

Last name _____

First name _____

LARSON—OPER 731—CLASSROOM WORKSHEET 15
Complementary Slackness!

Concepts

- (Sec. 2.4) *basis*, *basic variable*, *nonbasic variable*, *basic solution*, *basic feasible solution*, *canonical form*.
- (Sec. 2.8) *hyperplane*, *halfspace*, *line*, *line segment*, *convex*, *polyhedron*, *tight inequality*, *extreme point*.
- (Sec. 3.1) *dual LP*, *Weak duality theorem*.
- (Sec. 4.3) *complementary slackness*

1. What is an example of a minimum cost perfect matching problem?

2. Given a dual feasible y , what is the *reduced cost* of an edge?

3. How can we use reduced costs and the Strong Duality Theorem to find an optimal solution?

