

9-1 EX.12

Let G be an undirected graph with a loop at every vertex. Show that the relation R on the set of vertices of G such that uRv iff there is an edge associated to $\{u, v\}$ is a symmetric, reflexive relation on G .

9-2 Ex.20

Draw these graphs

- a) K_7
- b) $K_{1,8}$
- c) $K_{4,4}$
- d) C_7
- e) W_7
- f) Q_4

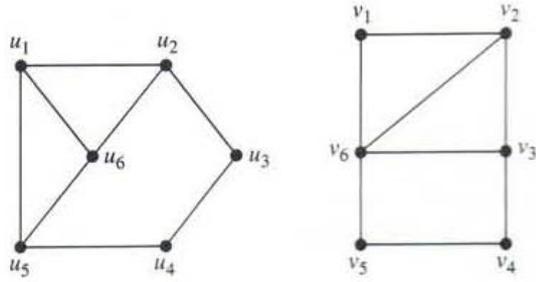
9-2 Ex.26

For which values of n are these graphs bipartite?

- a) K_n
- b) C_n
- c) W_n
- d) Q_n

9-3 Ex.34-44

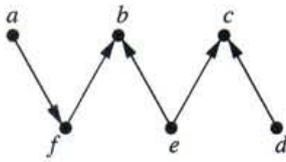
Determine whether the given pair of graphs is isomorphic



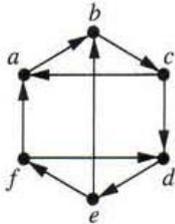
9-4 Ex.12

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

a)



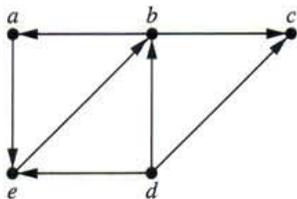
b)



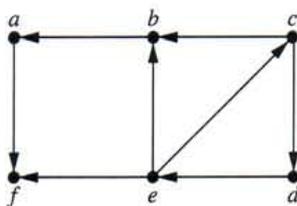
9-4 Ex.14

Find the strongly connected components of each of these graphs

a)

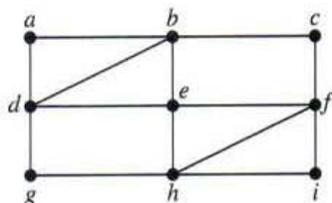


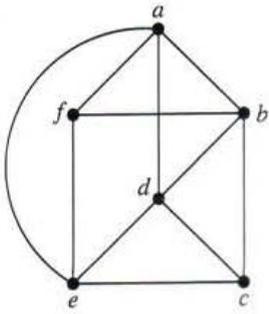
b)



9-5 Ex.2, 4

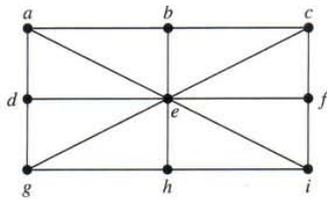
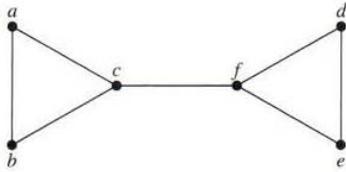
Determine whether the given graph has an Euler circuit or path





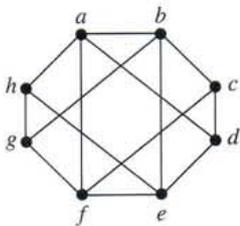
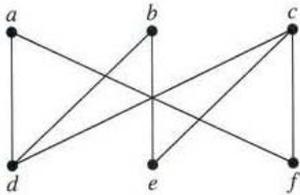
9-5 Ex.30, 36

Determine whether the given graph has an Hamilton circuit



9-7 Ex.6, 8

Determine whether the given graph is planar. If so, draw it so that no edges cross.



9-8 Ex.13

Which graphs have a chromatic number of 1?

9-8 Ex.18

How many different channels are needed for six stations located at the distances shown in the table, if two stations cannot use the same channel when they are within 150 miles of each other?

	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>1</i>	—	85	175	200	50	100
<i>2</i>	85	—	125	175	100	160
<i>3</i>	175	125	—	100	200	250
<i>4</i>	200	175	100	—	210	220
<i>5</i>	50	100	200	210	—	100
<i>6</i>	100	160	250	220	100	—