# Day 1: Game of Stones

Two players (numbered 1 and 2) are playing a game with n stones. Player 1 always plays first, and the two players move in alternating turns. The game's rules are as follows:

- In a single move, a player can remove either 2, 3, or 5 stones from the game board.
- If a player is unable to make a move, that player loses the game.

Given the number of stones, find and print the name of the winner (i.e., **First** or **Second**) on a new line. Each player plays optimally, meaning they will not make a move that causes them to lose the game if some better, winning move exists.

## **Input Format**

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

Each of the T subsequent lines contains a single integer, n, denoting the number of stones in a test case.

# **Constraints**

- 1 < T < 100
- $1 \le n \le 100$

## **Output Format**

On a new line for each test case, print **First** if the first player is the winner; otherwise, print **Second**.

### Sample Input

```
8
1
2
3
4
5
6
7
10
```

### **Sample Output**

```
Second
First
First
First
First
First
Second
First
```

### **Explanation**

In the sample, we have T=8 testcases.

We'll refer to our two players as  $P_1$  and  $P_2$ .

If n=1,  $P_1$  can't make any moves and loses the game (i.e., the  $P_2$  wins and we print  ${f Second}$  on a new

line).

If n=2,  $P_1$  removes 2 stones in their first move and wins the game, so we print **First** on a new line.

If n=3,  $P_1$  removes 2 stones in their first move, leaving 1 stone on the board. Because  $P_2$  is left with no available moves,  $P_1$  wins and we print **First** on a new line.

If n=4,  $P_1$  removes 3 stones in their first move, leaving 1 stone on the board. Because  $P_2$  has no available moves,  $P_1$  wins and we print **First** on a new line.

If n=5,  $P_1$  removes all 5 stones from the game board. Because  $P_2$  is left with no available moves,  $P_1$  wins and we print **First** on a new line.

If n=6,  $P_1$  removes 5 stones in their first move, leaving 1 stone on the board. Because  $P_2$  has no available moves,  $P_1$  wins and we print **First** on a new line.

If n=7,  $P_1$  can make any of the following three moves:

- 1. Remove  ${f 2}$  stones, leaving  ${f 5}$  stones on the board.  $P_{f 2}$  then removes  ${f 5}$  stones. Because  $P_{f 1}$  has no available moves,  $P_{f 2}$  wins.
- 2. Remove 3 stones, leaving 4 stones on the board.  $P_2$  then removes 3 stones, leaving 1 stone left on the board. Because  $P_1$  has no available moves,  $P_2$  wins.
- 3. Remove 5 stones, leaving 2 stones on the board.  $P_2$  then removes the 2 remaining stones. Because  $P_1$  has no available moves,  $P_2$  wins.

Because all possible moves result in  $P_2$  winning, we print **Second** on a new line.

If n=10,  $P_1$  can remove either 2 or 3 stones to win the game, so we print **First** on a new line. Recall that each player moves optimally, so  $P_1$  will not remove 5 stones because doing so would cause  $P_1$  to lose the game.