Compare two numbers

Enter two integers then compare their values.

Input

The first line of the input consist of a single integer number *t* which determines the number of tests.

In each of next *t* lines there are two number m and n that are separated by a space character.

Constraints

- $0 < t \le 1000$
- $-1000000 \le n, m \le 1000000$

Output

For each test case print out the result in format "<n> is greater than <m>" or "<n> is smaller than <m>" or "n is equal m: <n>". Separate your answers with a new line character.

Example

Input:

92

-3 -5

5 28

0 0

19 13

Output:

9 is greater than 2 -3 is greater than -5

5 is smaller than 28

n is equal m: 0

19 is greater than 13