

Beads (prob2)

Lana and Nala enjoy being identical twins. They wear the same outfits every day, including jewelry. They especially love necklaces of colored beads, but they continually run into a problem trying to determine whether two beaded necklaces are identical or not.

Beads come in 26 colors, and the colors are identified by the lower case alphabet. A beaded necklace containing n beads is represented by a string of n lower case alphabetic letters. The necklaces are continuous (no clasps).

It is easy to see that the two beaded necklaces “abcdefg” and “abcdefg” are identical. But it is not quite so obvious that the necklaces “efgabcd” and “bagfedc” are also identical to “abcdefg”.

The twins need you to write a program for them that will determine whether or not two beaded necklaces are identical.

Input

The input will begin with an integer C ($1 \leq C \leq 100$) that denotes the number of test cases. The rest of the input will consist of C pairs of necklaces, each on a line by itself. Each necklace contains at least 1 and no more than 99 beads.

Output

The output should display the case number (as shown below) followed by either “YES” or “NO” indicating whether the necklace pair is identical or not.

Sample Input

```
4
lana
nala
abcdefg
efgabcd
abcdefg
bagfedc
abcdefg
opqrstu
```

Sample Output

```
Case #1: YES
Case #2: YES
Case #3: YES
Case #4: NO
```