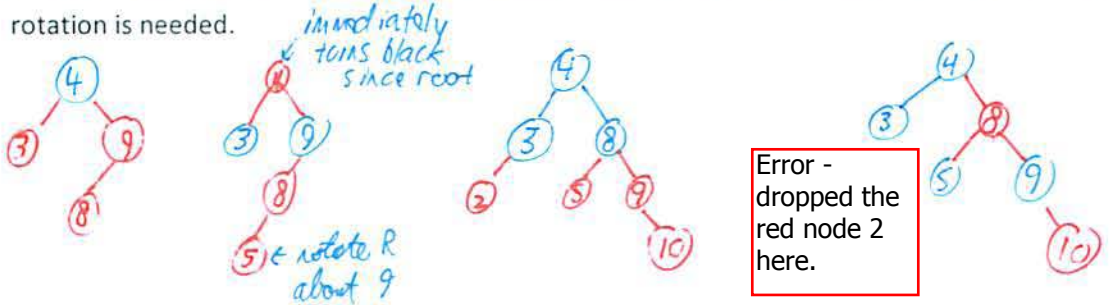


CS-2852 - Dr. Durant - Quiz 8  
Spring 2014, Week 10

1. (5 points) Illustrate the red-black tree resulting from adding the integers 4, 3, 9, 8, 5, 2, 10 to an initially empty tree. Draw a new tree (instead of adding to your previous drawing) whenever a rotation is needed.



2. (3 points) Would the arrangement of the above tree differ if it were an AVL tree instead? Why or why not?

best answer → Yes. Inserting 10 creates a 1-3 imbalance @ 4.

okay answer → Yes. The final tree isn't AVL (1-3 imbalance at 4.)

Correct answer: No, because it meets the AVL balance property at each step

3. (2 points) What two classes in the JCF have we discussed that use a (red-black) tree as their data structure? (Hint: They are named after the interfaces they implement.)

Tree Map < K, V >  
Tree Set < E >