7)

a) Prove that when function *DFS* is applied to a connected graph, the edges of *T* form a tree.

b) Prove that when function *BFS* is applied to a connected graph, the edges of *T* form a tree.

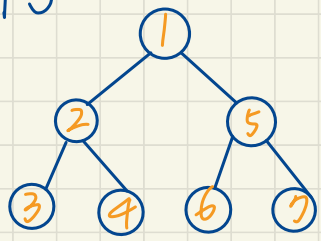
The definition of Tree is that there can not exist any point. can find way to start by itselves and can go back to itselves. simply put. there can not exist ring.

from the code. if it visited the point. and change the point's visited[v] = true. so next time run to this point. it will not form another route. if any point only have one way to arrive. prove there will form any ring.

both (a).(b) are the same idea.

The visit sequence (assume read Left first)

DFS



BFS