

Problem D. Delete And Win

Input file: *standard input*
Output file: *standard output*
Time limit: 1 second
Memory limit: 1024 mebibytes

You are given two strings composed of lowercase English letters.

One is the sample, and you can't change it. Your task is to make other string lexicographically smaller than the sample. In order to achieve the goal you can delete some characters. Your task is to find the minimum number of characters you have to delete in order to achieve the goal.

A string s is considered to be lexicographically smaller than a string t if s is a prefix of t (but is not equal to t) or the string s contains smaller character (in terms of English alphabet) than the string t in the first position they differ.

Input

The two lines of the input contain two strings of lowercase English letters. The first one is the string you may change while the second one is the sample. Both strings contain at least 1 and at most 10^5 characters.

Output

In the only line of the output print a single integer — the answer for the problem.

Example

standard input	standard output
pqsrrpspqz pqrpqz	2