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Dashboard > Algorithms > Game Theory > Misère Nim

Badge Progress (Details)

Points: 126   Rank: 270332

Misère Nim 🔖

👤 by **Shafaet**

| Problem | Submissions | Leaderboard | Discussions | Editorial 🔒 |

Two people are playing game of Misère Nim. The basic rules for this game are as follows:

- The game starts with n piles of stones indexed from 0 to $n - 1$. Each pile i (where $0 \leq i < n$) has s_i stones.

- The players move in alternating turns. During each move, the current player must remove one or more stones from a single pile.

- The player who removes the last stone *loses* the game.

Given the value of n and the number of stones in each pile, determine whether the person who wins the game is the *first* or *second* person to move. If the first player to move wins, print `First` on a new line; otherwise, print `Second`. Assume both players move optimally.

Input Format

The first line contains an integer, 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. An integer, n, denoting the number of piles.

2. n space-separated integers, $s_0, s_1, \ldots, s_{n-1}$, where each s_i describes the number of stones at pile i.

Constraints

- $1 \leq T \leq 100$

- $1 \leq n \leq 100$

- $1 \leq s_i \leq 10^9$

Output Format

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

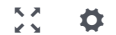### Sample Input

```
2
2
1 1
3
2 1 3
```

Sample Output

```
First
Second
```

f   🐦   in

Submissions:2047

Max Score:20
Difficulty: Easy

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Current Buffer (saved locally, editable)   ⅄ ⟳

Java 7

```java
1 ▾ import java.io.*;
2   import java.util.*;
3   import java.text.*;
4   import java.math.*;
5   import java.util.regex.*;
6
7 ▾ public class Solution {
8
9 ▾     public static void main(String[] args) {
10 ▾         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11        }
12  }
```

Line: 1 Col: 1

⬆ Upload Code as File   ☐ Test against custom input   Run Code   Submit Code

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