Problem F3101
Length of String

You are given a string s and an integer a. There are 4 statements :

The string s contains more than a many characters.
The string s contains at least a many characters.
The string s contains exactly a many characters.
The number of characters in s is different from integer a.

Output if these statements are correct in the order as they are given in the hypothesis.

Input

The input consist of two lines.
The string s is on the first line. It consist of at least 1 at most 100 many lowercase English Alphabet.
The integer a is on the second line. It is between 1 and 100 inclusive.

Output

Output 4 lines, each line indicating if one of these statements is correct, in the same order as they are given.
If the statement is true, output "True"(without quote) on a line, otherwise output "False"(without quote).

Sample Input

```
string
6
```

Sample Output

```
False
True
True
False
```