[F] The Drunken Sailor

Program:	`sailor.(cpp|java)`
Input:	`sailor.in`
Balloon Color:	`Brown`

Description

A drunken sailor is walking on a narrow pier. He's only taking steps to the right or to the left across the pier. If he takes too many steps in either direction, he might end up falling off. Given the initial position of the sailor and the series of steps and their directions that he takes, your task is to figure out if he falls off.

Input Format

The input starts with a number T ($1 \leq T \leq 1{,}000$) that represents the number of test cases in the file. Each test case starts with a line that contains three integers, the length of the pier P ($1 \leq P \leq 10^7$), the initial position of the sailor L ($1 \leq L \leq P$), and the number of series of steps S ($0 \leq S \leq 1{,}000$) the sailor will take. S lines follow, with each line containing an integer Si ($0 \leq Si \leq 10^7$) representing the number of steps, followed by a single character being either 'L' for left or 'R' for right. Position 1 on the pier is the left most position, and each step moves the sailor into an adjacent position. The sailor falls off if he takes a step to the left when he's in position 1, or takes a step to the right when he's in position P.

Output Format

The output for each test case is in this form:

```
k. ans
```

where ***k*** represents the test case number (starting at 1), and ***ans*** is the final position of the sailor after taking the series of steps. If the sailor falls off, ***ans*** is "Sailor Falls!" without the quotes instead.

Sample Input / Output

sailor.in

```
2
2 1 1
1 R
4 2 2
1 R
4 L
```

OUTPUT

```
1. 2
2. Sailor Falls!
```