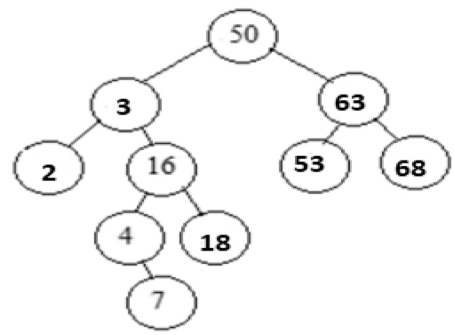
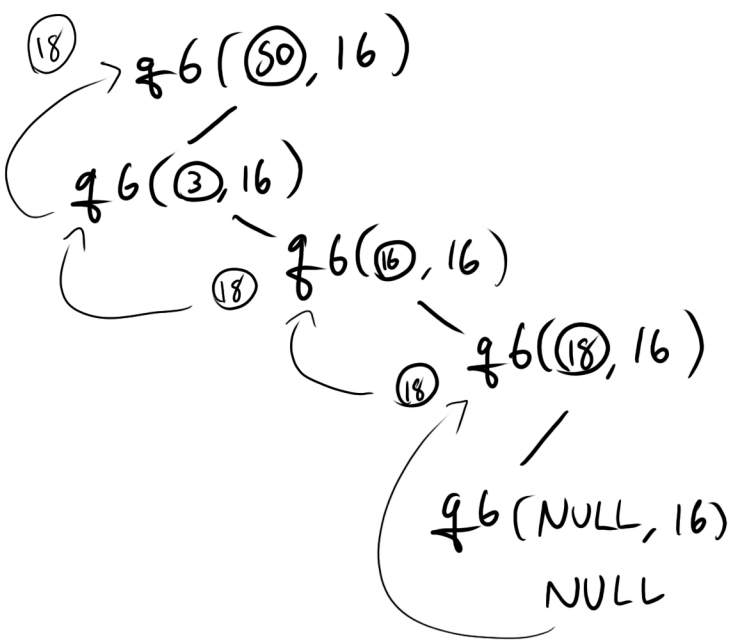
5. Write a function which returns the number of leaf nodes in a binary search tree. The prototype is below:

```
int numLeafNodes(struct treenode* root) {

    if(root){
       if(!root->left && !root->right) return 1;
       return numLeafNodes(root->left)+
              numLeafNodes(root->right);
    }
    else return 0;

}
```

6. Pass the following tree's root and 16 to the following function and explain what does the following function do and returns?

```
struct treenode* q6(struct treenode* root, int x) {
  if (root == NULL)
    return NULL;

  if (root->data > x) {

    struct treenode* tmp = q6(root->left, x);
    if (tmp == NULL)
      return root;
    else
      return tmp;
  }
  else
    return q6(root->right, x);
}
```





This function returns the smallest value greater than x that exists as a node in the tree.