

# Game of Two Stacks



Alexa has two stacks of non-negative integers, stack  $A = [a_0, a_1, \dots, a_{n-1}]$  and stack  $B = [b_0, b_1, \dots, b_{m-1}]$  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  $a_0, a_1, \dots, a_{n-1}$ .
3. The third line contains  $m$  space-separated integers describing the respective values of  $b_0, b_1, \dots, b_{m-1}$ .

## Constraints

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

## Subtasks

- $1 \leq n, m, \leq 100$  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.

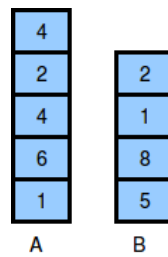
## Sample Input 0

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

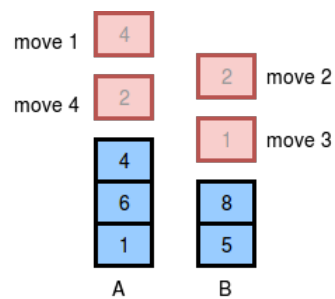
## Sample Output 0

### 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.)