PROBLEMSET GROUPS RATING EDU API CALENDAR HELP HOME TOP CATALOG CONTESTS GYM

PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

## F. SUM and REPLACE

time limit per test: 2 seconds memory limit per test: 256 megabytes

Let D(x) be the number of positive divisors of a positive integer x. For example, D(2) = 2 (2 is divisible by 1 and 2), D(6) = 4 (6 is divisible by 1, 2, 3 and 6).

You are given an array a of n integers. You have to process two types of queries:

- 1. REPLACE l r for every  $i \in [l, r]$  replace  $a_i$  with  $D(a_i)$ ;
- 2. SUM l r calculate  $\sum_{i=1}^{r} a_i$ .

Print the answer for each SUM query.

#### Input

The first line contains two integers n and m ( $1 \le n, m \le 3 \cdot 10^5$ ) — the number of elements in the array and the number of queries to process, respectively.

The second line contains n integers  $a_1, a_2, ..., a_n$  ( $1 \le a_i \le 10^6$ ) — the elements of the array.

Then m lines follow, each containing 3 integers  $t_i$ ,  $l_i$ ,  $r_i$  denoting i-th query. If  $t_i = 1$ , then i-th query is REPLACE  $l_i$  $r_i$ , otherwise it's SUM  $l_i$   $r_i$   $(1 \le t_i \le 2, 1 \le l_i \le r_i \le n)$ .

There is at least one SUM query.

#### Output

For each SUM query print the answer to it.

#### **Example**

input	Сору
7 6	
6 4 1 10 3 2 4	
2 1 7	
2 4 5	
1 3 5	
2 4 4	
1 5 7	
2 1 7	
output	Сору
30	
13	
4	
22	

## **Educational Codeforces Round 37** (Rated for Div. 2)

#### **Finished**

### **Practice**



### → Virtual participation

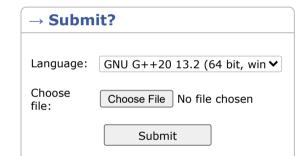
Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

# → Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest



ightarrow Last submissions		
Submission	Time	Verdict
291100293	Nov/11/2024 20:53	Accepted
272706764	Jul/26/2024 15:24	Accepted
272706612	Jul/26/2024 15:23	Accepted
272705738	Jul/26/2024 15:17	Time limit exceeded on test 2
272451221	Jul/24/2024 22:59	Time limit exceeded on test 2
272449990	Jul/24/2024 22:41	Time limit exceeded on test 2
272273957	Jul/24/2024 11:01	Time limit exceeded on test 2
272273310	Jul/24/2024 10:56	Time limit exceeded on test 2



# → Contest materials

- Announcement
- T (en)



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