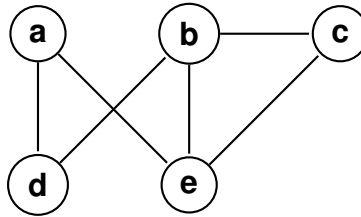


10.4 Connectivity

10.4 pg. 689 # 1

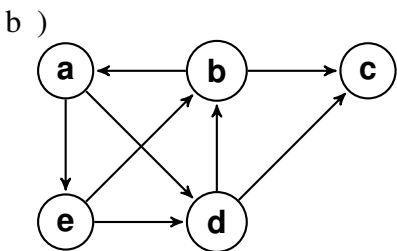
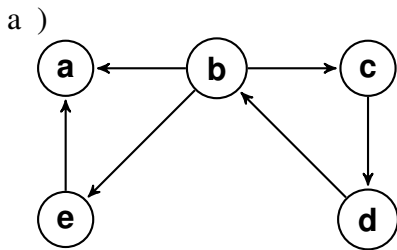
Does each of these lists of vertices form a path in the following graph? Which paths are simple? Which are circuits? What are the lengths of those that are paths?



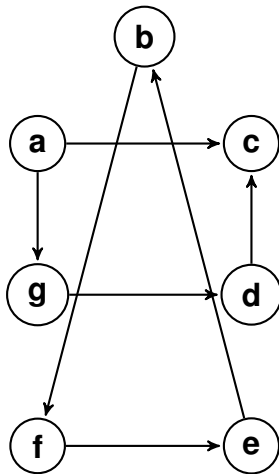
- a) a, e, b, c, b
- b) a, e, a, d, b, c, a
- c) e, b, a, d, b, e
- d) c, b, d, a, e, c

10.4 pg. 689 # 11

Determine whether each of these graphs is strongly connected and if not, whether it is weakly connected.



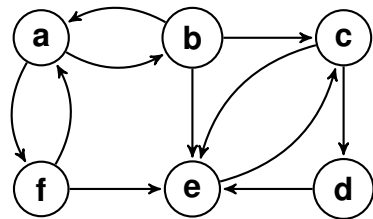
c)



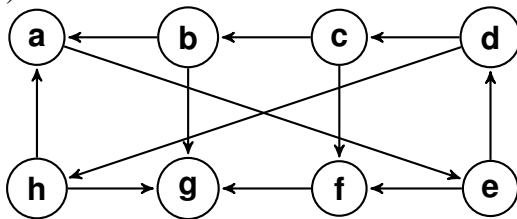
10.4 pg. 690 # 15

Find the strongly connected components of each of these graphs.

a)

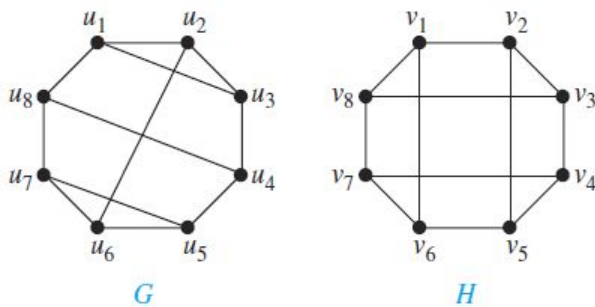


b)



10.4 pg. 690 # 21

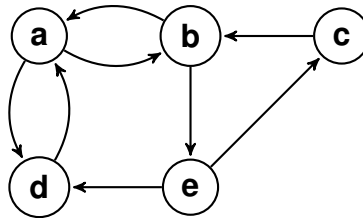
Use paths either to show that these graphs are not isomorphic or to find an isomorphism between them.



The graph G has a triangle formed by the path (u_1, u_2, u_3, u_1) . In H , there is no such triangle formed by any of the vertices, therefore these graphs are not isomorphic.

10.4 pg. 691 # 27

Find the number of paths from a to e in the directed graph of length



- a) 2.
- b) 3.

10.4 pg. 691 # 33

Find all the cut vertices of the given graph.

