10262   Suffidromes

Given two strings of lowercase letters, a and b, print the shortest string x of lowercase letters such that exactly one (but not both) of ax or bx is a palindrome; that is, equal to itself when reversed.

Input

Standard input contains several pairs of a and b. Each string is on a separate line and consists of between 0 and 1,000 lowercase letters.

Output

For each pair, output a line containing x. If several x satisfy the criteria above, choose the first one in alphabetical order. If it doesn't exist such a string x, print just 'No solution.' as answer.

Sample Input

```
abab
ababab
abc
def
```

Sample Output

```
baba
ba
```