

- A *loop* is an edge with the same vertex at both ends.
  - A *simple graph* has no loops, and there is no more than one edge connecting any pair of vertices. A *multigraph* has multiple edges connecting some pairs of vertices.
  - A *walk* is a sequence of edges in which the end of one edge (except the last) is the beginning of the next.
  - A *trail* is a walk in which no edge is repeated.
  - A *path* is a trail in which no vertex is repeated.
  - A *cycle* is a closed path (the end of the last edge is the start of the first).
  - A *Hamiltonian cycle* visits every vertex.
  - A *connected graph* has a path between every pair of vertices.
  - A *tree* is a simple connected graph with no cycles.
  - A *complete graph* is a simple graph where every pair of vertices is connected by an edge.
- 

- A *loop* is an edge with the same vertex at both ends.
- A *simple graph* has no loops, and there is no more than one edge connecting any pair of vertices. A *multigraph* has multiple edges connecting some pairs of vertices.
- A *walk* is a sequence of edges in which the end of one edge (except the last) is the beginning of the next.
- A *trail* is a walk in which no edge is repeated.
- A *path* is a trail in which no vertex is repeated.
- A *cycle* is a closed path (the end of the last edge is the start of the first).
- A *Hamiltonian cycle* visits every vertex.
- A *connected graph* has a path between every pair of vertices.
- A *tree* is a simple connected graph with no cycles.
- A *complete graph* is a simple graph where every pair of vertices is connected by an edge.