A. AppendAppendAppend

Time limit: 1 second
Memory limit: 256 megabytes

Momo has a string s which he plays with. After each day, he takes the initial string and appends it to the one that he currently has, that is, if the string is "*abc*", on the first day the string will remain "*abc*", on the second day the string will become "*abcabc*", on the third day the string becomes "*abcabcabc*", and so on.

Bobo has another string t. Bobo is curious whether his string t can be found as a subsequence in Momo's string. He is curious what is the first day when this property will hold.

A string a is a subsequence of a string b if a can be obtained from b by deletion of several (possibly, zero or all) elements.

Input

The first line of the input contains Momo's string s.

The second line of the input contains Bobo's string t.

Both strings have lengths at least 1 and at most $5 \cdot 10^5$ and contain only lowercase letters of the English alphabet.

Output

Output a single integer — the number of the day when Bobo's string will be a subsequence of Momo's string for the first time.

It is guaranteed that for all test cases in this problem such a day exists.

Example

standard input	standard output
dwalkcake cakewalk	2

Note

During the first day, the string is "*dwalkcake*", and doesn't contain "*cakewalk*" as a subsequence.

During the second day, the string is "*dwalkcakedwalkcake*", and it contains "*cakewalk*" as a subsequence.