CIS 121 - Quiz 14 - The Last Quiz - Friday, July 23, 2004

Name: ________________________________  J Number: ________________________________

1. (2 pts) The top node in a tree is called the ________________ of the tree, and a node which has no children is called a ________________ node.

2. (2 pts) An ________________ traversal of a binary search tree produces a list of numbers in ascending order.

3. (2 pts) Suppose we have the numbers 18 14 20 25 13 12 in an array. If we use QuickSort to sort the array, what two numbers are the first numbers swapped?

4. (2 pts) If we have a sorted array containing 2048 elements, we would expect to make about ________________ searches to find the number we are looking for with binary search.

5. (2 pts) Suppose we have a binary search tree which contains a Node called root, and the Node definition contains a left child and right child. What is wrong with the following code? What type of error will probably occur?

   public void traverse(Node root) {
       traverse(root.leftChild);
       System.out.println(root.datum);
       traverse(root.rightChild);
   }