



Problem B. Toby and Array

Input: Standard
Output: Standard
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As it is known, Toby loves arrays and queries (he also hates long statements :D). One day Toby came up with the following: there is an array of integers and multiple queries. For each query, Toby wants to know the value of the k -th position in the subarray $[l, r]$ ($r \geq l$) ($1 \leq k \leq r - l + 1$), **if the subarray $[l, r]$ was sorted in non-decreasing order.**

Input

The input has several test cases. The first line contains n ($1 \leq n \leq 10^6$) and q ($1 \leq q \leq 10^6$), the length of the array and the number of queries respectively. The next line contains n integers a_i ($1 \leq a_i \leq 10^9$). Then q lines follow, each line containing a query with three integers l, r and k ($1 \leq l, r \leq n$).

Output

For each query print the answer in a single line (**Look at the samples**).

Example

Input	Output
4 3	3
1 3 4 3	3
1 2 2	4
2 4 1	3
1 4 4	3
8 3	8
4 7 8 5 3 6 1 2	3
4 5 1	10
1 8 3	9
3 5 3	5
10 10	10
8 6 2 1 7 3 10 9 5 4	2
1 8 3	3
7 7 1	4
7 8 1	5
9 9 1	10
2 10 9	
2 7 2	
5 7 1	
10 10 1	
9 10 2	
7 10 4	

Use fast I/O methods

Explanation

For the first sample.

indexes: 1 2 3 4

array = {1, 3, 4, 3}

For first query $[1, 2]$ we have the subarray $\{1, 3\}$, after sorting we have $\{1, \bar{3}\}$, so the value in the 2 -th



position is 3.

For second query [2, 4] we have the subarray {3, 4, 3}, after sorting we have { $\bar{3}$, 3, 4}, so the value in the 1 - *th* position is 3.

For third query [1, 4] we have the subarray {1, 3, 4, 3}, after sorting we have {1, 3, 3, $\bar{4}$ }, so the value in the 4 - *th* position is 4.