

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 line of input, each containing a non-empty string composes 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 giving the length of the longest common subsequence.

Example

Input	Output
Acbdegcedbg begcfeubk	6
aaa bbbbbbbbbb	0