Problem F - Apple Baskets

It's harvest time! Daniel has hired the ACM team to help him harvest apples. Each person picks up one out of n large baskets (labeled from 1 to n), goes into Daniel's apple orchard and picks up some number of apples before dropping the basket off at Daniel's house. From there, Daniel loads up his truck with some number of apples, and drops them off at a warehouse.

Daniel has loaded his truck with baskets i for all $i \in [\ell, r]$, so his truck contains baskets $\ell, \ell+1, ..., r-1, r$. On his way to the warehouse, Daniel drops by David's house to gift his good friend some of the fruits of his labor. Daniel wants to give David k baskets of apples, but David refuses to take them unless Daniel has exactly k baskets with exactly the same number of apples. David will refuse the baskets if Daniel has more than k baskets with the same number of apples. Daniel doesn't want to move any apples between baskets (because that's too much work). Help Daniel determine how many different sets of baskets he can give to David.

Input

The first line contains a single integer, T specifying the number of test cases.

Each test case begins with one integer n ($1 \leq n \leq 2 \times 10^5$) denoting the total number number of baskets of apples Daniel has. Then follows one line with n space seperated integers, with the ith integer a_i ($1 \leq a_i \leq 10^6$) denoting the number of apples in the ith basket.

The next line contains $q (1 \leq q \leq 2 \times 10^5)$ the number of queries. Each query is considered as independent questions. Then follows q lines with one query on each line of the form $\ell\ r\ k$ ($1 \leq \ell \leq r \leq n$) ($1 \leq k \leq n$).

Output

For each test case, output the answers to the queries each on its own line.

Output the number of different sets of baskets he can give to David from baskets from $\ell, \ell+1, ..., r-1, r$ such that he has exactly k baskets with the same number of apples.

Sample Input

```
1
5
1 4 10 4 10
4
1 5 2
1 5 1
1 3 1
3 5 1
```

Sample Output

```
2
1
3
1
```