

# CPC 1 Problem 5 - Chika's Rage Tree

---

**Time Limit:** 2.0s    **Memory Limit:** 256M

---

Chika has been given a data structures problem and is trying to use a rage tree to solve it. Can you help her? The problem statement is:

Given an initially empty multiset of integers, support the following operations:

1. INSERT( $t$ ) - Insert  $t$  into the multiset
2. COUNT( $t$ ) - Count how many integers in the multiset are less than or equal to  $t$
3. SUM( $t$ ) - Compute the sum of all integers in the multiset less than or equal to  $t$

## Constraints

---

$$1 \leq Q \leq 10^6$$

$$1 \leq t_i \leq 10^6$$

## Input Specification

---

The first line contains one positive integer,  $Q$ .

The next  $Q$  lines each contain two integers. The first is between 1 and 3 inclusive, indicating the operation as per above. The second is the value of  $t_i$ , the value of  $t$  for the  $i$ th operation.

## Output Specification

---

For each `COUNT` and `SUM` operation - output the computed value. The values should be printed one per line in the order they were presented in.

## Sample Input

---

```
3
2 1000000
1 17
3 18
```

## Sample Output

---

0  
17