GRAPH TOPICS

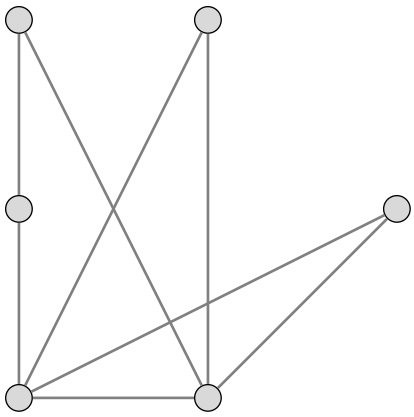
TEXT: 12.1, 12.3

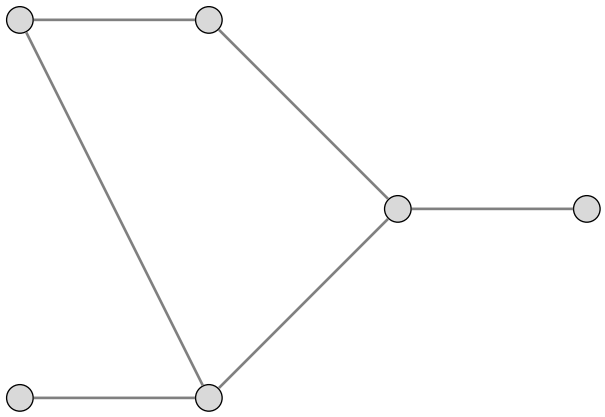
LAST NAME	FIRST NAME	DATE

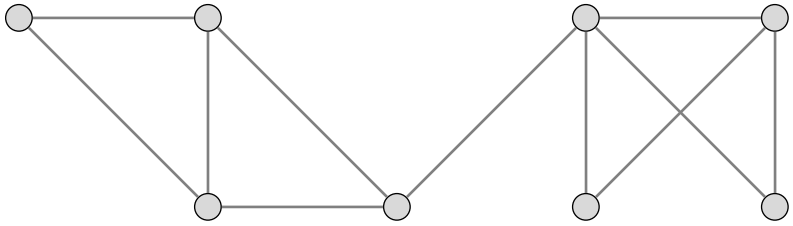
1 (6 points)**.** For each of the following three graphs,

(a) Identify the degree of each vertex

(b) Highlight the bridges





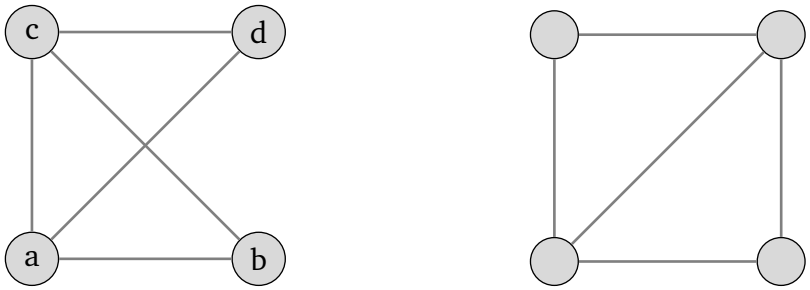


2 (1 point)**.** Draw the utilities graph $K_{2,2}$

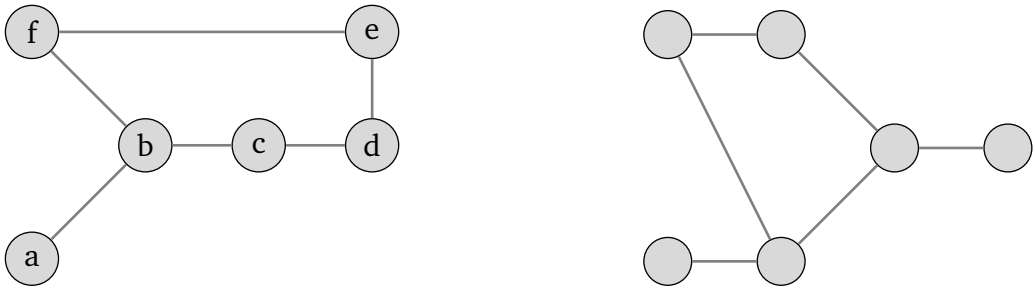
3 (1 point)**.** Draw the utilities graph $K_{3,4}$

4 (5 points)**.** For each pair of graphs, determine whether they are isomorphic or not. If yes, state the isomorphism by assigning letter names to the vertices in a way that makes the shown graphs equivalent. If no, explain why.

