

## Problem F. F

**Time limit** 1000 ms

**Mem limit** 524288 kB

Given an array of  $n$  integers, your task is to process  $q$  queries of the form: what is the sum of values in range  $[a, b]$ ?

### Input

The first input line has two integers  $n$  and  $q$ : the number of values and queries.

The second line has  $n$  integers  $x_1, x_2, \dots, x_n$ : the array values.

Finally, there are  $q$  lines describing the queries. Each line has two integers  $a$  and  $b$ : what is the sum of values in range  $[a, b]$ ?

### Output

Print the result of each query.

### Constraints

- $1 \leq n, q \leq 2 \cdot 10^5$
- $1 \leq x_i \leq 10^9$
- $1 \leq a \leq b \leq n$

### Example

Input	Output
8 4 3 2 4 5 1 1 5 3 2 4 5 6 1 8 3 3	11 2 24 4