

Last name \_\_\_\_\_

First name \_\_\_\_\_

**LARSON—MATH 356—CLASSROOM WORKSHEET 22**  
**Chromatic Polynomials, Network Flows**

**Review**

- What is an algorithm for computing  $P(K; G)$ ?

1. Use this algorithm to compute  $P(K; C_3)$ .

2. What is the complexity of this algorithm?

**Network Flows**

3. What is a *directed graph*?

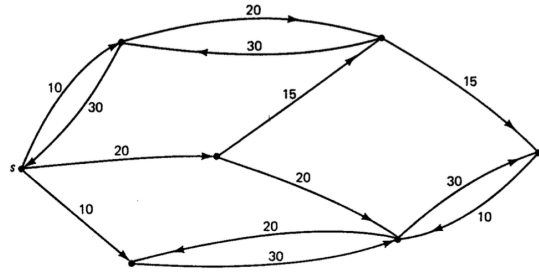


Fig. 3.1.1: A network

4. What is a *source* and *sink* in a directed graph?

5. What is a *capacity* of an edge in a directed graph?

6. What is a *network*  $\mathbf{X}$ ?

7. What is a *flow* in a network?

8. What is the *value* of a flow in a network?

9. Why does a maximum flow in a network *exist*?