Problem F. Sum Total

Time limit   1000 ms
Memory limit   256MB

Problem Description

Hutao has an array A of length n, with elements $A_1,\ A_2,\ A_3, \ldots, A_n$

Hutao will perform q operations. In the i-th operation, she will change A_k to x.

Hutao says that the changes **isn't** independent. The previous changes will affect the future.

Hutao wants to know the value of $A_1 + A_2 + A_3 + \ldots + A_n$ after each operation.

Hutao asks for your help.

Input format

The first line of the input contains two positive integers n and q ($1 \leq n, q \leq 2 \cdot 10^5$), representing the length of the array A and the number of operations Hutao will perform, respectively.

The second line contains n positive integers $A_1, A_2, A_3, \ldots, A_n$ ($1 \leq A_i \leq 10^9$).

The next q lines each contain two positive integers k and x ($1 \leq k \leq n, 1 \leq x \leq 10^9$), representing an operation where A_k will be changed to x.

We guarantee there are no $\{i, j\}$ such that $\{a_i, b_i\} = \{a_j, b_j\}$

Output format

Please output q lines. The i-th line should contain a positive integer representing the value of $A_1 + A_2 + A_3 + \cdots + A_n$ after the i-th operation.

Subtask score

Subtask	Score	Additional Constraints
1	25	$q = 1$
2	75	No constraints

Sample

Sample Input 1
```
3 2
2 3 1
1 4
2 1
```

Sample Output 1
```
8
6
```

Sample Input 2
```
5 1
1 2 3 4 5
1 1
```

Sample Output 2
```
15
```

Notes