Poker Nim



Poker Nim is another 2-player game that's a simple variation on a Nim game. The rules of the games are as follows:

- ullet The game starts with n piles of chips indexed from 0 to n-1. Each pile i (where $0 \leq i < n$) has c_i chips.
- The players move in alternating turns. During each move, the current player must perform *either* of the following actions:
 - Remove one or more chips from a single pile.
 - Add one or more chips *to* a single pile.

At least 1 chip must be added or removed during each turn.

- ullet To ensure that the game ends in finite time, a player cannot add chips to any pile i more than k times.
- The player who removes the last chip wins the game.

Given the values of n, k, and the numbers of chips in each of the n piles, determine whether the person who wins the game is the *first* or *second* person to move. Assume both players move optimally.

Input Format

The first line contains an integer, $oldsymbol{T}$, denoting the number of test cases.

Each of the 2T subsequent lines defines a test case. Each test case is described over the following two lines:

- 1. Two space-separated integers, n (the number of piles) and k (the maximum number of times an individual player can add chips to some pile i), respectively.
- 2. n space-separated integers, $c_0, c_1, \ldots, c_{n-1}$, where each c_i describes the number of chips at pile i.

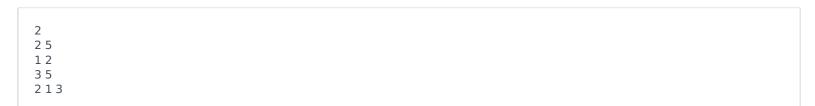
Constraints

- $1 \le T \le 100$
- $1 \le n, k \le 100$
- $1 < c_i < 10^9$

Output Format

For each test case, print the name of the winner on a new line (i.e., either **First** or **Second**).

Sample Input



Sample Output

First Second