Rafael Hidalgo Module 8 Homework.

1) vertices are a, b, c, d, e, g, h, i, f

There are 9 vertices

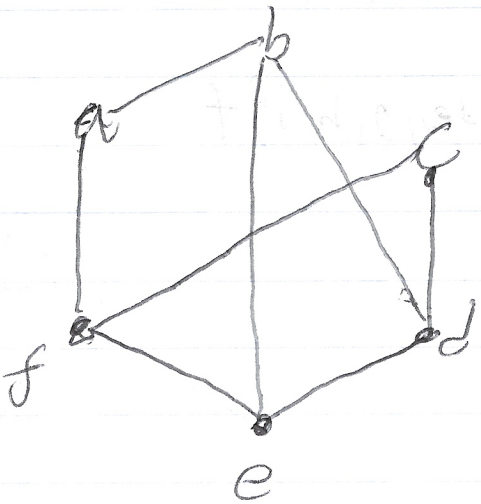
There are 12 edges

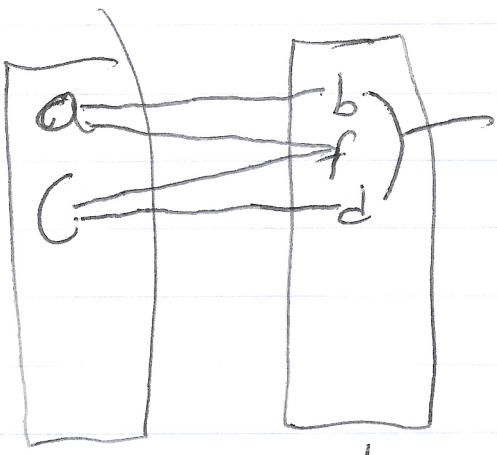
deg(a) = 3
deg(b) = 2
deg(c) = 4
deg(d) = 0
deg(e) = 6
deg(f) = 0
deg(g) = 4
deg(h) = 2
deg(i) = 3

vertex d and f are Isolated. There are No Pendant vertices.

2) This graph cannot exist since (15)(5) = 75 and 75 is not even.

3)





b and d are linked, therefore graph is not Bipartite.

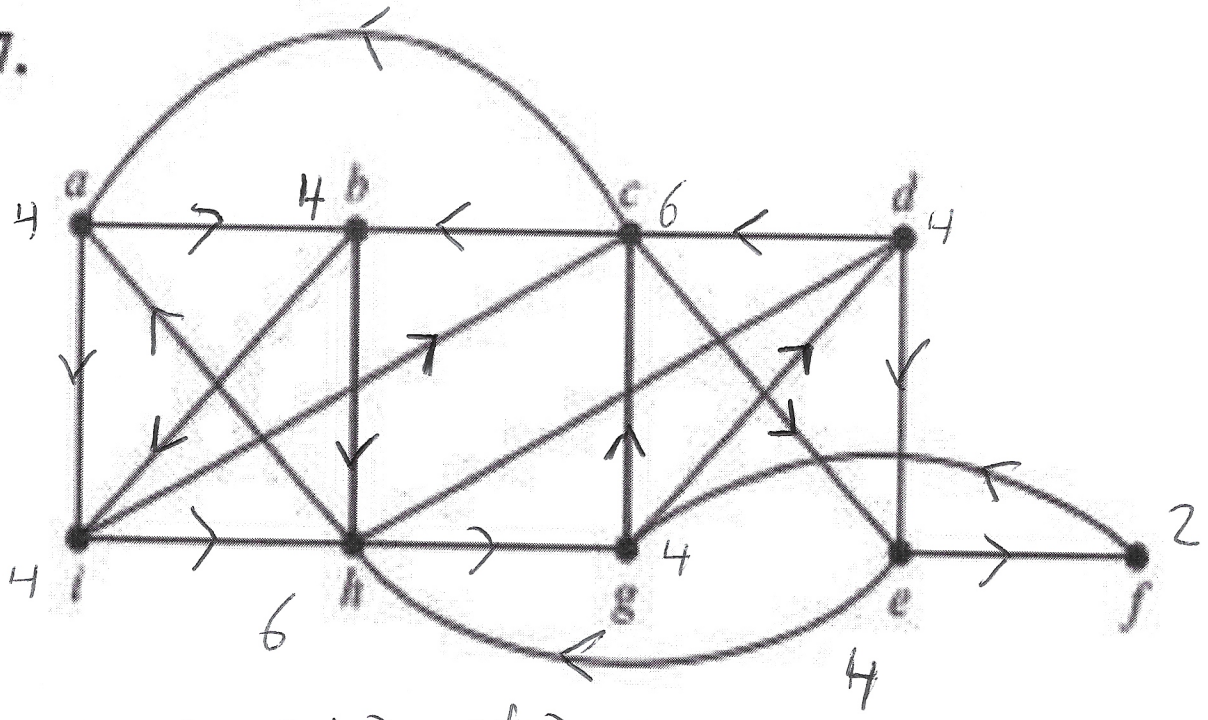
4)

	a	b	c	d
a	1	0	2	1
b	0	1	1	2
c	2	1	1	0
d	1	2	0	1

5) Yes since diagonal 0's mean there are no loops. Also having 1's means no multiple edges

B P3

7.



a → i → h → g → d → e → f → g → c → e → h → d → c →
a → b → i → c → b → h → a

6) Not Isomorphic. G has a triangle at v7, v6, and v5, but no such arrangement exists on H

7) See attached Page

8) A → b → C → F → d → C
is a hamilton path