

C - Large Queue

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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.

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Input

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

```
Q
query1
query2
⋮
queryQ
```

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

1 c x
 Contest Duration: 2025-07-05(Sat) 08:00 (http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250705T2100&p1=248) - 2025-07-05(Sat) 09:40 (http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250705T2240&p1=248) (local time) (100 minutes) [Back to Home \(/home\)](#)

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Output

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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.

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Sample Input 1

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

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Sample Output 1

```
11
19
```

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- 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, $A = (5, 5, 5)$.

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- 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

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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
```

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Sample Output 2

[Copy](#)

```
990
804
3024
```

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Sample Input 3

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```
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
```

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Sample Output 3

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```
16430766442004320
155640513381884866
149721462357295680
```

Language

Python (CPython 3.11.4) ▼

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