DMPG '18 S5 - Mimi and Division

For her birthday, Mimi is given an array A of N integers. She then proceeds to perform Q operations:

1. `1 l r x` : Count how many numbers there are in the subarray $A_l, A_{l+1}, \ldots, A_r$ which are divisible by x.
2. `2 u v` : Replace the uth number with v.

Because you forgot to get Mimi a present, you decide to write a program to verify her answers.

Constraints

For all subtasks:

$1 \leq l_i \leq r_i \leq N$

$1 \leq u_i \leq N$

$1 \leq v_i, x_i \leq 200\,000$

Subtask 1 [20%]

$1 \leq N, Q \leq 2\,000$

Subtask 2 [80%]

$1 \leq N, Q \leq 200\,000$

Input Specification

The first line will contain N and Q.
The next line will contain N space separated integers, $A_1, A_2, \ldots, A_N$.
The next Q lines will each contain a valid query.

Output Specification

The answer to each query of type 1, each on a new line.

Sample Input

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

Sample Output

```
5
2
1
2
```