

TC1018 – Estructuras de Datos

Momento de Práctica 5 – Game of Two Stacks

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Forma de Trabajo: *Individual*.

Forma de Entrega: Subir a Blackboard el código de tu solución y un archivo con la pantalla de Aceptado en la plataforma de hackerrank

El presente problema pertenece a HackerRank Online Judge (<https://hackerrank.com>)

Game of Two Stacks

URL: <https://www.hackerrank.com/challenges/game-of-two-stacks/problem>

Alexa has two stacks of non-negative integers, stack $A = [a_0, a_1, a_2, \dots, a_{n-1}]$ and stack $B = [b_0, b_1, b_2, \dots, b_{n-1}]$ 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 **n** 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, x and y for 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 subsequent **3 * g** lines describe each game in the following format:

1. The first line contains three space-separated integers describing the respective values of (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 $a_0, a_1, a_2, \dots, a_{n-1}$.
3. The third line contains **m** space-separated integers describing the respective values of $b_0, b_1, b_2, \dots, b_{n-1}$.

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

```
1
5 4 10
4 2 4
6 1 2
1 8 5
```

Sample Output

```
4
```