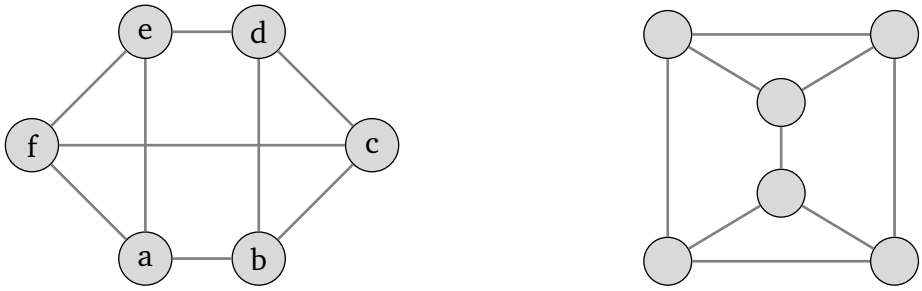
(a)



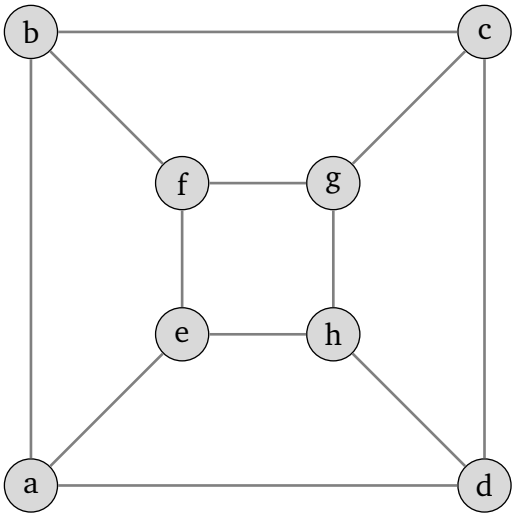
(b)

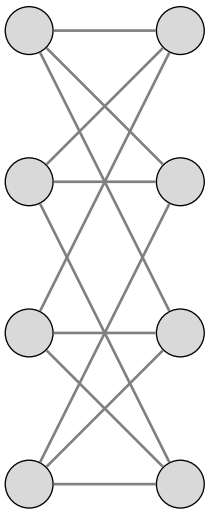


(c)

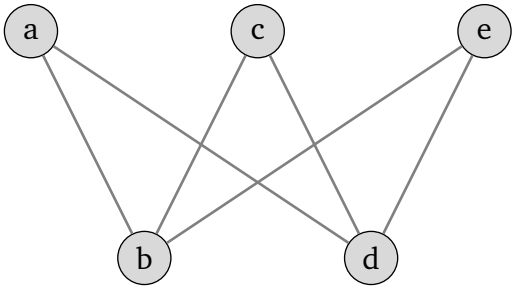


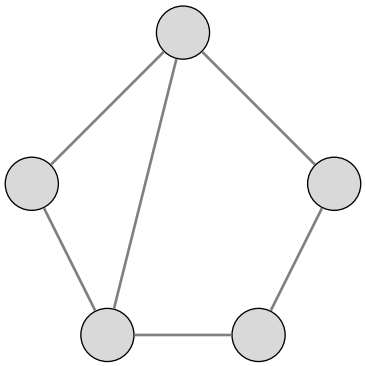
(d)





(e)





5. What are the degrees of vertices in the utilities graph $K_{n,m}$?

6. How many edges does the graph $K_{n,m}$ have?

7 (1 point)**.** Draw all non-isomorphic trees with 3 vertices.

8 (2 points)**.** Draw all non-isomorphic trees with 4 vertices.

9 (3 points)**.** Draw all non-isomorphic trees with 5 vertices.

10 (6 points)**.** Draw all non-isomorphic trees with 6 vertices.