Description | My Submissions | Hints/Editorial | AC Submissions | My Notes (0)

Kth Sum Value

? Ask Doubt

Time-Limit: 3 sec Score: 100.00/100 Difficulty : ★★★★

Memory: 256 MB Accepted Submissions: 100 Relevant For: AZ-201 AZ-202 AZ-301

Description

Given two arrays *A* of size *N* and *B* of size *M* and an integer *K*. Create a new array *C* of size *N*M* consisting of *A[i]+B[j]* for *1≤i≤N, 1≤j≤M*. Find the *Kth* smallest element in the array *C*.

Input Format

The first line contains *T*, the number of test cases (*1<=T<=10000*).

The first line contains 3 space-separated integer *N, M, K* where *1<=N<=10^6, 1<=M<=10^6, 1<=K<=N*M*.

Next line contains *N* space-separated integers (*0<=Ai<=1e4*).

Next line contains *M* space-separated integers (*0<=Bi<=1e4*).

Sum of ***min(N, M) across all test cases<=10^5***.

Output Format

For each test case print the *Kth* smallest element in the array *C*.

Sample Input 1

Copy

```
1
3 3 6
1 2 3
4 5 6
```

Sample Output 1

Copy

```
7
```

Note

Array C -> [1+4,1+5,1+6,2+4,2+5,2+6,3+4,3+5,3+6] -> [5,6,7,6,7,8,7,8,9]
Array C after sorting - [5,6,6,7,7,7,8,8,9]
6th element is 7.

C++14[GCC]

Submit

```
1
```