HW17b - 4.5

Wednesday, March 29, 2023   6:24 PM
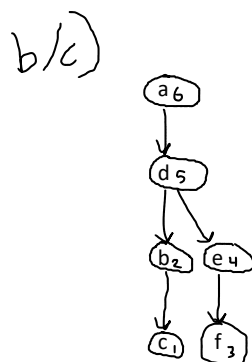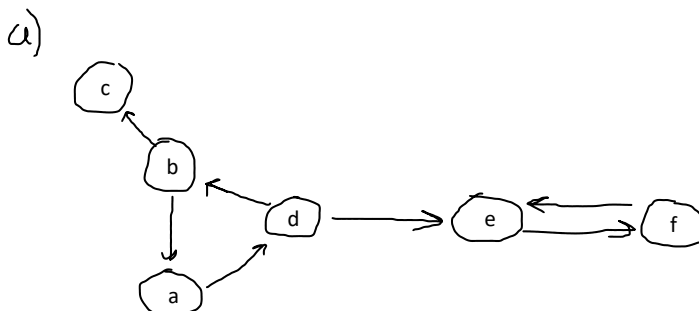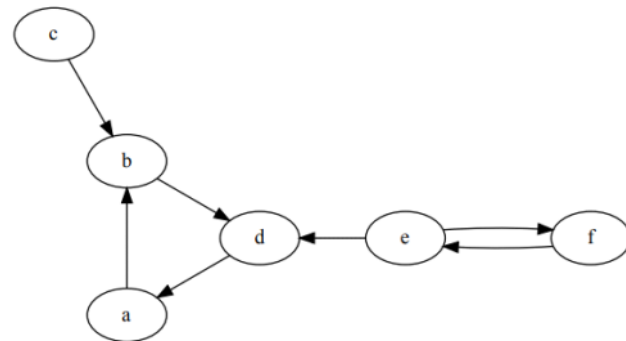
Problem 1.
Consider the directed graph with nodes V and edges E. A diagram of the
graph is provided at this link: **Graph**

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V = { a, b, c, d, e, f }
E = { (a,b), (b,d), (c,b), (d,a), (e,d), (e,f), (f,e) }
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Follow parts a-d below to show the steps of finding the strongly connected
components in the graph.

a. Draw the diagram for the reverse-edge graph.

b. Draw the DFS-forest for the reverse-edge graph. (When there is a choice
of nodes to visit, choose the one that is first in alphabetic order.)

c. Give the postorder numbers for the nodes in the reverse-edge graph.
Assign numbers starting with the number 1.

d. Draw the DFS-tree for each strong component in the order it is found.
(When there is a choice of nodes to visit, choose the one that is first in
alphabetic order.)

a)

b/c)

d) a d e f b c