Graph Terminology

A graph $G = (V, E)$ is an object that contains a vertex set V and an edge set E.

We also write $V(G)$ to denote the vertex set of G and $E(G)$ to denote the edge set of G.

Edges are pairs of vertices.

Most graphs we will discuss will not have directions on the edges.

However, **directed graphs** have directions on the edges (so an edge $u \to v$ from u to v is not the same as an edge $v \to u$ from v to u).

We often refer to directed graphs as **digraphs**.

Most graphs are finite (so $|V| < \infty$), but sometimes graphs are infinite.

In this class we'll only talk about finite graphs and unless otherwise specified the graphs will be undirected.