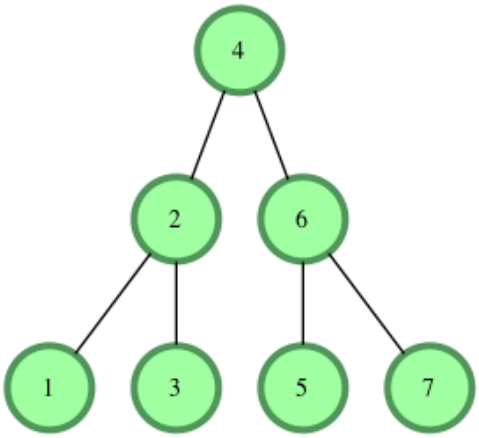
Tree: Height of a Binary Tree

https://www.hackerrank.com/challenges/tree-height-of-a-binary-tree/problem

The height of a binary tree is the number of edges between the tree's root and its furthest leaf. For example, the following binary tree is of height 2:



Function Description
Complete the getHeight or height function in the editor. It must return the height of a binary tree as an integer.

getHeight or height has the following parameter(s):

- root: a reference to the root of a binary tree.

Note - The Height of binary tree with single node is taken as zero.

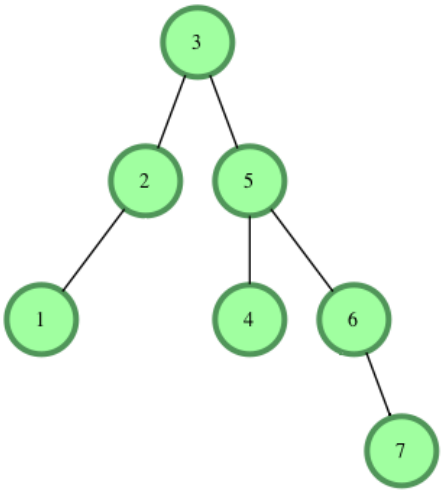
Input Format
The first line contains an integer - the number of nodes in the tree.
Next line contains space separated integer where the integer denotes $<node.data[i]$.

Note: Node values are inserted into a binary search tree before a reference to the tree's root node is passed to your function. In a binary search tree, all nodes on the left branch of a node are less than the node value. All values on the right branch are greater than the node value.

Constraints
$1 \leq node.data[i] \leq 20$
$1 \leq n \leq 20$

Output Format
Your function should return a single integer denoting the height of the binary tree.

Sample Input

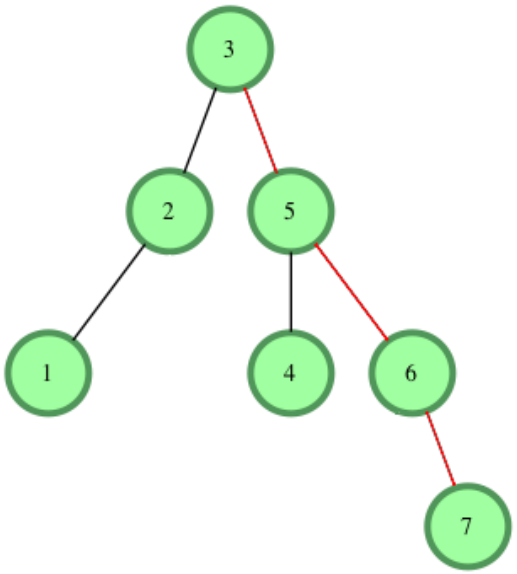


Sample Output

3

Explanation

The longest root-to-leaf path is shown below:



There are 4 nodes in this path that are connected by edges, meaning our binary tree's height = 3.