

Programming Problem: Water Contained

Problem:

The goal of this problem is to determine how much water can be trapped/contained by a series of pipes of varying heights. Water can only be trapped if it is between two pipes. The left or right edge of sequence of pipes is not considered to be a pipe and therefore water can fall off the edges. A few examples below should better illustrate this.

Input:

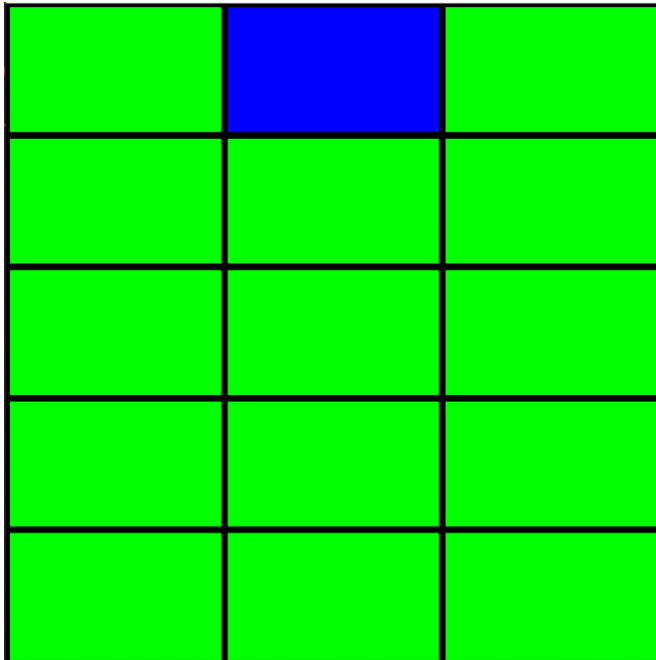
You input will be a list of integers representing the height of the pipes in that specific order.

Ex: [3,1,1,4,5,1]

Output:

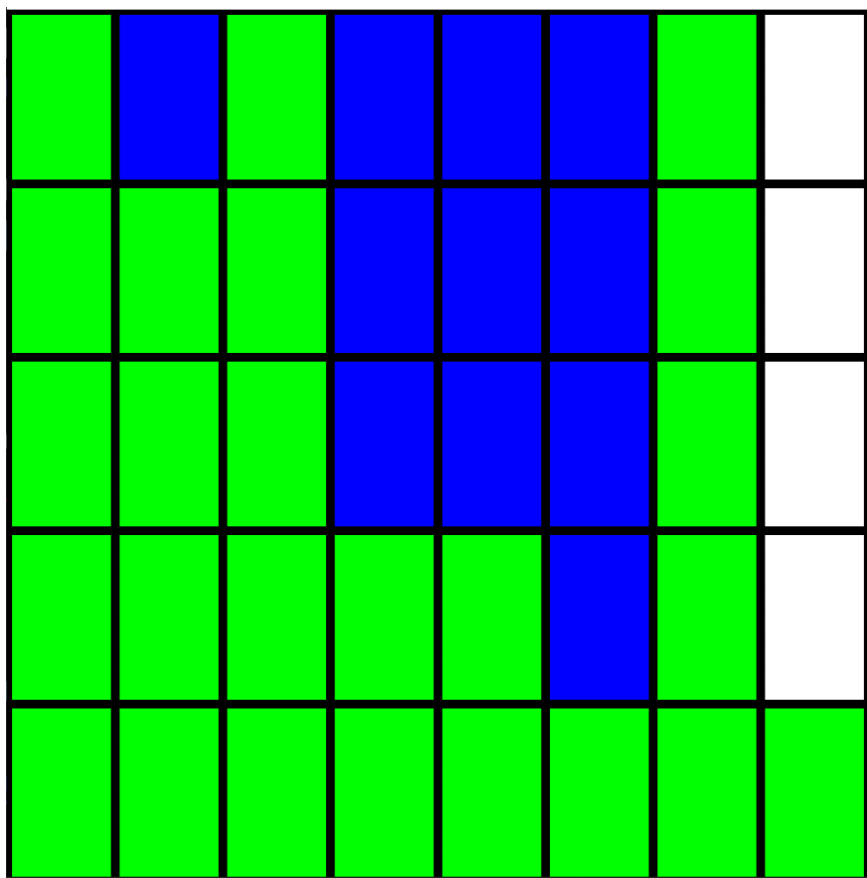
The output should be a positive integer representing the area of water that is trapped/contained by the pipes. If the area is 0, return 0.

Examples



Input: [5,4,5]

Output: 1



Input: [5,4,5,2,2,1,5,1]

Output: 11