

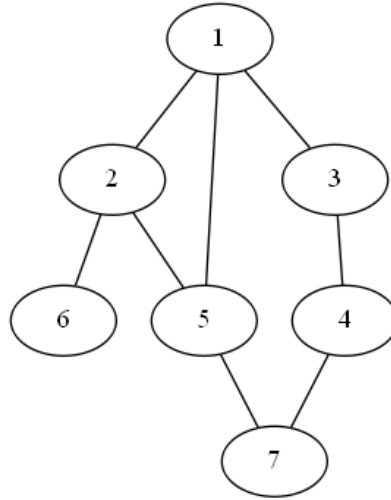
Name: Brian Sampson

Date: 10/12/22

Pledge: I pledge my honor that I have abided by the Stevens Honor System.

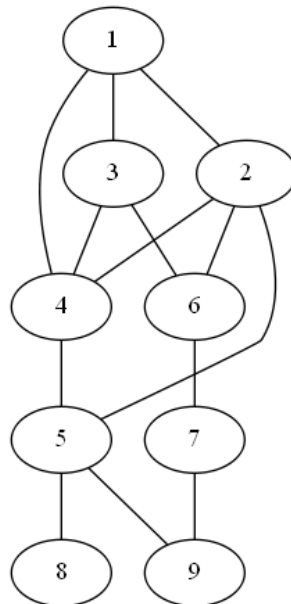
For each of the graphs below, list the order in which the vertices are visited in a **breadth-first search**, starting with vertex 1. If there are multiple vertices adjacent to a given vertex, visit the adjacent vertex with the lowest value first. Then repeat the process for **depth-first search**.

1.



BFS: 1, 2, 3, 5, 6, 4, 7

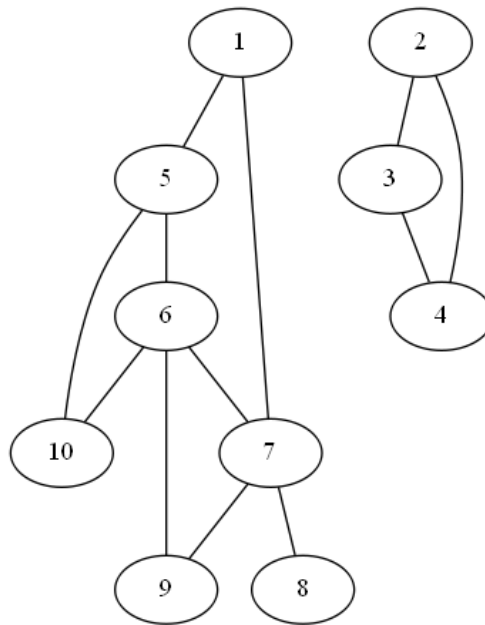
DFS: 1, 2, 5, 7, 4, 3, 6



BFS: 1, 2, 3, 4, 5, 6, 8, 9, 7

DFS: 1, 2, 4, 5, 8, 9, 7, 6, 3

2.

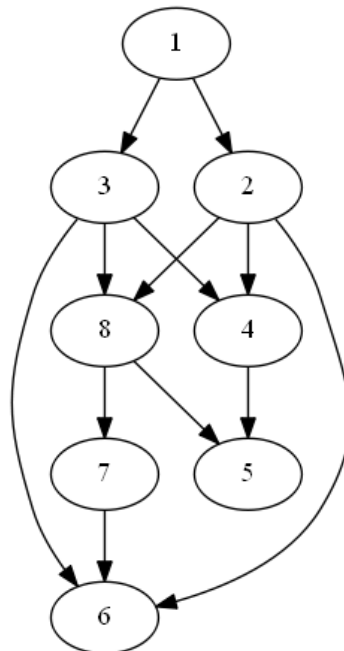


BFS: 1, 5, 7, 6, 10, 8, 9, 2, 3, 4

DFS: 1, 5, 6, 7, 8, 9, 10, 2, 3, 4

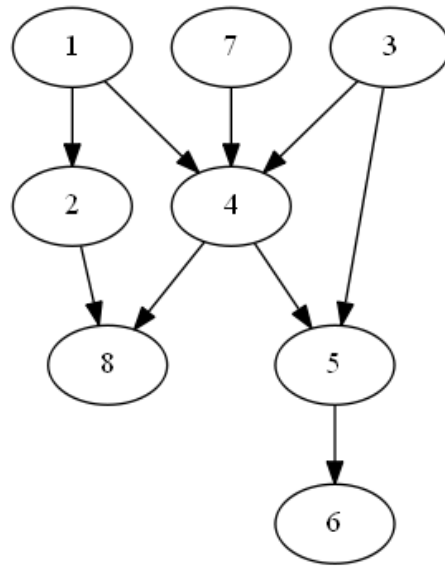
For each of the graphs below, list the order in which the vertices are visited in a **topological sort**, starting with vertex 1. If there are multiple vertices adjacent to a given vertex, visit the adjacent vertex with the lowest value first.

3.



Topological sort: 1, 2, 3, 4, 8, 5, 7, 6

4.



Topological sort: 1, 3, 7, 2, 4, 5, 8, 6