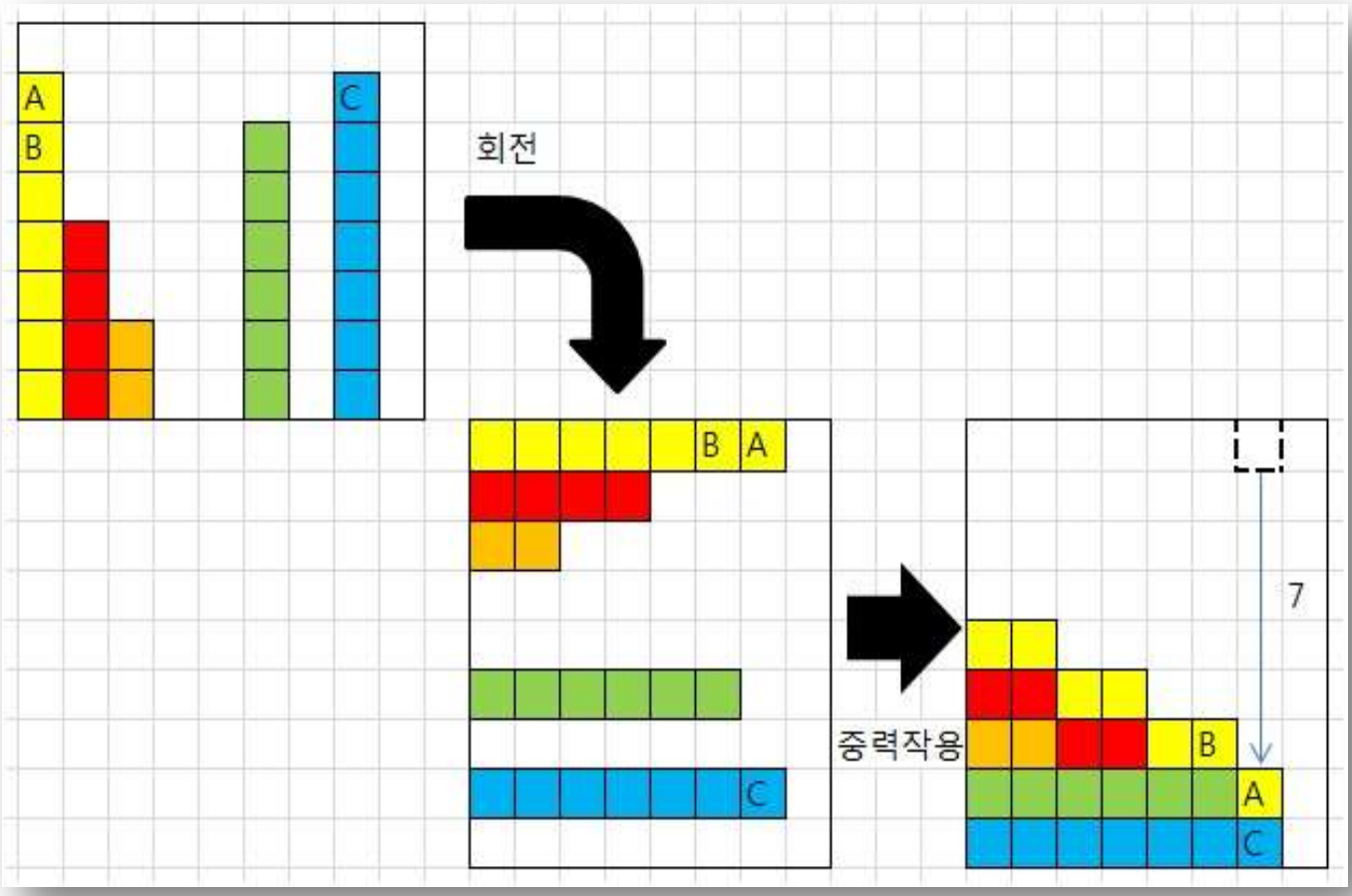
Sample Problems (For Practice Purpose only)

Sample Problem 1: There is a room where boxes are stacked. If a room is rotated 90 degrees to the right, boxes will fall, affected by gravity. Finds out a box which will have the longest ‘fall distance’, and output the value of the longest ‘fall distance.’



