

Sorting is a basic and an important technique in many real-world applications. A class of sorting algorithms is known as comparison-based sorting. As its name, the comparison-based sorting sorts numbers by comparing their values. Your goal is to write a program to help examine the relation of each pair of numbers.

Input

The input begins with an integer n indicating the number of cases, followed by n lines, each of which contains two numbers to be compared.

Output

For each case, output the relation of the two numbers. Each output should be in separate line.

Sample Input

3
1 3
2 2
1000 250

Sample Output

<
=
>