Lexicographical ordering

In this problem you have to compare two strings lexicographically for a given ordering of english alphabets. For example, the usually ordering is "abcdefghijklmnopqrstuvwxyz" but in this problem ordering can be any permutation of these 26 characters.

Input

First line contains T the number of test cases. then T test case follow. Each test case is described in 3 lines. First describes the ordering (in exaclty 26 characters) next two lines contains two strings A and B of equal length.

Output

For each test case print ">" if A > B or "<" if A<B else print "="

Example

Input:
1
abcdefghijklmnopqrstuvwxyz
nsit
nits

Output:
>