CS200 Quiz 8: Trees (10/30/08)

1. [Circle one] Which is not true of a priority queue?
   a. it orders data by a special search key
   b. it obeys a FIFO strategy for deletion
   c. it provides access to one element at a time
   d. it can be implemented using a binary search tree

d. When you insert a new value in a binary search tree, it gets added to a leaf and then swapped with parents until it is put in the correct position.
e. In worst case, heap deletion is $O(\log n)$.
f. An inorder traversal of a binary search tree produces a sorted order of keys.
g. Tomorrow is Halloween.

2. [Circle one] Which is not true of a heap?
   a. it is a complete binary tree
   b. its root holds the maximum value
   c. each subtree is also a heap
   d. an inorder traversal produces a sorted order of keys

4. [Circle all that are true] For the binary search tree below:
   a. “9” is inserted as the left child of “15”.
   b. To make it a heap, swap 15 and 10.
   c. Only the data in the root can be deleted.
   d. Assuming the algorithm from class notes, “8” will become the root if “10” is removed.
e. If stored as an ArrayList using the equations from class, it would look like: [10,7,15,1,8].