CSc 127B — Introduction to Computer Science II
Fall 2015 (McCann)

In-Class Activity #10

Name #1: _____ Section Leader: _____

Name #2: _____ Section Leader: _____

Name #3: _____ Section Leader: _____

Directions: In groups of 2 or 3, without using electronics, answer the following questions to the best of your combined abilities. When appropriate, show your work, to help us understand your thought process. ICAs (In-Class Activities) count toward your grade; please take them seriously. Week 15 (2015/12/02)

1. Insert the following integer values, in the order shown, into a binary search tree. Show the resulting tree.

   ```
   12 80 76 62 5 68 85 30
   ```

2. What are the inorder predecessor and the inorder successor of 76 in your tree, above?

3. Imagine a binary search tree node, N, that has exactly one child. It is possible that the inorder predecessor of N could be above (i.e., have a smaller level than) N in the tree. Draw a BST that demonstrates this situation, and highlight the node and its inorder predecessor.

4. Devise an algorithm, just in words, that explains how to start at the root of a binary search tree and locate the largest value in the tree.

When your group is satisfied with your answers, or time is up, hand this to one of the class staff. We'll review the correct answers after time is up.