Distance Invariants

Concepts & Notation

- Sec. 5.1.2: eccentricity, center, radius, diameter.

1. Find the eccentricity $\epsilon(v)$ of each vertex $v$.

2. Find the center of this graph $G$.

3. Find the radius $\text{rad}(G)$ of this graph.

4. Find the diameter $\text{diam}(G)$ of this graph.
A graph is *radius critical* if the removal of any vertex either disconnects the graph or the radius decreases.

5. Show that $p_4$ is radius critical.

6. Show that $c_6$ is radius critical.

7. Show that the third graph above is radius critical.