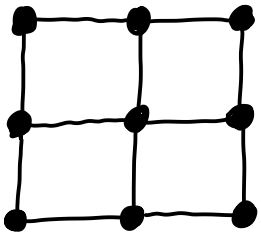
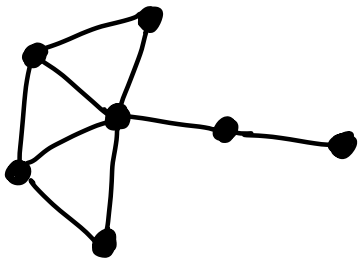
**Distance** $d_G(u, v)$ between two vertices $u, v$ in a graph $G$
= length of the shortest path between u and v.

**Diameter** $\mathrm{diam}(G)$ of a connected graph $G$
= maximum distance between any two vertices in $G$.

**Radius** $\mathrm{rad}(G)$ of a connected graph $G$
= smallest number $r$ so that every vertex in $G$ is at distance $\leq r$ from some (particular) vertex in $G$.

Find the diameter & radius of each graph:





Q Is the diameter of a graph double the radius?

"**Six degrees of separation** is the idea that all people are six or fewer social connections away from each other." *(Wikipedia)*

What does this say for the graph $G$ where **vertices = people**, and **edges = "social connections"** (e.g., friendships btwn 2 people)?