In the example above, there are 26 boxes in total (7 + 4 + 2 + 6 + 7 = 26). After rotating, gravity affects all boxes and final state becomes like the room on the right. Among these 26 boxes, a ‘fall distance’ of box A is the longest as 7, therefore, return 7.

For reference, a ‘fall distance’ of box B is 6, and a ‘fall distance’ of box C is 1.

[Constraints]

Gravity begins to apply after rotation is finished.

Boxes are stacked being adjacent to one side of the wall, thus all boxes are located in a two dimensional plane. There is no box which is stacked apart from the wall. The width of the wall is always 100, and the height of the wall is always 100.

- In other words, boxes can be stacked in the minimum 0 and maximum 100 heights.

Input

First line contains t, the number of test cases.

t test cases follow. Each test case has 2 lines. First line of each test case is n, the width of the room.

Next line contains n space separated integers representing the number of boxes in each stack.

1<=t<=10

1<=n<=100

Output

The program should give output in separate line, for each test case.

Sample Input

1

9

7 4 2 0 0 6 0 7 0

Sample Output

7

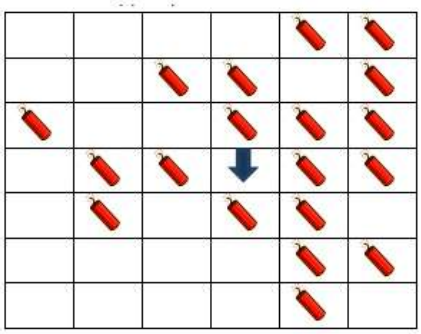
Sample Problem 2:

An operation is going to be carried out in order to remove mines by dropping a bomb in the area where mines are densely packed. If a bomb is dropped, mines will be consecutively exploded, and this chain reaction will be continued every second to the four directions: front, back, left and right. (The mines in the diagonal direction will not be exploded.)

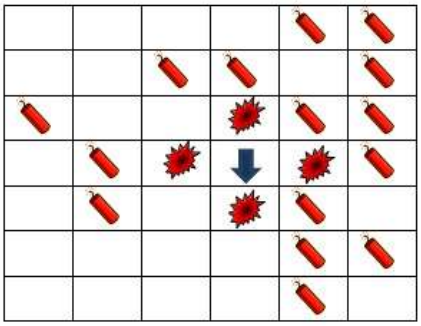
Write a function which returns the number of remaining mines in 10 seconds after dropping a bomb to a specific place. (There could be a mine at the place where a bomb is dropped or there could be no mine there. The mine at the place where a bomb is dropped will be removed simultaneously with the bomb-dropping)

[Example]

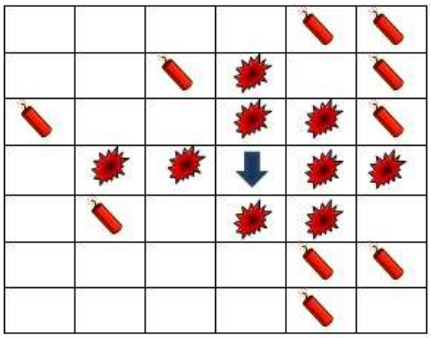
The picture below shows the area in which mines are densely packed. (Arrow sign indicates the place where a bomb is dropped.)



The picture below shows the state in one second after dropping a bomb. (15 mines will remain in one second.)



The picture below shows the state in two seconds after dropping a bomb. (10 mines will remain in two seconds.)



[Constraints]

Any external libraries or the header file cannot be used. Maximum size of matrix is 100.

[Input]

The first line contains an integer T, T test cases follow.

Each test case has first line containing size of array and X and Y coordinate of the bomb dropping point separated by a space character.

Next line contains the array with 1 indicating bomb and 0 indicating blank space.

[Output]

No of bomb left in the space after 10 seconds is to be displayed on each line.

[Sample Input]

```
1
10 3 5
1 1 1 1 1 1 0 0 1 1
1 1 1 0 1 1 1 1 0 0
0 0 1 0 1 1 0 1 1 1
1 0 1 0 0 1 1 1 1 0
1 0 1 0 0 1 0 1 1 1
1 1 1 0 0 1 1 0 1 1
1 1 1 0 0 1 1 1 1 1
1 0 1 0 1 1 0 0 0 1
0 1 0 1 0 1 1 1 1 1
0 0 1 1 1 1 1 0 0 1
```

[Sample Output]

```
13
```