**Question:** Alice and Bob are best friends who enjoy solving puzzles on binary trees. They came up with this game:

* Alice looks only at the left subtree of the root and sums up all the odd numbers he can find.
* Bob looks only at the right subtree of the root and sums up all the even numbers he can find.

As you already learned about the Binary tree, help them to calculate the absolute difference between the sum of Alice’s odd numbers and Bob’s even numbers. Write a recursive function/method **subtree\_difference()** that takes the root of the binary tree as a parameter and returns the absolute difference. Consider the Node class for Binary Tree already defined with elem, left and right variables. You can use helper functions.

**YOU CANNOT USE LIST OR DICTIONARY. You cannot use any built-in function.**

| **Sample Input** | **Sample Output** |
| --- | --- |
|  | **7**  **Explanation:**  Summation of all odd number in left subtree = (5+7+9) =21  Summation of all even number in right subtree = (12+2) =14  absolute difference = |21-14| = 7 |

**Question:** Alice and Bob are best friends who enjoy solving puzzles on binary trees. They came up with this game:

* Alice looks only at the left subtree of the root and multiplies all the even numbers he can find.
* Bob looks only at the right subtree of the root and multiplies all the odd numbers he can find.

As you already learned about the Binary tree, help them to calculate the absolute difference between the product of Alice’s odd numbers and Bob’s even numbers. Write a recursive function/method **subtree\_difference()** that takes the root of the binary tree as a parameter and returns the absolute difference. Consider the Node class for Binary Tree already defined with elem, left and right variables. You can use helper functions.

**YOU CANNOT USE LIST OR DICTIONARY. You cannot use any built-in function.**

| **Sample Input** | **Sample Output** |
| --- | --- |
|  | **1**  **Explanation:**  product of all even number in left subtree = (8\*4) =32  product of all odd number in right subtree = (11\*3) =33  absolute difference = |32-33| = 1 |