

# DMOPC '14 Contest 2 P6 - Selective Cutting

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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

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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

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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

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

## Sample Output

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```
12
9
5
5
15
```