

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

PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

# D. The Child and Sequence

time limit per test: 4 seconds memory limit per test: 256 megabytes

At the children's day, the child came to Picks's house, and messed his house up. Picks was angry at him. A lot of important things were lost, in particular the favorite sequence of Picks.

Fortunately, Picks remembers how to repair the sequence. Initially he should create an integer array a[1], a[2], ..., a[n]. Then he should perform a sequence of m operations. An operation can be one of the following:

- 1. Print operation l, r. Picks should write down the value of  $\sum_{i=l}^{r} a[i]$ .
- 2. Modulo operation l, r, x. Picks should perform assignment  $a[i] = a[i] \mod x$  for each  $i \ (l \le i \le r)$ .
- 3. Set operation k, x. Picks should set the value of a[k] to x (in other words perform an assignment a[k] = x).

Can you help Picks to perform the whole sequence of operations?

#### Input

The first line of input contains two integer: n, m ( $1 \le n$ ,  $m \le 10^5$ ). The second line contains n integers, separated by space: a[1], a[2], ..., a[n] ( $1 \le a[i] \le 10^9$ ) — initial value of array elements.

Each of the next m lines begins with a number  $type(type \in \{1, 2, 3\})$ .

- If type = 1, there will be two integers more in the line:  $l, r (1 \le l \le r \le n)$ , which correspond the operation 1.
- If type = 2, there will be three integers more in the line: l, r, x  $(1 \le l \le r \le n; 1 \le x \le 10^9)$ , which correspond the operation 2.
- If type = 3, there will be two integers more in the line: k, x  $(1 \le k \le n; 1 \le x \le 10^9)$ , which correspond the operation 3.

#### Output

For each operation 1, please print a line containing the answer. Notice that the answer may exceed the 32-bit integer.

## **Examples**

```
input

5 5
1 2 3 4 5
2 3 5 4
3 3 5
1 2 5
2 1 3 3
1 1 3

output

Copy

8
5
```

input	Сору
10 10	
6 9 6 7 6 1 10 10 9 5	
1 3 9	
2 7 10 9	
2 5 10 8	
1 4 7	
3 3 7	
2 7 9 9	
1 2 4	
1 6 6	
1 5 9	
3 1 10	
output	Сору
49	
15	
23	
1	
9	

# Note

Consider the first testcase:

- At first,  $a = \{1, 2, 3, 4, 5\}.$
- After operation 1,  $a = \{1, 2, 3, 0, 1\}$ .
- After operation 2,  $a = \{1, 2, 5, 0, 1\}$ .
- At operation 3, 2 + 5 + 0 + 1 = 8.
- After operation 4,  $a = \{1, 2, 2, 0, 1\}$ .
- At operation 5, 1 + 2 + 2 = 5.

### Codeforces Round 250 (Div. 1)

#### **Finished**

## Practice



## → Virtual participation

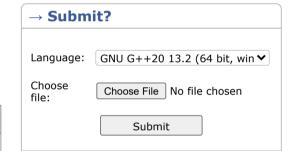
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Start virtual contest

#### → Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest



→ Last submissions		
Submission	Time	Verdict
291103004	Nov/11/2024 21:17	Accepted
277450655	Aug/21/2024 02:25	Accepted



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# → Contest materials

- Codeforces Round #250
- Tutorial (en)