B Robot Instructions

Input: Standard Input
Output: Standard Output

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.

l   LEFT: move one unit left (decrease *p* by 1, where *p* is the position of the robot before moving)
l   RIGHT: move one unit right (increase *p* by 1)
l   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*<=100). Each test case begins with an integer *n* (1<=*n*<=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.

Sample Input

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

Problemsetter: Rujia Liu, Special Thanks: Feng Chen, Md. Mahbubul Hasan