

# Longest Common Subsequence

*Time limit: 1 sec*

Given a string  $S = s_1s_2s_3\dots s_n$  of length  $n$  where  $s_i$  is a single character, a subsequence of  $S$  is a string derived from  $S$  by deleting some element from  $S$  without changing the order of the element. For example,  $P = s_2s_4s_n$  is a subsequence of  $S$  while  $Q = s_4s_1s_2$  is not. A longest common subsequence of two strings **A** and **B** is a longest string that is a subsequence of both **A** and **B**.

Your task is to find the length of a longest common subsequence of **A** and **B**.

## Input

There are two lines of input, each containing a non-empty string composed of a lower case English alphabets. The length of each string does not exceed 400.

## Output

The output must contain exactly one line giving the length of the longest common subsequence.

## Example

Input	Output
Acbdegcedbg begcfeubk	6
aaa bbbbbbbbbb	0