

Reading Questions 16

page 291 Definition 9.2.4

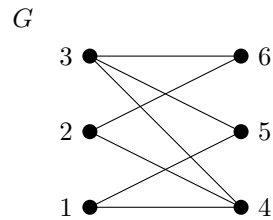
page 291 Example 4

1. A bipartite graph is a graph with no edges.
2. A complete bipartite graph is a graph with all possible edges.
3. Suppose $V(G) = \{1, 2, 3, 4\}$ and $E(G) = \{\{1, 2\}, \{2, 3\}, \{3, 4\}, \{4, 1\}\}$. Give a bipartition sets V_1 and V_2 for the graph G .

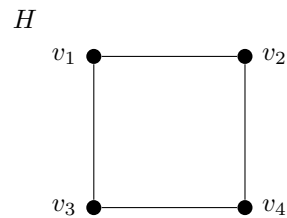
Section 9.2 Definitions and Basic Properties (Part 1)

Definitions and Basic Properties

P 1. Compute $V(G)$ and $E(G)$ for the following graph.



P 2. Compute $\sum_{v \in V(H)} \deg v$ for the following graph. Also compute $|E(H)|$.



P 3. What is the maximum number of edges in a graph containing n vertices?

P 4. Prove that at any party an even number of people must have shaken an odd number of hands.

P 5. Let G be a graph and $p = 2k + 1$ for some integer k . Prove that if $\deg v = p$ for all $v \in V(G)$ then $p \mid |E(G)|$.