

Based on given two strings, you identify those strings to same or not. However, you must consider about specific strings as described below:

1. Permutation  
ex) “abc” and “bac” are same
2. Including repeated characters  
ex) “aaabbbccc” and “bbccc aaa” are same

With considering above cases, you should make program for identifying strings same or not.

### Input

First line of input file means the number of input cases. (*input cases* < 100)

Following lines include test cases, and each test case is composed of two lines. Every line does not have space and capital letters and numbers. They include only small letters. The length of each line is smaller than one thousand. (*line length* < 1000)

### Output

If given strings are same, printing “equal”.

Otherwise, printing “different”.

Sample Input	Sample Output
2 abc aaabbbccc abc dac	equal different