A Lazy Problem

Time Limit: 1.0s   **Memory Limit:** 64M

Given an array a of length N filled with 0s at the beginning, and Q queries, support the following queries:

- `1 l r` Output the sum of the elements in the subarray $[l, r]$ $(1 \leq l \leq r \leq N)$.
- `2 v` Add v to all elements in the array, $(1 \leq v \leq 10^5)$.

Input Specification

The first line will contain two integers N, Q $(1 \leq N, Q \leq 10^5)$.

The next Q lines will each contain a query of the form defined above.

Output Specification

For each type 1 query, output the desired answer.

Sample Input

```
4 3
1 2 3
2 4
1 2 4
```

Sample Output

```
0
12
```