

# Druid and Queries

Druid accumulates numbers very fast, once he had some numbers, and some queries, he asks you to play a game, the game goes as follows, given N numbers and Q queries; the fastest to answer all the Q queries wins the game. Druid challenges you to answer all the queries faster than him.

Can you beat Druid in his game?

## Input

The first line contains 2 space separated integers N, Q ( $1 \leq N, Q \leq 10^5$ ), the second line contains N space separated integers ( $0 \leq N_i < 2^{31}$ ), after that follows Q lines, the i-th line contains 3 space separated integers T, A, and B, T ( $0 \leq T \leq 1$ ) is the query type, A and B ( $1 \leq A \leq B \leq N$ ) are indices ( 1-based ).

## Output

For each query, output one line contains the answer to the i-th query. If T is 0, then the answer should be the number of odd numbers between the 2 indices A and B inclusive, otherwise, the answer should be the number of even numbers between the 2 indices A and B inclusive.

## Example

**Input:**

```
10 5
10 6 4 9 46 21 99 36 45 1
1 1 2
1 1 3
1 1 4
0 1 5
0 5 10
```

**Output:**

```
2
3
3
1
4
```