

Prompt	Scratchpad	Our Solution(s)	Video Explanation	Run Code
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Solution 1	Solution 2	Solution 3	Solution 4
<pre>1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved. 2 3 // Average case: when the tree is balanced 4 // O(n) time   O(h) space - where n is the number of nodes in 5 // the Binary Tree and h is the height of the Binary Tree 6 ▼ function allKindsOfNodeDepths(root) { 7     return getTreeInfo(root).sumOfAllDepths; 8 } 9 10 ▼ function getTreeInfo(tree) { 11 ▼   if (tree === null) { 12 ▼     return { 13         numNodesInTree: 0, 14         sumOfDepths: 0, 15         sumOfAllDepths: 0, 16     }; 17   } 18 19   const leftTreeInfo = getTreeInfo(tree.left); 20   const rightTreeInfo = getTreeInfo(tree.right); 21 22   const sumOfLeftDepths = leftTreeInfo.sumOfDepths + leftTreeInfo.numNodesInTree; 23   const sumOfRightDepths = rightTreeInfo.sumOfDepths + rightTreeInfo.numNodesInTree; 24 25   const numNodesInTree = 1 + leftTreeInfo.numNodesInTree + rightTreeInfo.numNodesInTree; 26   const sumOfDepths = sumOfLeftDepths + sumOfRightDepths; 27   const sumOfAllDepths = sumOfDepths + leftTreeInfo.sumOfAllDepths + rightTreeInfo.sumOfAllDepths; 28 29 ▼   return { 30       numNodesInTree, 31       sumOfDepths, 32       sumOfAllDepths, 33   }; 34 } 35 36 // This is the class of the input binary tree. 37 ▼ class BinaryTree { 38 ▼   constructor(value) { 39       this.value = value; 40       this.left = null; 41       this.right = null; 42   } 43 } 44 45 exports.allKindsOfNodeDepths = allKindsOfNodeDepths; 46</pre>			

