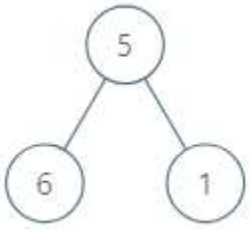
1120. Maximum Average Subtree

- User Accepted:689
- User Tried:752
- Total Accepted:720
- Total Submissions:1257
- Difficulty: Medium

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 and average of (5 + 6 + 1) / 3 = 4.

For the node with value = 6 we have and average of 6 / 1 = 6.

For the node with value = 1 we have and average of 1 / 1 = 1.

So the answer is 6 which is the maximum.
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Note:

1. The number of nodes in the tree is between `1` and `5000`.
2. Each node will have a value between `0` and `100000`.
3. Answers will be accepted as correct if they are within `10^-5` of the correct answer.