

Finding Maximum Subtree Sum in a Binary Tree

```
class Node {
  constructor(data) {
    this.data = data;
    this.left = null;
    this.right = null;
  }
}

class Solution {
  constructor() {
    this.maxSum = Number.MIN_SAFE_INTEGER;
  }

  maxSubtreeSum(root) {
    if (root === null) return 0;
    const leftSum = this.maxSubtreeSum(root.left);
    const rightSum = this.maxSubtreeSum(root.right);
    const subtreeSum = root.data + leftSum + rightSum;

    this.maxSum = Math.max(this.maxSum, subtreeSum);

    return subtreeSum;
  }

  findMaxSubtreeSum(root) {
    this.maxSubtreeSum(root);
    return this.maxSum;
  }
}

const solution = new Solution();
// const root1 = new Node(1);
// root1.left = new Node(2);
// root1.right = new Node(3);
// root1.left.left = new Node(4);
// root1.left.right = new Node(5);
// root1.right.left = new Node(6);
// root1.right.right = new Node(7);
// console.log(solution.findMaxSubtreeSum(root1)); // Output: 28

const root2 = new Node(1);
root2.left = new Node(-2);
root2.right = new Node(3);
root2.left.left = new Node(4);
root2.left.right = new Node(5);
root2.right.left = new Node(-6);
root2.right.right = new Node(2);
console.log(solution.findMaxSubtreeSum(root2));
```