

# Common Subsequence

<https://vjudge.net/problem/poj-1458>

A subsequence of a given sequence is the given sequence with some elements (possibly none) left out. Given a sequence  $X = \langle x_1, x_2, \dots, x_m \rangle$  another sequence  $Z = \langle z_1, z_2, \dots, z_k \rangle$  is a subsequence of  $X$  if there exists a strictly increasing sequence  $\langle i_1, i_2, \dots, i_k \rangle$  of indices of  $X$  such that for all  $j = 1, 2, \dots, k$ ,  $x_{i_j} = z_j$ . For example,  $Z = \langle a, b, f, c \rangle$  is a subsequence of  $X = \langle a, b, c, f, b, c \rangle$  with index sequence  $\langle 1, 2, 4, 6 \rangle$ . Given two sequences  $X$  and  $Y$  the problem is to find the length of the maximum-length common subsequence of  $X$  and  $Y$ .

## Input

The program input is from the std input. Each data set in the input contains two strings representing the given sequences. The sequences are separated by any number of white spaces. The input data are correct.

## Output

For each set of data the program prints on the standard output the length of the maximum-length common subsequence from the beginning of a separate line.

## Sample

Input		Output
abcfbc	abfcab	4
programming	contest	2
abcd	mnp	0