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KQUERY - K-query

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Given a sequence of n numbers $a_1, a_2 \dots a_n$ and a number of k -queries. A k -query is a triple (i, j, k) ($1 \leq i \leq j \leq n$). For each k -query (i, j, k) , you have to return the number of elements greater than k in the subsequence $a_i, a_{i+1} \dots a_j$.

Input

- Line 1: n ($1 \leq n \leq 30000$).
- Line 2: n numbers $a_1, a_2 \dots a_n$ ($1 \leq a_i \leq 10^9$).
- Line 3: q ($1 \leq q \leq 200000$), the number of k -queries.
- In the next q lines, each line contains 3 numbers i, j, k representing a k -query ($1 \leq i \leq j \leq n, 1 \leq k \leq 10^9$).

Output

- For each k -query (i, j, k) , print the number of elements greater than k in the subsequence $a_i, a_{i+1} \dots a_j$ in a single line.


Example

Input

```
5
5 1 2 3 4
3
2 4 1
4 4 4
1 5 2
```

Output

```
2
0
3
```

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