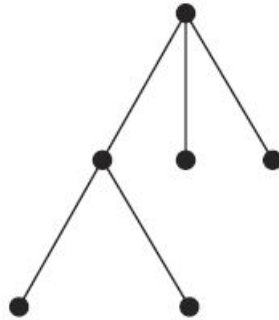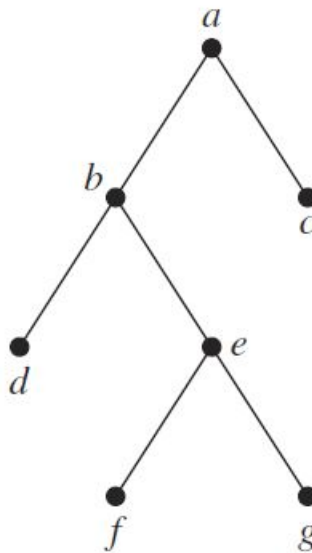# 11.3 Tree Traversal

**11.3 pg. 783 # 1**

Construct the universal address system for the given ordered rooted tree. Then use this to order its vertices using the lexicographic order of their labels.
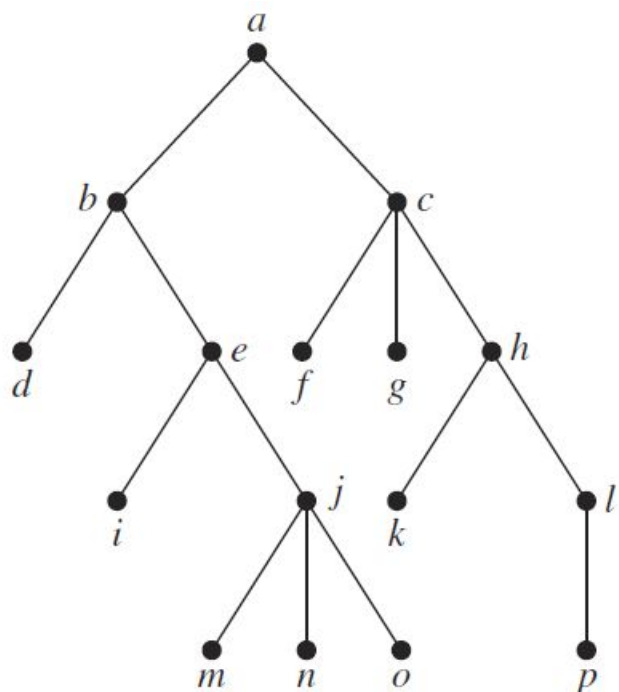


**11.3 pg. 783 # 7**

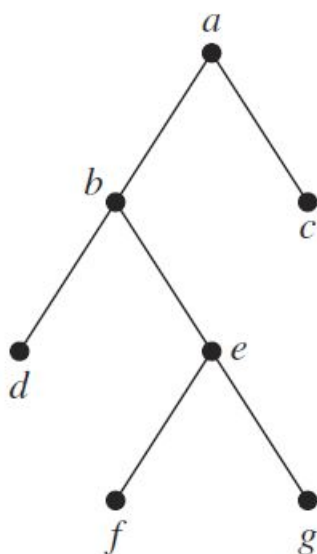Determine the order in which a preorder traversal visits the vertices of the given ordered rooted tree.



**11.3 pg. 783 # 11**

Determine the order in which an inorder traversal visits the vertices of the given ordered rooted tree.

**11.3 pg. 783 # 13**

Determine the order in which a postorder traversal visits the vertices of the given ordered rooted tree.



**11.3 pg. 784 # 17**

a) Represent the expressions $(x + xy) + (x/y)$ and $x + ((xy + x)/y)$ using binary trees.

b) Write these expressions in prefix notation.

c) Write these expressions in postfix notation.

d) Write these expressions in infix notation.

**11.3 pg. 784 # 23**

What is the value of each of these prefix expressions?

a) $- * 2/8\ 4\ 3$

b) $\uparrow - * 3\ 3 * 4\ 2\ 5$

c) $+ - \uparrow 3\ 2 \uparrow 2\ 3/6 - 4\ 2$

d) $* + 3 + 3 \uparrow 3 + 3\ 3\ 3$