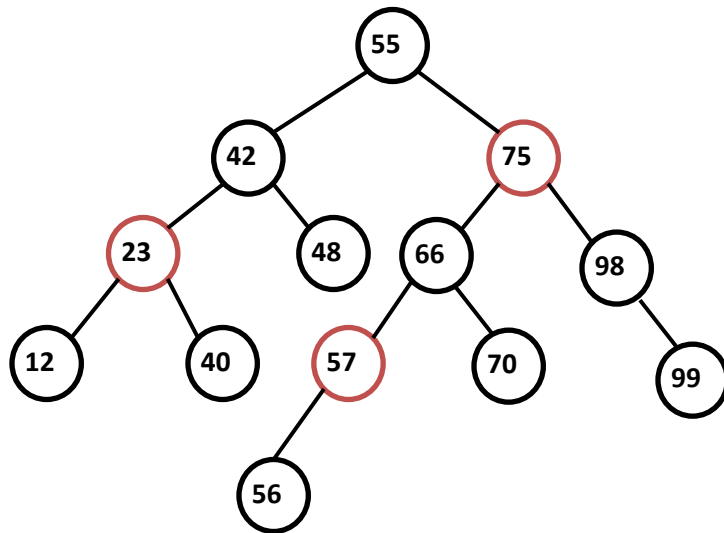
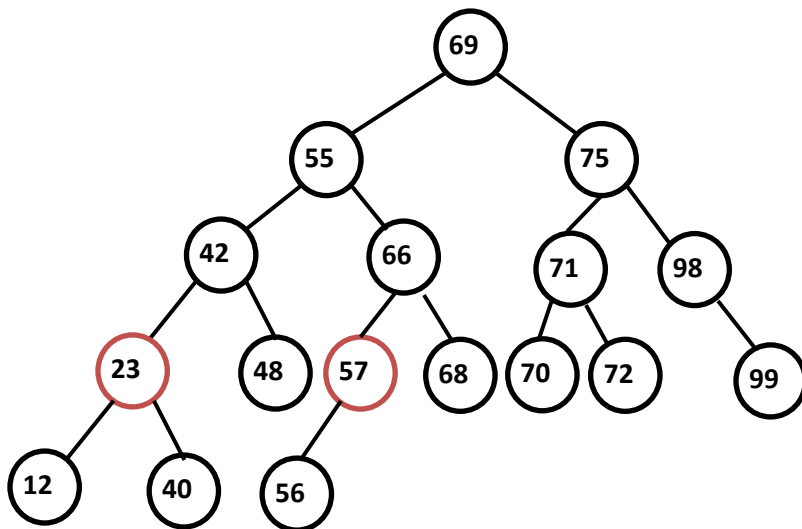


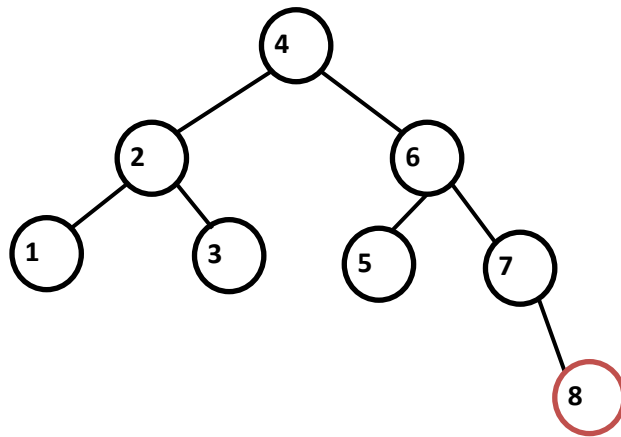
1. For the following Red-Black tree, show what happens when 68, then 72, 69, then 71 are inserted into the tree.



Solution:

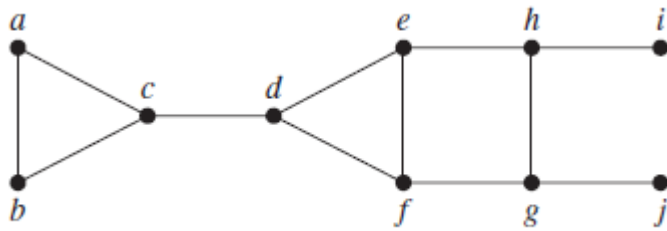


2. Given an empty Red-Black tree, show what happens after the following keys are inserted into the tree, in the given order: 1, 2, 3, 4, 5, 6, 7, 8

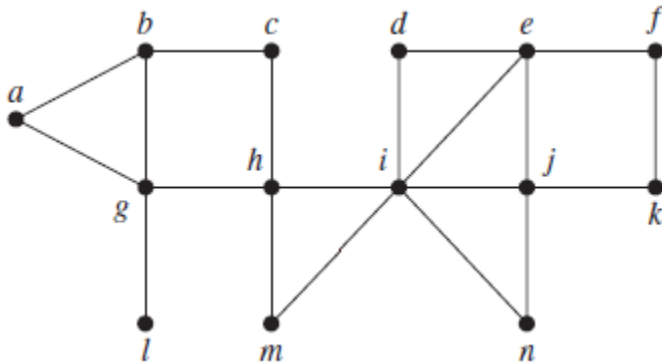


3. For the following undirected graphs, use both a Depth First Search/Traversal and a Breadth First Search/Traversal to produce spanning trees beginning at vertex *a*. If there is a choice when deciding which vertex to add to the tree next, always choose the lowest letter.

