Cryptogram

Mirko intercepted an encrypted message. Mirko knows only that specific sentence was part of the original message. Find the first occurrence of this sentence inside the encrypted message.
Message is encrypted by substituting every word from the original message with some (possibly the same one) word. If some word appears more than once in the original message, it will be substituted using the same word on each appearance. No two different words will have the same substitute word. Words are space separated sequences of lowercase letters. Sentence is a sequence of consecutive words.

Input

The first line of input contains the encrypted message. This message will not contain more than 10^6 characters. There will be exactly one whitespace between adjacent words, and end of the line will be marked with $. Trailing $ is not considered to be a part of message.
The following line contains the sentence that appears in the original message, and which we must find in the encrypted message. This sentence won't be longer than 10^6 characters, and will follow the same format as described above.

Output

The first and only line of output should contain the index in the encrypted message of the first word in the first occurrence of given original message sentence. Solution will always exist.

Sample input   **Sample output**

a a a b c d a b c $ x y $	3
xyz abc abc xyz $ abc abc $	2
a b c x c z z a b c $ prvi dr prvi tr tr x $	3