DMOPC '14 Contest 2 P6 - Selective Cutting

Time Limit: 2.0s   **Memory Limit:** 128M

The Logging Company has been hit with a petition from concerned citizens regarding their uncontrolled tree-cutting. For public relations purposes, they have decided that, moving forward, they will only cut down trees with mass above a certain threshold.

The Logging Company has a line of N $(1 \le N \le 100\,000)$ trees. Each tree i has a mass m_i $(1 \le m_i \le 20\,000)$. The Company wants to cut some of the trees, so they've hired you to calculate the mass of all the wood they would get from cutting all the trees with m_i greater than or equal to q $(1 \le q \le 20\,000)$ between positions a and b inclusive $(0 \le a \le b < N)$. In particular, they want you to answer Q $(1 \le Q \le 100\,000)$ such queries.

Input Specification

The first line will contain the integer N. For each tree i, the ith (from 0) integer on the second line will contain the integer mass m_i. The third line will contain the number Q, the number of queries the logging company wants you to answer. The next Q lines will contain three integers a and b and q.

Output Specification

For each query, print the total mass of the trees at position i such that $a \le i \le b$, and $m_i \ge q$.

Sample Input

```
5
1 3 4 2 5
5
0 4 3
1 3 2
0 4 5
4 4 1
0 4 1
```

Sample Output

```
12
9
5
5
15
```