1 Glossary

A directed graph (or digraph) is a set of vertices and a collection of directed edges. Each directed edge connects an ordered pair of vertices.

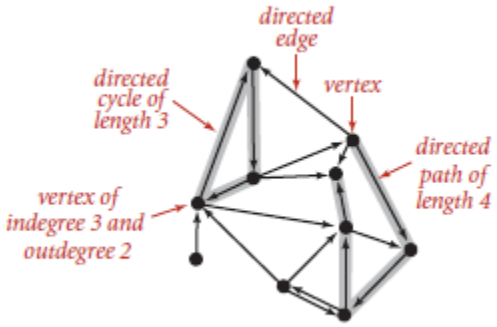
The outdegree of a vertex in a digraph is the number of edges going from it; the indegree of a vertex is the number of edges going to it.

The first vertex in a directed edge is called its head; the second vertex is called its tail.

A directed path in a digraph is a sequence of vertices in which there is a (directed) edge pointing from each vertex in the sequence to its successor in the sequence.

A directed cycle is a directed path with at least one edge whose first and last vertices are the same.

A simple cycle is a cycle with no repeated edges or vertices (except the requisite repetition of the first and last vertices).



Anatomy of a digraph

We say that a vertex w is reachable from a vertex v if there is a directed path from v to w.