

L13: PROBLEM 4 (4/4 points)

Consider the case when we allow nodes in a tree to have more than one parent (a graph).

1. Assume the item is in the graph. Depth-first search must keep a list of the nodes visited to avoid the possibility of infinite loops when searching for the item.

- ☒ True ✓
☐ False

2. Assume the item is NOT in the graph. Depth-first search will always run into an infinite loop, even if it uses a list of the nodes visited when searching for the item.

- ☐ True
☒ False ✓

3. Assume the item is in the graph. Breadth-first search must keep a list of the nodes visited to avoid possible infinite loops when searching for the item.

- ☐ True
☒ False ✓

4. Assume the item is NOT in the graph. Breadth-first search will avoid running in an infinite loop if it makes use of a list of the nodes visited when searching for the item.

- ☒ True ✓
☐ False

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