SAC '21 Code Challenge P4 - Averaging Averages

Time limit: 1.0s **Memory limit:** 256M

To get into university, you are required to have a high average, so your advisor offers you a challenge:

> If you can answer my Q queries, I will boost your average by 1%.

Each query will consist of $[L, R]$, meaning your advisor wants you to query the average of courses $L, L+1, \ldots, R$ rounded down to the nearest integer.

Input Specification

The first line will contain N and Q, the number of courses you are currently taking and the number of queries.

The second line will contain N space-separated integers, A_i, your average in the i^{th} course.

The next Q lines will contain L and R, a query for the average of your courses in $[L, R]$.

Note: Fast I/O might be required to fully solve this problem (e.g., BufferedReader for Java).

Output Specification

Output Q lines, the answer to each query rounded down to the nearest integer.

Constraints

For all subtasks:

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

$1 \leq L \leq R \leq N$

$0 \leq A_i \leq 100$

Subtask 1 [50%]

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

Subtask 2 [50%]

No additional constraints.

Sample Input

```
5 3
100 50 0 75 90
1 2
2 3
2 5
```

Sample Output

```
75
25
53
```