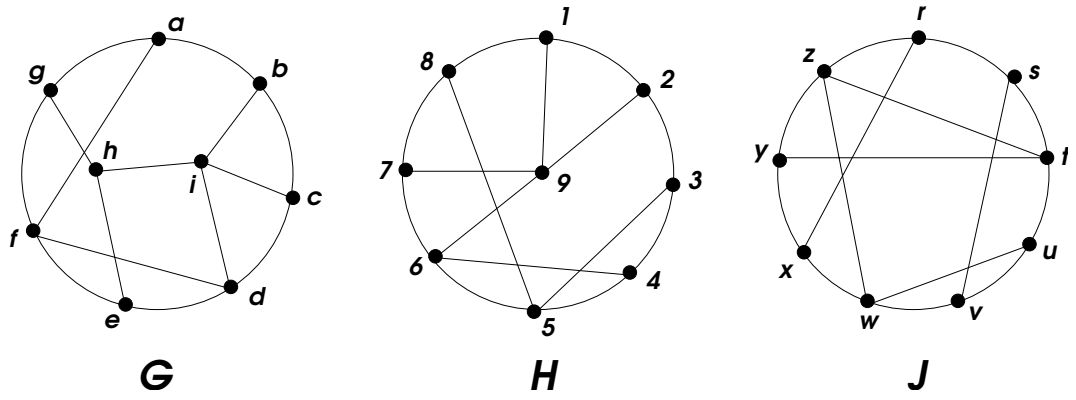
Math 249, Winter 2013
Assignment 5

Due Wednesday, March 13, in class.

1. For each pair of graphs below, prove or disprove that the graphs are isomorphic.



2. Suppose that G has p vertices, q edges, maximum degree k and no cycles of length 3. Prove that $q \leq k(p-k)$.

3. Let $k \in \mathbb{N}$. In class, we proved that if k is even then there does not exist a k-regular graph with a bridge. How can you construct a k-regular graph with a bridge, if k is odd?