

Car Show



You are in charge of planning a prestigious car show that will run for several days.

The company has an array of n cars, numbered 1 to n from left to right. They don't necessarily have distinct models, though. We represent a car's model with an integer: car i has model A_i .

The show will run for q days. You are tasked to select a nonempty subset of the cars to be displayed on each day. However, there are a few restrictions. Specifically, for the i^{th} day,

- The set of displayed cars must form a contiguous subarray of the cars.
- The set of displayed cars must lie between car l_i and car r_i , inclusive.
- The models of the displayed cars must be distinct.

For each day, how many valid choices are there for the set of cars to display on that day?

Input Format

The first line contains two space-separated integers n and q .

The second line contains n space-separated integers A_1, A_2, \dots, A_n .

The i^{th} of the next q lines contains two space-separated integers l_i, r_i .

Constraints

- $1 \leq n, q \leq 10^5$
- $1 \leq A_i \leq 10^6$
- $1 \leq l_i \leq r_i \leq n$

Subtasks

- For 20% of the maximum score, $n, q \leq 10^3$

Output Format

Print q lines. The i^{th} line must contain a single integer denoting the answer for the i^{th} line.

Sample Input 0

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

Sample Output 0

```
24
19
20
10
10
```

Explanation 0

For the second day, we are only considering the cars between car $l_2 = 2$ and car $r_2 = 7$. The models of those cars are **5, 1, 2, 4, 6, and 1**, respectively.

It turns out that there are **19** valid choices. Thus, the answer to the second query is **19**.

An example of a valid set of cars would be **{4, 5, 6, 7}**, since they form a contiguous subarray of cars between car **2** and car **7**, and their models, **2, 4, 6, 1**, are distinct. Another example of a valid set of cars would be **{3, 4, 5}**.

On the other hand,

- The set of cars **{3, 4, 5, 6, 7}** is invalid since car **3** and car **7** have the same model, **1**.
- The set of cars **{2, 4, 5, 6, 7}** is invalid since they don't form a contiguous subarray.
- The set of cars **{1, 2, 3, 4}** is invalid since not all cars are between car **2** and car **7**.