# Making cake

Problem

Kraft opens an online cake shop, which allows customers to order cake from his shop. "Grid cake" is a cake from Kraft's shop; and customers can specify the size and height of the cake. Here are how the customer to make an order of Grid cake:

First, the customer needs to enter a number **N** to specify the width and length of cake. In order to follow customer to specify the height easier, the cake is separated into **N** zone from the side view:
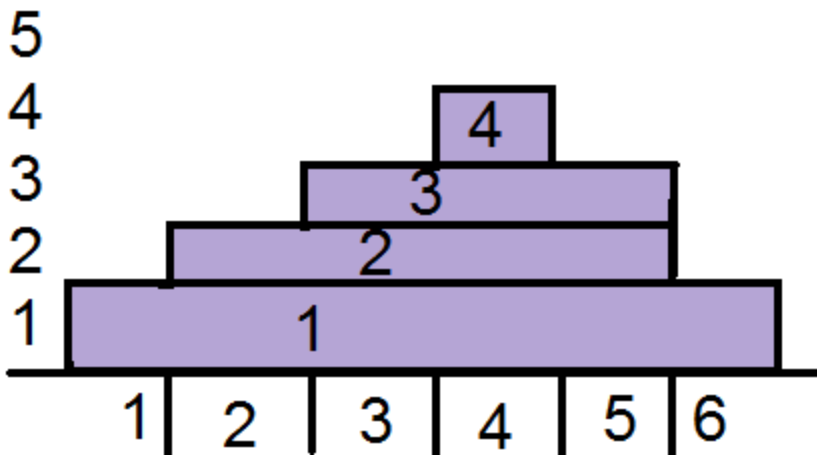

N = 6
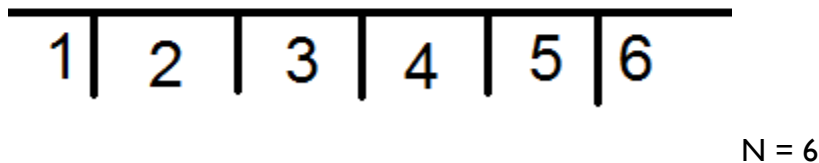
Then, the customer needs to enter **N** numbers to specify the height of each zone respectively.

For example, if the customer enters: **1 2 3 4 3 1**, the cake will look like this:
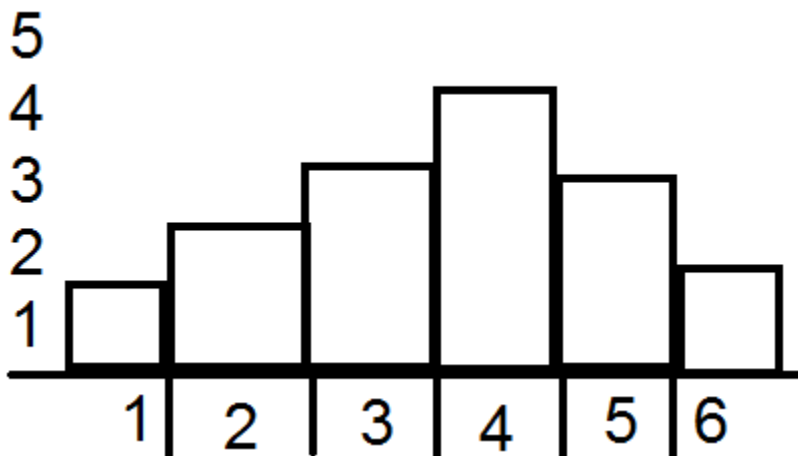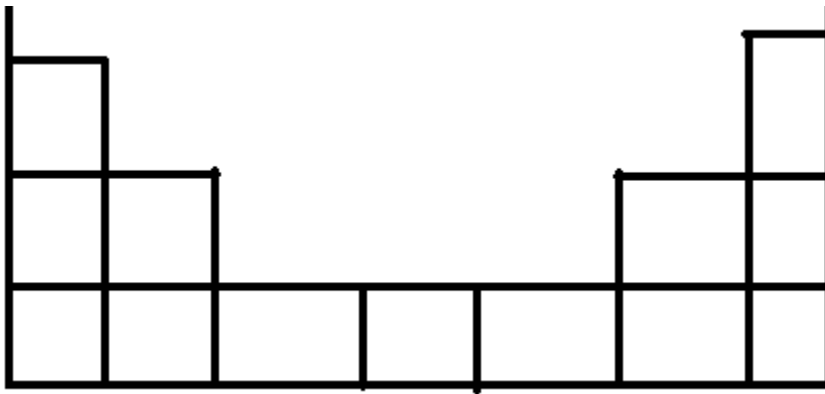

Grid cake is made by putting cake layer from the bottom to the top, using the example above:
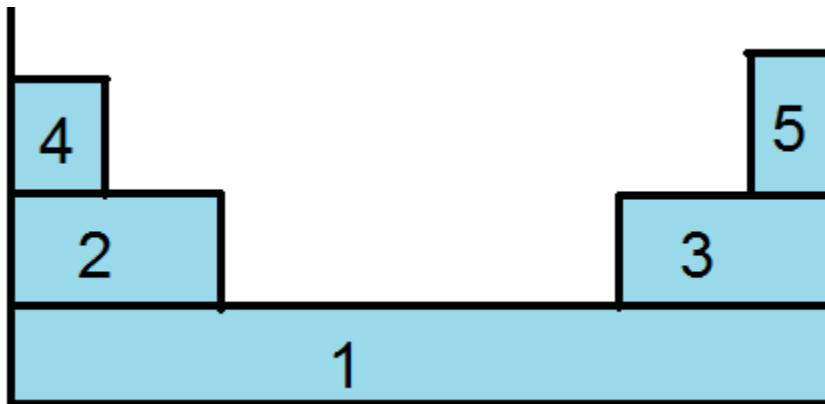
This cake uses four layers.

But sometimes, the customer may order an irregular shaped cake, like:

N = 7, and height: **3 2 1 1 1 2 3**

Then the cake will need more layers as the cake has discontinuous height zone:

Now, Kraft wants to know how many layers he needs to make, in order to produce the "customized" Grid Cake. Can you help?

Input

For each testcase, it starts from an integer **N (N <=10000)**, followed by N numbers (0<=Ni<=N). They are represnting the length and width of the cake, and the height of the cake zone.

Input ends with EOF.

Output

Output the number of layers needed to make that cake.

Sample

Input	Output
6	4
1 2 3 4 3 1	5
7	
3 2 1 1 1 2 3	

Warning: brute force will cause "time limit exceeds":