

- **complete graph** or **clique**  $K_n$  has  $n$  vertices, and each pair of vertices is an edge. (for  $n \geq 1$ )
- **k-cycle**  $C_k$  has vertex set  $V = \{1, 2, \dots, k\}$  and edge set  $E = \{\{1, 2\}, \{2, 3\}, \dots, \{k-1, k\}, \{k, 1\}\}$ . (for  $k \geq 3$ )
- **k-path**  $P_k$  has vertex set  $V = \{1, 2, \dots, k, k+1\}$  and edge set  $E = \{\{1, 2\}, \{2, 3\}, \dots, \{k, k+1\}\}$ . (for  $k \geq 1$ )

Try it out:

- Draw  $K_5$ ,  $C_5$ , and  $P_5$

- Identify these graphs:

