CS 201 Data Structures II – Spring 2024

Instructor: Dr. Muhammad Mobeen Movania

Quiz 6 - Solution

Name: _____ **Date:** 27 March 2024

Regn. No. : _____ **Time limit:** 30 mins

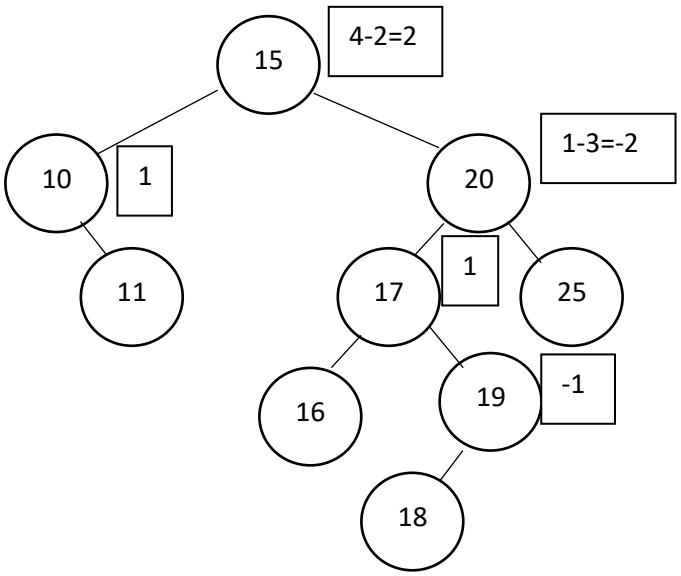
There are four questions in this quiz. Marks assigned are mentioned at the start of each question.

Q1) (3 marks) Write the complexity of the following AVL functions?

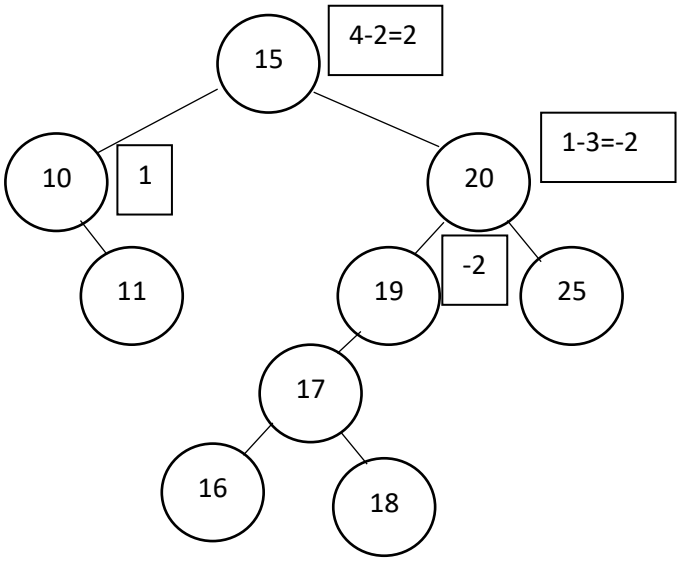
S. No.	Function	Complexity
1	Find	O(log(n))
2	Add	O(log(n))
3	Remove	O(log(n))

Q2) (4 marks) By using rotations, convert the following tree into a valid AVL Tree step by step?

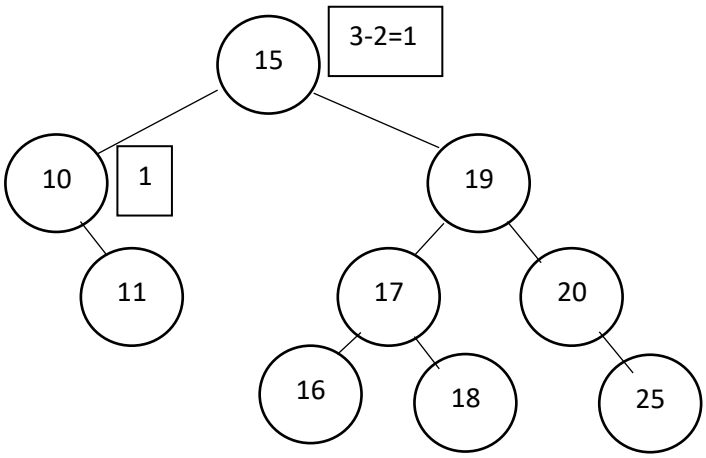
Double left right rotation case.



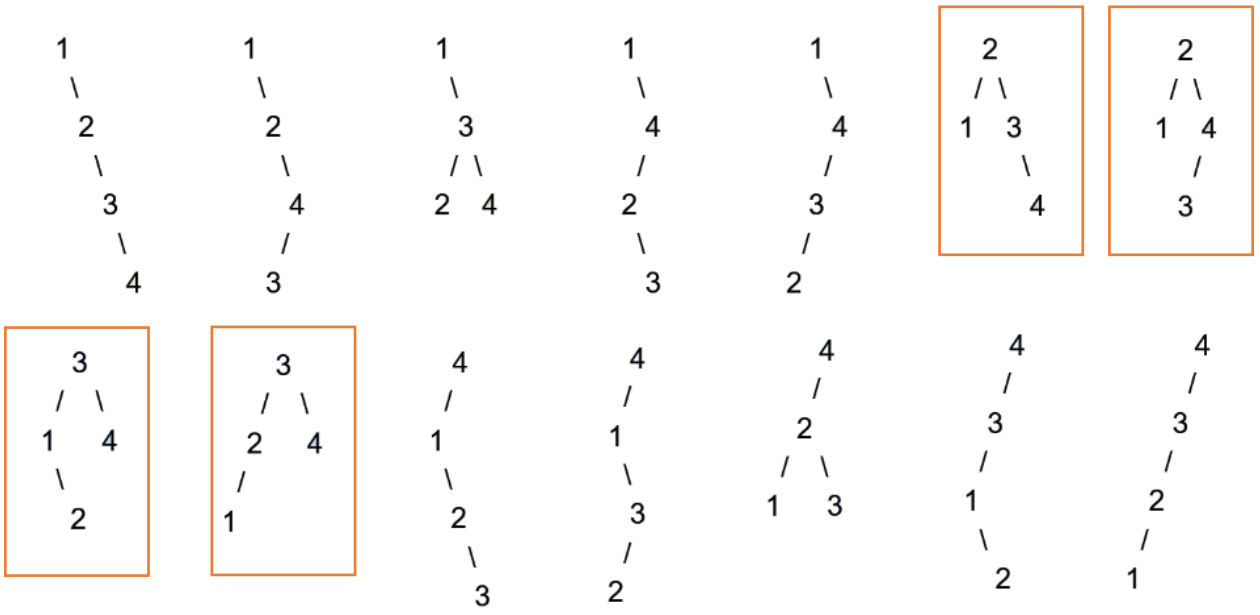
First do left rotation at node 17 to make 19 root node



Second do a right rotation at node 20 to make node 19 the root node



Q3) (3 marks) Count the total number of AVL trees in the following BSTs and circle all AVL trees: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Ans. 4