IOI Training Camp 2017 Practice Test 4

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

- $0 \le a \le b \le 10^{18}$

Sample Input 1

123 321

Sample Output 1

153

Sample Input 2

123456789 987654321

Sample Output 2

167386971

Limits

Time: 2 seconds

Memory: 256 MB