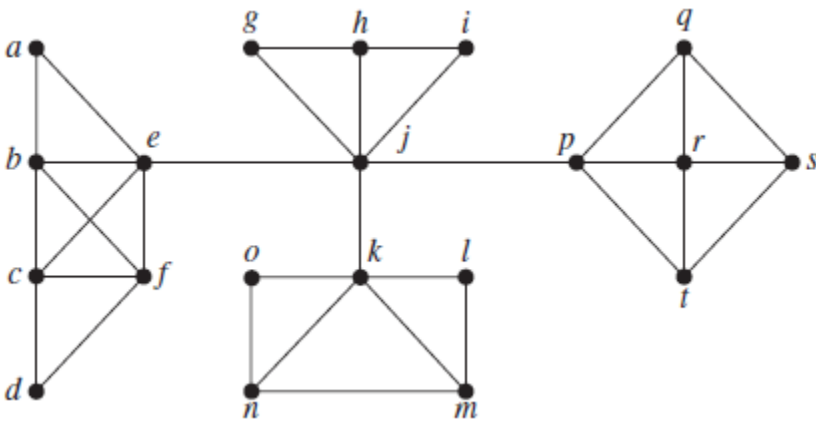
a)



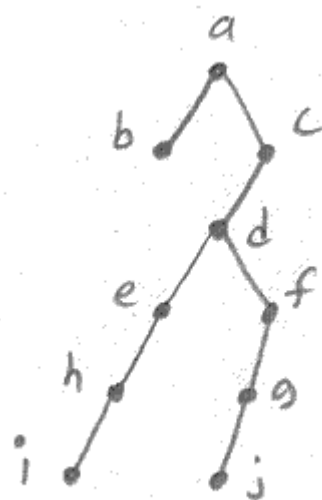
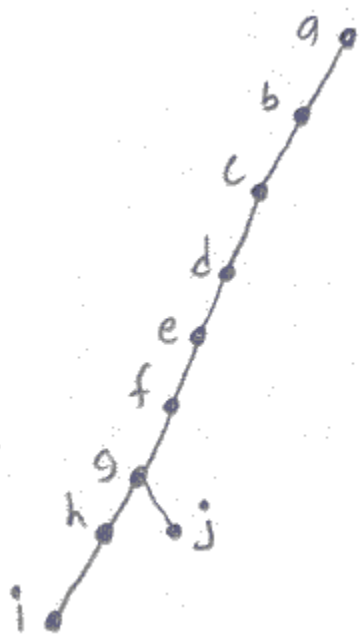
b)



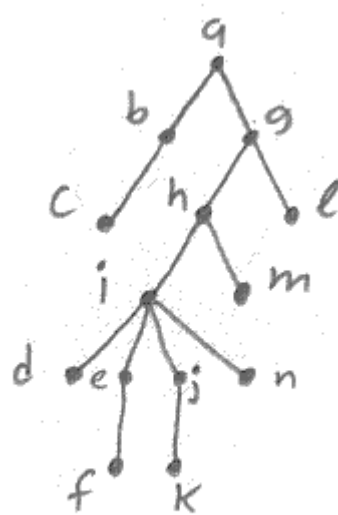
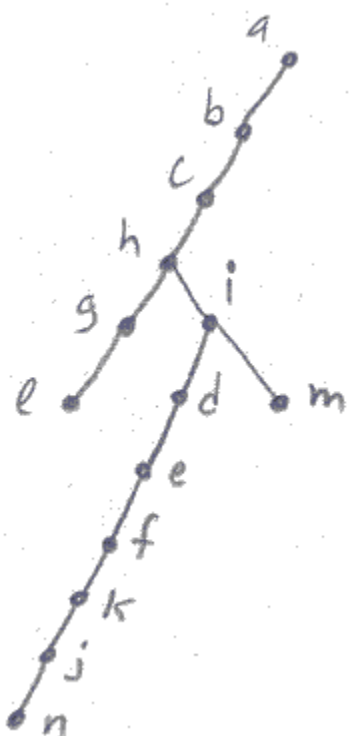
c)



a)



b)



c)

