B   Better Dice

The latest Table-Top Role Playing Game is out now: *Better Dice*. Unlike all other TTRPGs, this one is all about dice. In fact, it is all about the *better die*: decisions are made, friendships gained and lost, fights fought, battles won, all based on who has the *better die*.

This game uses special n-sided dice where each of the n faces has the same probability of being rolled. Moreover, each die has its own special set of n numbers on the faces.

While playing *Better Dice* you ended up in a very precarious situation where you must absolutely have a *better die* than your opponent, that is, you must roll higher than your opponent. Given both your die and your opponent's die, decide who is more likely to roll a higher number.

A twenty-sided die with a special set of numbers on the faces. CC BY 4.0 by hamstermann on Thingiverse

Input

The input consists of:

- One line with an integer n ($1 \leq n \leq 1000$), the number of sides on each die.

- Two lines, each with n integers d ($1 \leq d \leq 10^9$), the values on one of the dice.

Output

Output "first" if the first die is more likely to roll a higher number than the second die. Output "second" if the second die is more likely to roll a higher number than the first die. Output "tie" if they are both equally likely to come up higher than the other.

Sample Input 1	Sample Output 1
2 4 6 5 5	tie

Sample Input 2	Sample Output 2
6 1 2 3 4 5 6 7 6 5 4 3 2	second

Sample Input 3	Sample Output 3
3 2 2 2 1 1 8	first