

range_update_query

You have an array A of size $N \leq 100000$, initially every element is zero.

You have to process Q queries, each is one of the following

"add x y k " - add k to $A[i]$ for every i between x and y

"query x y " - print $A[x] + A[x+1] + \dots + A[y]$

Input:

N Q

The next Q lines are queries as mentioned above

Output:

The result of each "query" type queries, seperated by a space

Sample Input 1:

```
10 4
add 1 2 2
add 2 5 2
query 1 4
query 1 5
```

Sample Output 1:

```
10 12
```

Notes:

Everything fits in 64-bit integer.

The array A is one-indexed

$N, Q \leq 100000$