Robot Instructions

Input file:	`standard input`
Output file:	`standard output`
Time limit:	`1 second`

You have a robot standing on the origin of x axis. The robot will be given some instructions. Your

task is to predict its position after executing all the instructions.

• **LEFT**: move one unit left (decrease p by 1, where p is the position of the robot before moving)

• **RIGHT**: move one unit right (increase p by 1)

• **SAME AS i**: perform the same action as in the i-th instruction. It is guaranteed that i is a positive

integer not greater than the number of instructions before this.

Input

The first line contains the number of test cases T ($T \leq 100$). Each test case begins with an integer n

($1 \leq n \leq 100$), the number of instructions. Each of the following n lines contains an instruction.

Output

For each test case, print the final position of the robot. Note that after processing each test case, the

robot should be reset to the origin.

Example

Sample Input 1	Sample Output 1
2 3 LEFT RIGHT SAME AS 2 5 LEFT SAME AS 1 SAME AS 2 SAME AS 1 SAME AS 4	1 -5