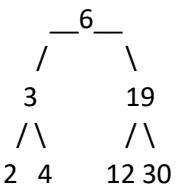
1. There are three different kinds of depth first traversals (DFT):
Pre-order traversal: The left subtree and then the right subtree of the root node are visited first in pre-order traversal.
In-order traversal: In in-order traversal, the root node, the left subtree, and the right subtree are traversed in that sequence.
Post-order traversal: In post-order traversal, the root node is visited last and is followed by visits to the left and right subtrees.

2. The three types of DFT traversal methods are briefly explained below:
Pre-order traversal: This recursive approach explores a tree's root node first, then its left subtree, and finally its right subtree. A linked list representation of a tree is frequently created using the pre-order traversal method.
A recursive procedure known as "in-order traversal" explores a tree's left subtree before moving on to the root node and its right subtree. A tree is frequently sorted with its elements in ascending order using the in-order traversal.
Recursively, the post-order traversal algorithm first explores the left and then the right subtrees of a tree before moving on to the root node. A tree is frequently deleted using the post-order traversal method.

3.
The top node of a tree is known as the root node.
Child node: A node that is linked to the root node is referred to as a child node.
A node that is linked to a child node is known as a parent node.
Node that has no child nodes is referred to as a leaf node.
Nodes with the same parent node are referred to as siblings.

4. (a) The binary search tree based on the given array is shown below:



(b) The outputs of post-order, pre-order, and in-order using the tree that you identified are shown below:

Post-order traversal: 2, 4, 3, 12, 19, 6, 30
Pre-order traversal: 6, 3, 2, 4, 19, 12, 30
In-order traversal: 2, 3, 4, 6, 12, 19, 30

5.

Pre-order traversal: A linked list representation of a tree is frequently created via pre-order traversal.
The in-order traversal method is frequently used to arrange a tree's components in ascending order.
Post-order traversal: A tree is frequently deleted via post-order traversal.