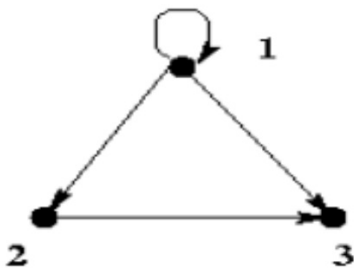


Lesson 12

Digraphs

A diagraph is short for directed graph, and it is a diagram composed of points called vertices (nodes) and arrows called arcs going from a vertex to a vertex.

Example 1)



3 vertices & 4 arcs

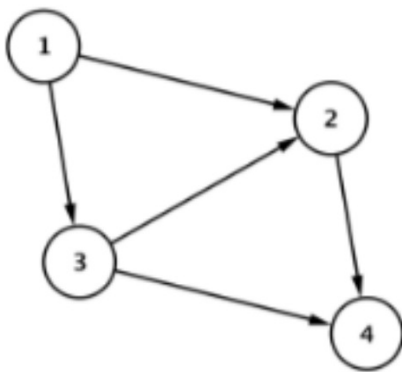
Vertices: Numbers 1, 2, 3

A digraph is an ordered pair of sets $G = (V, A)$, where V is a set of vertices and A is a set of ordered pairs (called arcs).

Vertices: $V = \{1, 2, 3\}$

Arcs: $A = \{(1, 1), (1, 2), (1, 3), (2, 3)\}$

Example 2)

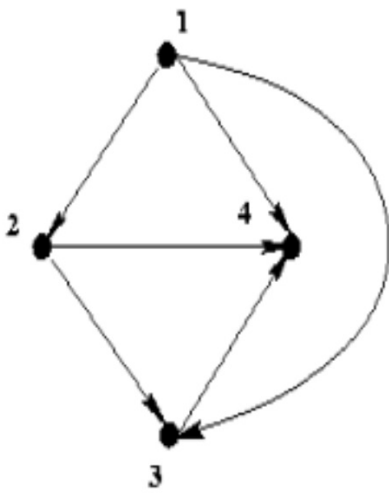


4 Vertices & 5 arcs

Vertices: $V = \{1, 2, 3, 4\}$

Arcs: $A = \{(1,2), (1,3), (3,2), (3,4), (2,4)\}$

Example 3)



4 Vertices & 6 arcs

G_2

Vertices: $V = \{1, 2, 3, 4\}$

Arcs: $A = \{(1,2), (1,3), (1,4), (2,3), (2,4), (3,4)\}$