

You are making a pile of boxes. The boxes have cubic dimensions (equal edges) and their upper surfaces are open, so a smaller box will fall into a larger one (container), but a larger box will stay on the smallest top (Figure 1).

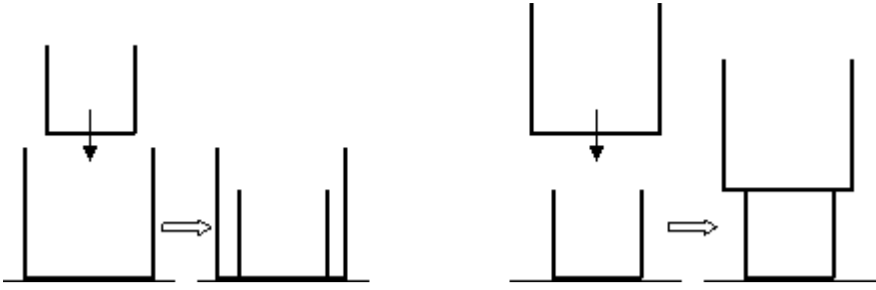


Figure 1 - Boxes falling over a pile

Furthermore, these boxes have strange properties: they are permeable to other smaller boxes, so one box may fall through the interior of larger boxes until a smaller one or the floor is found (Figure 2).

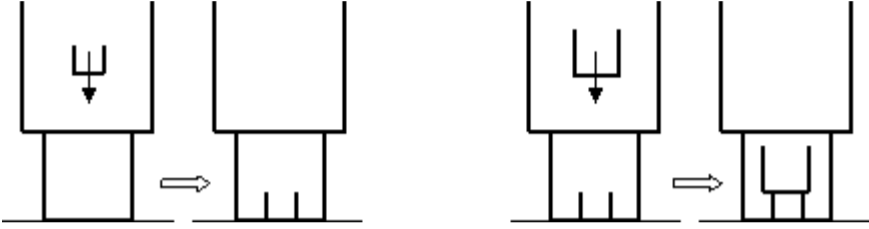


Figure 2 - Boxes are permeable to smaller ones

There is one restriction: if one box does not fit entirely in the height of a potential container, then it stays in the upper possible level (Figure 3).

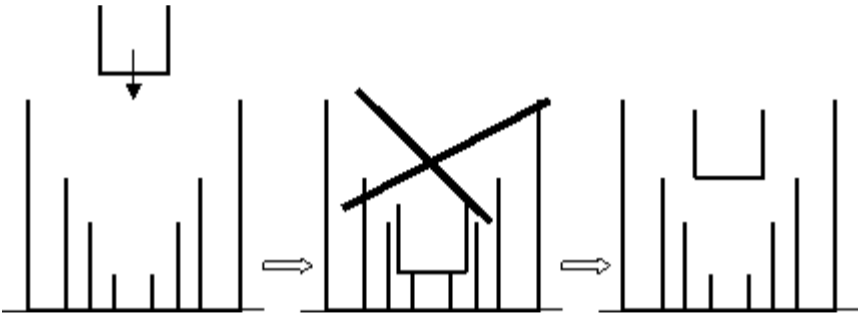


Figure 3 - One box must fit entirely in its container

Given a sequence of boxes, it is necessary to evaluate the total pile height. All the cubes have different dimensions.

**Input**

The input will contain several test cases, each of them as described below. Consecutive test cases are separated by a single blank line.

The input is a sequence of text lines, as follows.

The first text line contains the number *NC* (integer format) of boxes. It is followed by a sequence of *NC* text lines containing, each one, the length of a box (integer format). The maximum number of boxes is 100.

**Output**

For each test case, output on a line by itself one integer number, representing the total pile height.

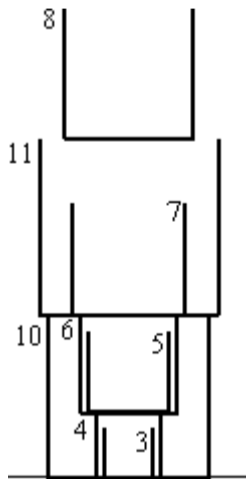


Figure 4 - Pile generated in the example

**Sample Input**

8  
10  
4  
6  
3  
3  
11  
7  
8  
5

**Sample Output**

29