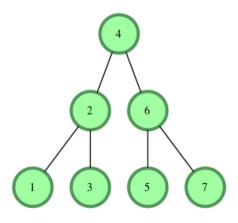
# Tree: Height of a Binary Tree



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 n, the number of nodes in the tree.

Next line contains n space separated integer where ith integer denotes node[i].data.

**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**

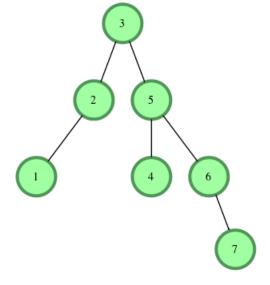
$$1 \leq node.\, data[i] \leq 20$$

$$1 \le n \le 20$$

#### **Output Format**

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

#### Sample Input

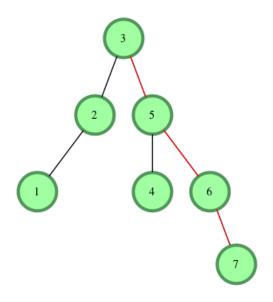


## Sample Output

3

# Explanation

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



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