

CSE 373 Lecture 11 In-Class Worksheet – Fall 2018

Name: _____ Date: _____

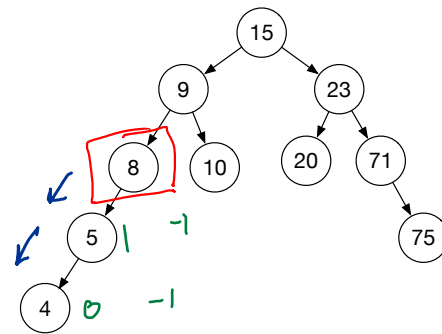
UW Student #: _____ UW Email address: _____

Partner name(s) for this activity: _____

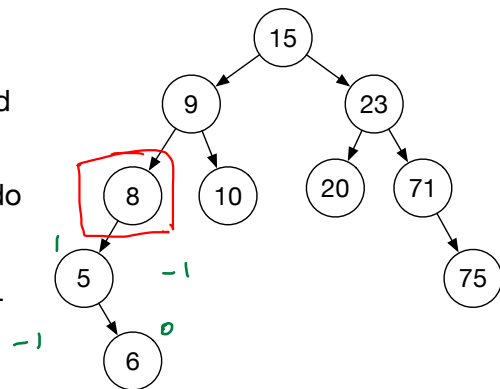
Will you want to pick up your worksheet later? Circle one: Yes / No

(Q1) Answer the following questions for the corresponding tree (on the right):

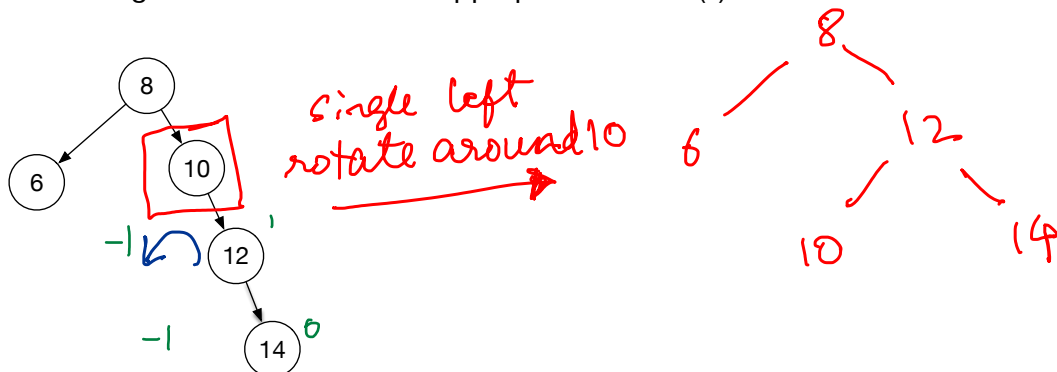
- A. Is this a BST? (Y/N): **Y**
- B. Highlight the AVL unbalanced node:
- C. Is this a 'line' or 'kink' case?
- D. To make this AVL balanced, how many rotations do you need? (**single**/double)



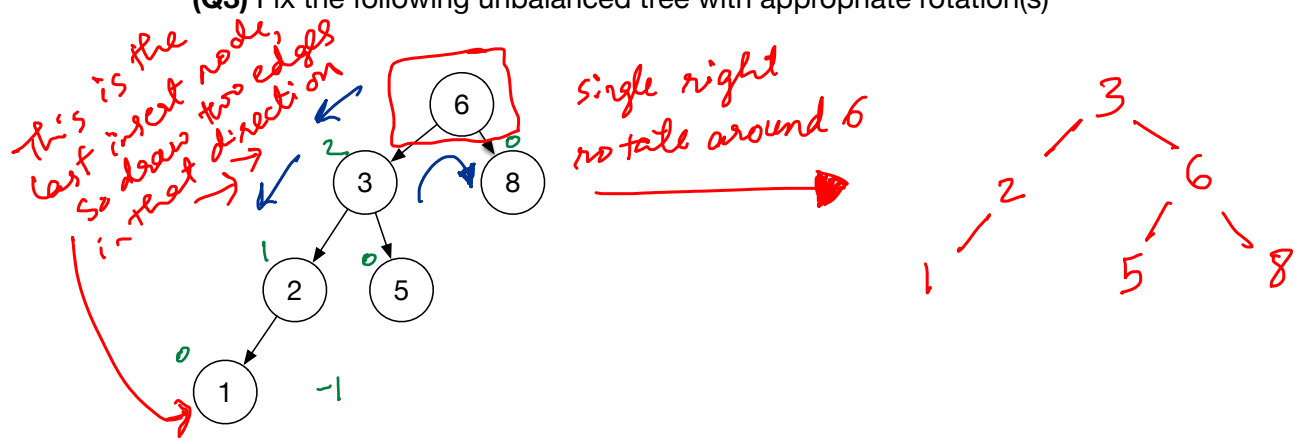
- A. This is an unbalanced AVL tree. Is the imbalance a 'line' or a 'kink' case?
- B. To make this AVL balanced, how many rotations do you need? (**single**/double)
- C. If we remove node 6, will the resulting tree be an AVL tree? **Yes**



(Q2) Fix the following unbalanced tree with appropriate rotation(s)



(Q3) Fix the following unbalanced tree with appropriate rotation(s)



(Q4) Draw the AVL tree that results from inserting the keys 1, 3, 7, 5, 6, 9 in that order into an initially empty AVL tree. (*Hint: Drawing intermediate trees as you insert each key.*)