

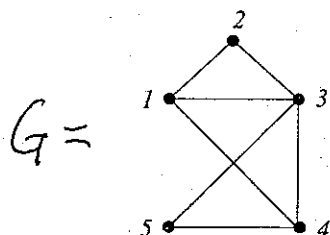
Mathematics 2602

Quiz 6

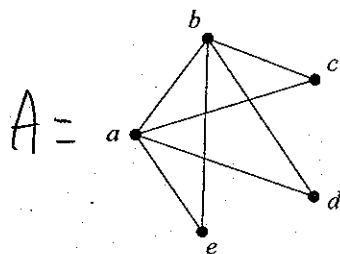
Prof. Margalit

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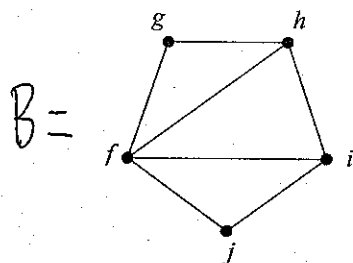
1. Consider the following graph:



Decide whether or not each of the following three graphs is isomorphic to the above graph. If the graph is not isomorphic, give a reason, and if it is, exhibit an explicit isomorphism.



No; the degree sequence of  $G$  is  $(4, 3, 3, 2, 2)$   
but the degree sequence of  $A$  is  $(4, 4, 2, 2, 2)$



Yes; Let  $\varphi$  be:

$$\varphi(1) = h$$

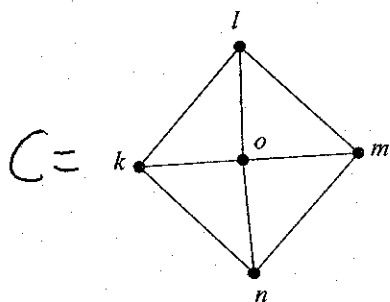
$$\varphi(2) = g$$

$$\varphi(3) = f$$

$$\varphi(4) = i$$

$$\varphi(5) = j$$

(There could be other isomorphisms)



No;  $G$  has 7 edges, but  $C$  has 8 edges.  
(You can also talk about their degree sequences)