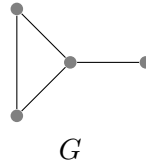Name: _____

Directions: Show all work.

1. [**2 parts, 5 points each**] Let G be the 4-vertex graph consisting of a vertex u of degree 3 plus one additional edge joining two neighbors of u; this graph is called the paw.

G

(a) Prove that $r(G, G) > 6$.

(b) Prove that $r(G.G) \leq 7$.