Vocab 8.1

Before looking up the definitions, try recalling them from class. Write down the best of your recollections before checking your answers and adjusting any errors.

Vertex

A vertex, or node, usually represented by a point or circle, is a fundamental unit used in discrete mathematics (often to describe the relation between other vertices in a meaningful or applied way).

Edge (use the words "join" and "incident")
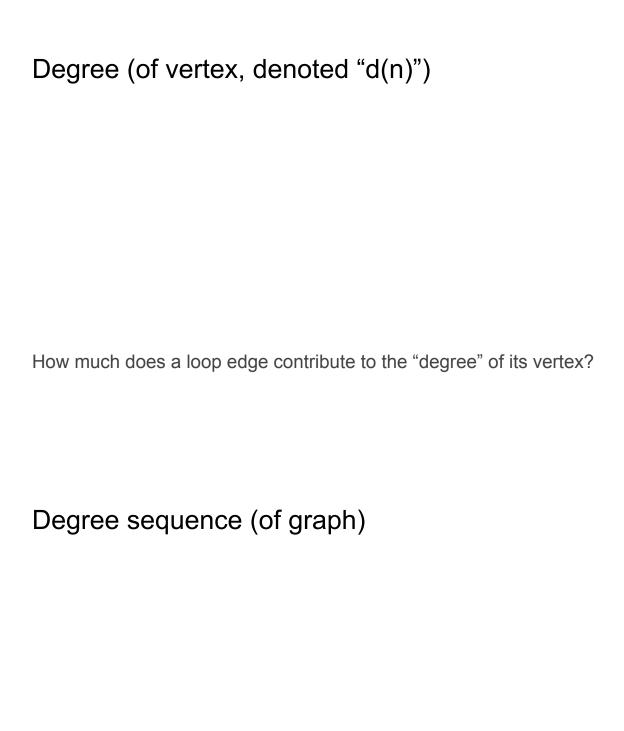
Adjacent

Loop

Parallel vs. Antiparallel

Graph

Subgraph

What is a "proper" subgraph?

Picture (of a graph)

Degree (of vertex, denoted "d(n)")

How much does a loop edge contribute to the "degree" of its vertex?

Degree sequence (of graph)

Simple graph (given in class, not in the book)

Pseudograph

Multigraph

Digraph (directed graph)

Head and Tail

Can you also describe what a head "function" and tail "function" are?

Bipartite graph

What is a "part" of a bipartite graph?

Complete graph — K$_n$

Complete bipartite graph — K$_{m,n}$

n-cube — Q_n

What is the easiest way to draw Q_n?

Cycle graph (n-cycle) — C_n

(Note that a "3-cycle" is called a "triangle" in Section 8.2.)

Petersen graph

(Do not "define" it; practice drawing it and guess or recall a few of its qualities/properties. We will revisit the Petersen graph in Section 8.4 when we cover "planarity.")

Theorem 1 (pseudograph's sum of deg seq)

Corollary 1 (how many vertices with odd degree)

Theorem 2 (digraph's sum of in-degree vs. out-degree sequence)

"Generally" graphic (given in class; not in the book)

"Simply" graphic (given in class; not in the book)

Theorem (given in class; Nov 12 Lec, p. 26)

(What is the relationship between the degree sequence and the concept of being "generally" graphic?)

Proposition (about cycle graphs/n-cycle)

(Given in class. See Nov 14 PDF p. 16-17.)