DBL

Description

Bagas is a professional basketball player, especially at dribbling. After finishing his final match, he found out that the score was rigged by the referee. Since Bagas knows that you are a well-known programmer, he wants you to check the total score that is rigged.

Given the following commands, find out the total score that is manipulated

- **add N** : Record a new score of **N**
- **dbl** : Record a new score that is the double of the previous score
- **six** : Record a new score that is the sum of the previous score plus **6**
- **del** : Invalidate the previous score, removing it from the record
- **total** : Calculate the sum of all scores

Input Format

- The first line contains the number of test cases which is **T**
- The next **T** lines contain the **command (string)** and **N (integer)**

Output Format

Print the sum of all the scores on the record after applying all the operations.
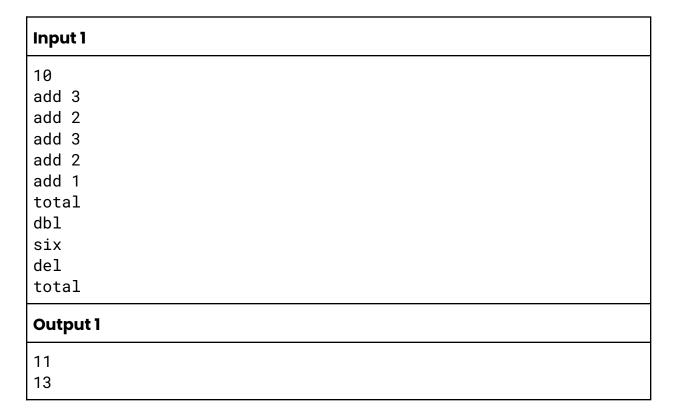
Constraints

- 0 < T ≤ 100
- 0 < N ≤ 100
- 1 < command ≤ 100

Example

Input 0
7 add 3 add 3 add 2 add 1 dbl six total

Output 0
19

Explanation 0

- **add** 3, 3, 2 and 1 to the stack. The initial stack will be 1 2 3 3
- **dbl** : Double the top of the stack. The stack will be 2 1 2 3 3
- **six** : Add 6 to the top element. The stack will be 8 2 1 2 3 3
- **total** : Calculate the sum = 19

Input 1
10 add 3 add 2 add 3 add 2 add 1 total dbl six del total

Output 1
11 13

Explanation 1

- **add** 3, 2, 3, 2 and 1 to the stack. The initial stack will be 1 2 3 2 3
- **total**: Calculate the sum = 11
- **dbl**: Double the top element. The stack will be 2 1 2 3 2 3
- **six**: add 6 to the top element. The stack will be 8 2 1 2 3 2 3
- **del**: Delete the top element. The stack will be 2 1 2 3 2 3
- **total**: Calculate the sum = 13