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Coding Area

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# Coding Area

**A****B****C****D****E****F****G****H****ONLINE EDITOR (E)**

## Sub Arrays

### + Problem Description

Two arrays, of same size, and two sets of low and high indices of each of the array are provided. The low to high indices of each array creates two sub-arrays. Find the unique number of elements from both arrays which are not part of both sub-arrays.

### + Constraints

 $0 < N \leq 5 \cdot 10^3$  (Integer) $0 < \text{Villegers ID} \leq 5 \cdot 10^3$  (Integer) $0 < Q \leq 100000$  (Integer)

### + Input Format

First line contains a single integer  $N$  (the size of arrays)

Next two lines contain  $N$  space delimited integers (elements of each array)

Next line contains integer  $Q$  (number of queries)

Next  $Q$  lines containing 4 space separated integers  $L1, H1, L2, H2$

where

L1 and H1 denote low and high indices of array 1 i.e sub-part of array 1

L2 and H2 denote low and high indices of array 2 i.e sub-part of array 2

### + Output

For each query, print the unique number of elements from both arrays which are not part of both sub-arrays.

### + Test Case

### + Explanation

Example 1

Input

10

1 2 3 4 5 6 7 8 9 10

2 3 4 6 7 9 10 12 23 24

1

1 5 1 5

Output

6

Explanation

We can see that there is only one query so we have to get 1st to 5th elements from the first array, which is 1 2 3 4 5. Similarly, 1st to 5th elements from the second array, which is 2 3 4 6 7.

So now the remaining elements, which are not a part of sub-arrays are :

6 7 8 9 10 9 10 12 23 24

But we can see that elements 9 10 are appearing twice in the list. So we count them only once. Also, elements 6 and 7 are a part of sub-array 2, hence they too should be eliminated from the final count.

After elimination we have final list of elements as :

8 9 10 12 23 24

So the count of unique number of elements from both arrays which are not part of both sub-arrays is 6.

Example 2

Input

10

1 2 3 4 5 6 7 8 9 10

6 7 8 9 10 11 12 13 15 12

2

1 3 6 9

7 10 2 4

Output

7

10

Explanation

For 1st query viz. 1 3 6 9 we have to get 1st to 3rd elements from the first array, which are 1 2 3. Similarly, 6th to 9th elements from the second array, which is 11 12 13 15.

So now the remaining elements are :

4 5 6 7 8 9 10 6 7 8 9 10 12

But we can see that elements 6 7 8 9 10 are appearing twice in the list. So we count them only once. Also, element 12 appears in sub-array 2. Hence we have to eliminate 12 from the list.

After eliminating we have final list of elements as :

4 5 6 7 8 9 10

So the count of unique number of elements from both arrays which are not part of both sub-arrays is 7.

Similarly, for 2nd query viz. 7 10 2 4 output will be 10.

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