Limits

Time limit: 1 sec per test case
Memory limit: 128 MB per test case