Array query-1

locked

Problem | Submissions | Leaderboard | Discussions

You're given two arrays A and B of sizes N and M respectively. C is an array of size $N * M$, which consist of $A_i + B_j$ for all $1 \leq i \leq N$ and $1 \leq j \leq M$. You have to answer Q queries such that for ${Q_i}^{th}$ query, you have to print how many values of array C are greater than ${X_i}^{th}$ smallest element and smaller than ${Y_i}^{th}$ smallest element or greater than ${Y_i}^{th}$ smallest element and smaller than ${X_i}^{th}$ smallest element of array C. The problem is divided into two subtasks depends on the constraints. Initially P will be given to indicate the which subtask the problem belongs to.

Input Format

The first line contains three space-separated integers N, M and P. The second line contains N space-separated integers denoting the elements of array A. The third line contains M space-separated integers denoting the elements of array B. The fourth line contains Q. Each of the next Q lines contain two space-separated integers X and Y.

Constraints

$0 \leq P \leq 1$
$0 < X_i , Y_i \leq N * M$

When $P = 0$

$0 < A_i , B_j \leq 10000$
$0 < N \leq 5000$
$0 < M \leq 10^5$
$0 < Q \leq 10^6$

When $P = 1$

$0 < A_i , B_j \leq 10^8$
$0 < N , M \leq 10^5$
$0 < Q \leq 50$

Output Format

Print number of values for each query on separate line.

Sample Input 0

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

Sample Output 0

```
2
0
```

Explanation 0

$A_0 + B_0 = 3$
$A_1 + B_0 = 4$
$A_0 + B_1 = 4$
$A_1 + B_1 = 5$

so $C = [3, 4, 4, 5]$

Query 1
1st smallest element = 3, 4th smallest element = 5 in between there are two numbers = $[4, 4]$
Query 2
2nd smallest = 4 , 4th smallest = 5
there are no numbers in between them, so the answer is = 0

Submissions: 5
Max Score: 100

Rate This Challenge:

Download problem statement

Download all test cases

Suggest Edits

Collapse

Admin Options

Edit Challenge

View Submissions

C++

```
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;


int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}

```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code