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Game of Two Stacks 🔖

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Alexa has two stacks of non-negative integers, stack $A = [a_0, a_1, \ldots, a_{n-1}]$ and stack $B = [b_0, b_1, \ldots, b_{m-1}]$ where index 0 denotes the top of the stack. Alexa challenges Nick to play the following game:

- In each move, Nick can remove one integer from the top of either stack A or stack B.

- Nick keeps a running sum of the integers he removes from the two stacks.

- Nick is disqualified from the game if, at any point, his running sum becomes greater than some integer x given at the beginning of the game.

- Nick's *final score* is the total number of integers he has removed from the two stacks.

Given A, B, and x for g games, find the maximum possible score Nick can achieve (i.e., the maximum number of integers he can remove without being disqualified) during each game and print it on a new line.

Input Format

The first line contains an integer, g (the number of games). The $3 \cdot g$ subsequent lines describe each game in the following format:

1. The first line contains three space-separated integers describing the respective values of n (the number of integers in stack A), m (the number of integers in stack B), and x (the number that the sum of the integers removed from the two stacks cannot exceed).
2. The second line contains n space-separated integers describing the respective values of $a_0, a_1, \ldots, a_{n-1}$.
3. The third line contains m space-separated integers describing the respective values of $b_0, b_1, \ldots, b_{m-1}$.

Constraints

- $1 \le g \le 50$
- $1 \le n, m \le 10^5$
- $0 \le a_i, b_j \le 10^6$
- $1 \le x \le 10^9$

Subtasks

- $1 \le n, m, \le 100$ for 50% of the maximum score.

Output Format

For each of the g games, print an integer on a new line denoting the maximum possible score Nick can achieve without being disqualified.
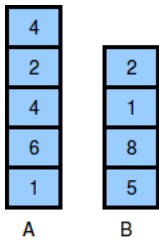
Sample Input 0

```
1
5 4 10
4 2 4 6 1
2 1 8 5
```
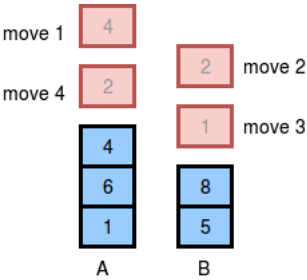
Sample Output 0

4

Explanation 0

The two stacks initially look like this:

The image below depicts the integers Nick should choose to remove from the stacks. We print 4 as our answer, because that is the maximum number of integers that can be removed from the two stacks without the sum exceeding $x = 10$.

(There can be multiple ways to remove the integers from the stack, the image shows just one of them.)

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Submissions: 5769

Max Score: 30
Difficulty: Medium

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More

Current Buffer (saved locally, editable) ⎇ 🕐   C++ ⌄   ⤢   ⚙

```cpp
#include <bits/stdc++.h>

using namespace std;

int main(){
    int g;
    cin >> g;
    for(int a0 = 0; a0 < g; a0++){
        int n;
        int m;
        int x;
        cin >> n >> m >> x;
        vector<int> a(n);
        for(int a_i = 0; a_i < n; a_i++){
            cin >> a[a_i];
        }
        vector<int> b(m);
        for(int b_i = 0; b_i < m; b_i++){
            cin >> b[b_i];
        }
        // your code goes here
    }
    return 0;
```

```
24  }
25
```

Line: 1 Col: 1

⬆ <u>Upload Code as File</u>   ☐ Test against custom input

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