1. [30] The method void printOutLeaves(bool leftToRight) prints out the elements in all the leaves of the tree in either left-to-right or right-to-left order; the leaves may be on different levels. For example, for the Problem 2 tree below, the two outputs would be 9-10-12-15-12-13 and 13-12-15-12-10-9.

   b. [5] What is the time complexity of your function?

2. [30] Write C++ code to remove and return the min element for the MinHeap class above. Show the steps (by-hand approach, not using code) and the result for the heap below when you remove the min.

3. [25] Explain how to sort the following numbers (in ascending order) using a min winner tree:
4,3,6,8,9,5,7,3,2,6,9,4,5,2,5,8 (16 elements). Show the initial tree and the state of the tree after the first two numbers have been output. Calculate/explain the complexity of this sort.

4. [15] Indexed binary search trees
   a. [5] Label the tree above, adding an attribute to each node to make it usable as an indexed binary search tree.
   b. [10] Show all the steps to delete the element at index 9. Show the resulting tree with updated annotations.