

Edit Distance

Time Limit: 1 Second
Memory Limit: 256 MB

Compute the edit distance between two strings.

The edit distance of a string s and a string t is the minimum number of operations you need to perform to s to get t .

The following are the valid operations:

- **INSERT** pos, ch – insert the letter ch in the string at position pos . The letter ch becomes the $pos+1$ symbol of the string, and all letters to the right shift right by 1.
- **DELETE** pos – delete the letter ch in the string at position pos . The letters to the right shift left by one.
- **REPLACE** pos, ch – replace the $pos+1$ letter in the string by ch .

Input

The first line contains s , the second line contains t . The lines consist only of capital Latin letters, their lengths are positive numbers from 1 to 1000.

Output

Output the minimum edit distance between s and t .

Sample Inputs

ACCEPTED
WRONGANSWER

Sample Outputs

10
