Overview: Given a set of operations, determine the final value after the operations.

Description: Honey Lemon is experimenting again to create exciting new chemical compounds. Since many of these experiments are both dangerous and costly, she's first running simulations with the sole purpose of verifying success and to count up the number of ingredients required. To help her in her task, she needs a special 3-button calculator.

Starting with 0 ingredients, the calculator has 3 operations. Whenever a new ingredient is added, the operation "+" adds one to our current total of ingredients. If a newly added ingredient is causing the simulation to go awry, we'll remove it using the operation "-," which subtracts one from our current total. The operation "z" undoes our last operations -- but, since we may want to undo many operations at once, we abbreviate k undo operations as "z k". We assume that we cannot undo more operations than we have previously executed. Note that undo completely reverses the previous k operations (reverse the result back to it was k operations before), so

```
+
z 1
z 1
```
will result in 1, but
```
+
z 1
z 1
z 1
```
will result in 0. Given this information, can you help Honey Lemon with her chemistry simulations?

Filename: calc.{java, cpp, c, cc, py}

Input: The input will contain $n+1$ lines.
              The first line is n, the number of operations
              The next n lines have one of "+", "-", or "z k". If it is "z k", then it is guaranteed there are not more than k operations before this undo operation. Also, k will be a nonnegative integer.

Output: Output a single integer, the value after our operations.

Assumptions: $1 \le n \le 10{,}000$.

Sample   3
Input #1:   +
              -
              z 2

Sample   0
Output #1:

Sample   7
Input #2:   +
              +
              -
              +
              z 2

```
       +
   z   2
```

Sample
Output #2:   `2`