Show the Traversals

Pre-Order:______________________________

In-Order:______________________________

Post-Order:____________________________

Definition of BST
- Collection of nodes that hold data
- Each node in the tree is connected to another
- A node can have no more than 2 “children”
- The left subtree of any given node will only contain data values less than the value of that node
- The right subtree of any given node will only contain data values greater than the value of that node

Description of BST Node
- Field for holding data
- Field for accessing right subtree
- Field for accessing left subtree

Definition of AVL Tree
- A binary tree that is self-balancing.

Description of AVL Tree Node
- Field for holding data
- Field for accessing right subtree
- Field for accessing left subtree
- Field for keeping track of height

Runtime Analysis:

BST: AVL Tree:
find(): ___________ ___________
insert(): ___________ ___________
delete(): ___________ ___________
buildTree(): ___________ ___________
AVL Operations:
• Single Rotation
• Double Rotation

Practice Problems:

1. Is it a BST? Is it an AVL Tree? (If not, circle nodes that violate the rules of each)

```plaintext
BST: ___________  BST: ___________
AVL: ___________  AVL: ___________
```

2. Adding values to a BST in a certain order, what does the resulting tree look like? How about AVL?
   2, 6, 8, 1, 9, 13, 7