1. (20 points) Write the sequence of the nodes visited, during preorder, inorder, and postorder traversal of the tree.
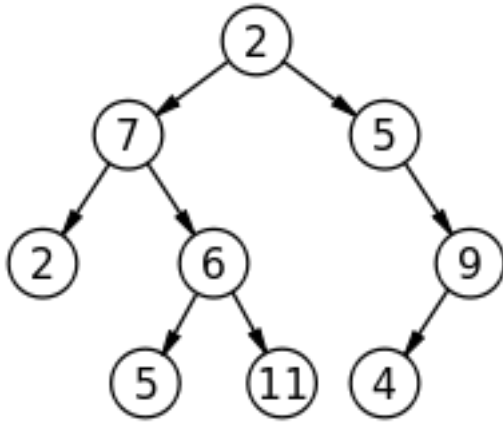
Preorder traversal:

_____

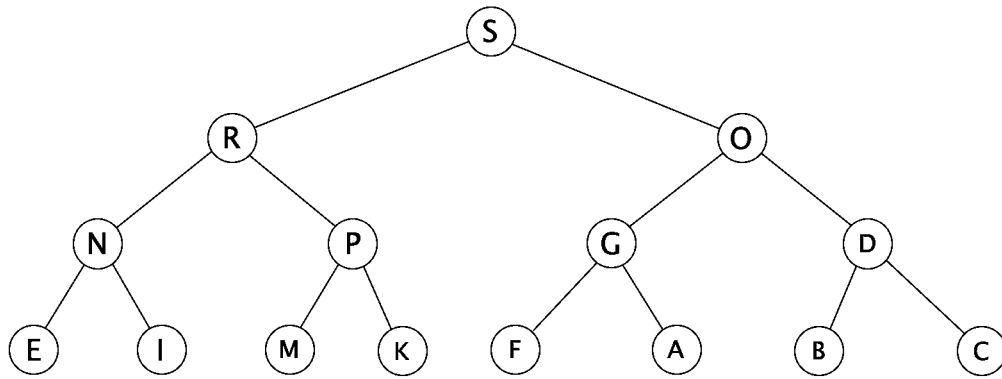Inorder traversal:

_____

Postorder traversal:

_____

2. Insert the key **L** to the max-heap below. Show the resulting heap.

3. Write a **Java method** for a linear-time certification algorithm to check whether an input integer array pq[] represents a min-oriented heap. The method should take the integer array pq[] and its size as input, and return a boolean value with the answer. (Assume that pq[0] is unused and the root is at pq[1], the same as in our textbook.)

First, describe your general approach in 1-2 sentences.

Then, write the Java method below.

```
public static boolean isMinHeap( int[] pq, int size)
```