DMOPC '14 Contest 2 P6 - Selective Cutting

Time limit: 0.25s **Memory limit:** 128M
Java: 1.0s
Python: 1.0s

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 $(1 \leq N \leq 100\,000)$ trees. Each tree i has a mass m_i $(1 \leq m_i \leq 20\,000)$. 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 $(1 \leq q \leq 20\,000)$ between positions a and b inclusive $(0 \leq a \leq b < N)$. In particular, they want you to answer Q $(1 \leq Q \leq 100\,000)$ such queries.

Input Specification

The first line will contain the integer N. For each tree i, the i^{th} (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 $a \leq i \leq b$, and $m_i \geq q$.

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
```