

GFSSOC '15 Fall J4 - Marathon

Time limit: 1.0s **Memory limit:** 128M

It was a peaceful day in the life of a student, when suddenly Timothy Li messages you about some strange anime called Date a Live. There are N episodes in the series, and each episode i has a rating k_i from 1 to 10. Being super bored, you decide to give it a try. Unfortunately, you cannot live without food through the entire afternoon and the anime streamer you are using does not have a pause button for some reason. Thus, to make an intelligent decision on when to go make food, you have Q queries in the form $a\ b$. For each of these queries, you will simulate skipping episodes a to b (inclusive), and output the sum of the ratings of the episodes you do not skip.

Input Specification

The first line of input contains 2 integers, space separated — N, Q .

The next line contains N integers, space separated. The i^{th} of these integers represents the rating of the i^{th} episode.

The next Q lines contain integers a_i and b_i , the episodes that are skipped.

Output Specification

For each query, output one integer, the sum specified in the problem statement.

Constraints

$$1 \leq N, Q \leq 500\,000$$

$$1 \leq k_i \leq 10$$

$$1 \leq a \leq b \leq N$$

Sample Input

```
10 3
5 6 7 8 3 4 5 6 1 2
1 3
2 4
1 10
```

Sample Output

29
26
0

Explanation of Output for Sample Input

For the first query, the first three episodes will be skipped, so the total rating is $8 + 3 + 4 + 5 + 6 + 1 + 2 = 29$.