Problem H. Hidden string

Source file name:	hidden.c, hidden.cpp, hidden.java
Input:	`Standard`
Output:	`Standard`
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After several years of research finally someone found the secret of the mystical mexican pyramids. It turns out there is a hidden message in the two strings S and T that are written in the door of the main entrance to the tomb of the red queen.

After this was disclosed to the public it is too obvious how to find this hidden string. The secret message is string of size K that is contained in both string S and T. Now everyone is trying to sell messages saying that is the original message found on the mystical mexican pyramids. As you are a clever person you decided to write a program to verify if it is really possible that what is being sold by people next to the pyramids is the hidden string.

Given S and T, you have to determine if there exist a string of size K that is contained on both strings.

Input

The input consits of several test cases, each test case contains S, T and K separated by a space.

- The length of S and T is the same and is at most 10^5
- $K \leq |S|$ Where $|S|$ denotes the size of the string S

Output

For each test case your program should print a single line with the word "yes" in case there exist at least one string of length K that is contained in both S and T, print "no" otherwise.

Example

Input	Output
`abcdef cdefba 2` `abcdef bcdabc 5`	`yes` `no`

Explication

In the first test case the strings *abcdef* and *cdef* we are looking for a string of size 2 that is contained in both strings, there are some of them, one is *cd* that's why the output is yes. In the second test case there are no strings of length 5 that is contained in both strings, that's why the output is no.