Submit a solution for F-106735. Triangle Binary Search Tree

Time limit: 1 s

Real time limit: 5 s

Memory limit: 256M

Problem F: 106735. Triangle Binary Search Tree

You are given N integers, that form a binary search tree by inserting them in the given order. You draw a set of horizontal lines that goes throug nodes with the same height (level, depth). After that you can see triangles with nodes instead vertices and edges instead sides. Your task is calculate the number of the smallest triangles.

Input format

The first line consists of an integer N - number of nodes in Binary Search Tree ($1 \leqslant N \leqslant 10000$).

The second line contains N integers a_i - value of each node in Binary Search Tree in order of their insertion ($1 \leqslant a_i \leqslant N$).

It is guaranteed that there are no duplicates.

Output format

Print the number of mini-triangles in resulting Binary Search Tree.

Examples

Input

```
3
3 5 1
```

Output

```
1
```

Input

```
3
1 3 5
```

Output

```
0
```

Input

```
16
13 9 3 7 6 16 1 11 12 10 4 2 14 5 8 15
```

Output

```
5
```

Submit a solution

Language: g++ - GNU C++ 11.4.0

File Choose File No file chosen

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Previous submissions of this problem

Run ID	Time	Size	Problem	Language	Result	Failed test	View source	View report
1885	1006:56:40	1816	F	g++	OK	N/A	View	View

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