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# **Magical Forest & Fruits**

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#### **Problem Statament**

In a magical forest, **N** trees stand in a straight line, each bearing a certain number of enchanted fruits with the power to grant wishes. The number of fruits on the i-th tree is given in an array **A** of size **N**.

A group of adventurers is planning a journey to collect fruits and needs to determine the total number of fruits available within different tree ranges. To help them, you must answer **Q** queries. Each query consists of two integers **L** and **R**, representing the range of trees they want to collect fruits from. Your task is to compute the total number of fruits in the range [L, R].

### **Input Format**

- The first line contains two integers N and Q:
  - $1 < N < 10^6$  (number of trees)
  - $1 \leq Q \leq 10^5$  (number of queries)
- The second line contains N integers  $A_1,A_2,\ldots,A_n$ , where  $0\leq A_i\leq 10^6$ , representing the number of fruits on each tree.
- Each of the next Q lines contains two integers L and R ( $1 \le L \le R \le N$ ), representing a query.

#### Constraints

- $1 \le N \le 10^6$
- $1 < Q < 10^5$
- $0 \le A_i \le 10^6$

#### **Output Format**

For each query, print a single integer—the total number of fruits in the range [L, R]. Each result should be printed on a new line.

#### Sample Input 0

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

```
7
13
```

## Explanation 0

```
• Query (1,3): Trees 1 to 3 \rightarrow 2 + 4 + 1 = 7
• Query (2,5): Trees 2 to 5 \rightarrow 4 + 1 + 5 + 3 = 13
• Query (4,4): Tree 4 alone \rightarrow 5
                                                                                       Contest ends in 2 hours 40 minutes 35 seconds
                                                                                       Submissions: 221
                                                                                       Max Score: 1
                                                                                       Rate This Challenge:
                                                                                       \triangle \triangle \triangle \triangle \triangle \triangle
                                                                                       More
                                                                                           C++20
    1 ▼#include <cmath>
    2 #include <cstdio>
    3 #include <vector>
    4 #include <iostream>
    5 #include <algorithm>
    6 using namespace std;
    7
    8
    9 vint main() {
            /\star Enter your code here. Read input from STDIN. Print output to STDOUT \star/
   10 ▼
             return 0;
   11
   12 }
   13
                                                                                                                         Line: 1 Col: 1
<u>♣ Upload Code as File</u> Test against custom input
                                                                                                                        Submit Code
                                                                                                        Run Code
```