C - Large Queue

Editorial (/contests/abc413/tasks/abc413_c/editorial)

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

Problem Statement

There is an empty integer sequence $A = ()$. You are given Q queries, and you need to process them in the given order. There are two types of queries:

- Type 1: Given in the format `1 c x`. Add c copies of x to the end of A.
- Type 2: Given in the format `2 k`. Remove the first k elements from A and output the sum of the removed k integers. It is guaranteed that k is at most the length of A at that time.

Constraints

- $1 \leq Q \leq 2 \times 10^5$
- In type 1 queries, $1 \leq c \leq 10^9$.
- In type 1 queries, $1 \leq x \leq 10^9$.
- In type 2 queries, letting n be the length of A at that time, $1 \leq k \leq \min(10^9, n)$.
- All input values are integers.

Input

The input is given from standard input in the following format:

$$
\begin{aligned}
&Q\\
&\mathrm{query}_1\\
&\mathrm{query}_2\\
&\vdots\\
&\mathrm{query}_Q
\end{aligned}
$$

where query_i represents the i-th query and is in one of the following formats:

$$1 \quad c \quad x$$

$$2 \quad k$$

Output

Let q be the number of type 2 queries. Output q lines. The i-th line should contain the answer to the i-th type 2 query.

Sample Input 1 Copy

Copy

```
5
1 2 3
1 4 5
2 3
1 6 2
2 5
```

Sample Output 1 Copy

Copy

```
11
19
```

- 1st query: Add 2 copies of 3 to the end of A. Then, $A = (3, 3)$.
- 2nd query: Add 4 copies of 5 to the end of A. Then, $A = (3, 3, 5, 5, 5, 5)$.
- 3rd query: Remove the first 3 elements from A. Then, the sum of the removed 3 integers is $3 + 3 + 5 = 11$, so output 11. After removal, $A = (5, 5, 5)$.
- 4th query: Add 6 copies of 2 to the end of A. Then, $A = (5, 5, 5, 2, 2, 2, 2, 2, 2)$.
- 5th query: Remove the first 5 elements from A. Then, the sum of the removed 5 integers is $5 + 5 + 5 + 2 + 2 = 19$, so output 19. After removal, $A = (2, 2, 2, 2)$.

Sample Input 2 Copy

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```
10
1 75 22
1 81 72
1 2 97
1 84 82
1 2 32
1 39 57
2 45
1 40 16
2 32
2 42
```

Sample Output 2

```
990
804
3024
```

Sample Input 3

```
10
1 160449218 954291757
2 17217760
1 353195922 501899080
1 350034067 910748511
1 824284691 470338674
2 180999835
1 131381221 677959980
1 346948152 208032501
1 893229302 506147731
2 298309896
```

Sample Output 3

```
16430766442004320
155640513381884866
149721462357295680
```

/#telegram)

:url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc413%2Ftasks%2Fabc413_c%3Flang%3Den&title=C%20-

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