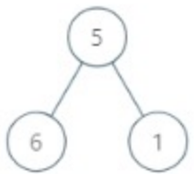
1120. Maximum Average Subtree

Medium 150 5 Add to List Share

Given the `root` of a binary tree, find the maximum average value of any subtree of that tree.

(A subtree of a tree is any node of that tree plus all its descendants. The average value of a tree is the sum of its values, divided by the number of nodes.)

Example 1:




```
Input: [5,6,1]
Output: 6.00000
Explanation:
For the node with value = 5 we have an average of (5 + 6 + 1) / 3 = 4.
For the node with value = 6 we have an average of 6 / 1 = 6.
For the node with value = 1 we have an average of 1 / 1 = 1.
So the answer is 6 which is the maximum.
```

Note:

1. The number of nodes in the tree is between `1` and `5000`.

```python
# Definition for a binary tree node.
# class TreeNode(object):
#     def __init__(self, val=0, left=None, right=None):
#         self.val = val
#         self.left = left
#         self.right = right
class Solution(object):
    def maximumAverageSubtree(self, root):
        """
        :type root: TreeNode
        :rtype: float
        """

```