Trapping Rain Water

Submissions: 57614 (/problem_submissions.php?pid=281) Accuracy: 42.45% Difficulty: Medium (https://practice.geeksforgeeks.org/Medium/0/0/) Marks: 4

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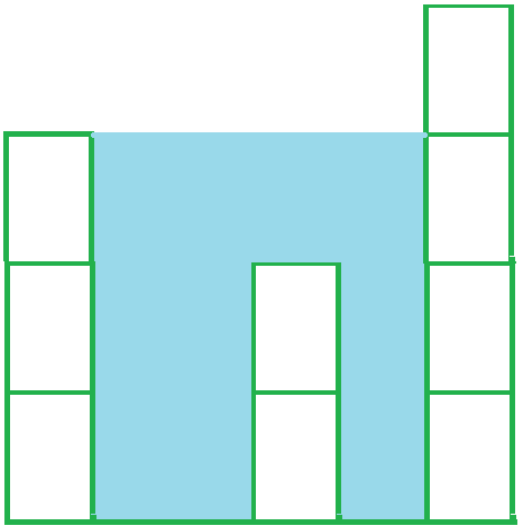
Problems

Given an array **arr[]** of **N** non-negative integers representing height of blocks at index **i** as A_i where the width of each block is 1. Compute how much water can be trapped in between blocks after raining.

Structure is like below:

| |
|_|

We can trap 2 units of water in the middle gap.



Bars for input {3, 0, 0, 2, 0, 4}
Total trapped water = 3 + 3 + 1 + 3 = 10

Input:

The first line of input contains an integer **T** denoting the number of test cases. The description of **T** test cases follows. Each test case contains an integer **N** denoting the size of the array, followed by **N** space separated numbers to be stored in array.

Output:

Output the total unit of water trapped in between the blocks.

Constraints:

$1 <= T <= 100$
$3 <= N <= 10^7$
$0 <= A_i <= 10^8$

Example:

Input:

2
4
7 4 0 9
3
6 9 9

Output:

10
0

Explanation:

Testcase 1: Water trapped by block of height 4 is 3 units, block of height 0 is 7 units. So, total unit of water trapped is 10 units.

** For More Input/Output Examples Use 'Expected Output' option **