Solution no. 3

3. (a) The point is to show how to find the next node to visit after visiting a node x. This is done by going down to the right child of x, and ten all the way to the left. The node reached should be visited next. If x has no right child, the walk should go up the tree until it first reaches a node from its left child (checking from which child you arrived is easy). The node reached should be visited next.

   (b) Perform an in-order walk (or any other walk), and keep track of your depth at each point. Also keep track of the deepest node you visited, which is then returned as the height of the tree.

1,5. Induction.. The point in question 5 was to show *formally* that the algorithm shown in class has the required properties.

2,4. Shown in class.