Final - Due Aug 15

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1. Solve the following problem using the Simplex method:

$$\max 2x_1 + 3x_2$$
$$s.t.$$
$$x_1 + x_2 \leq 8$$
$$x_2 \leq 6$$
$$2x_1 + x_2 \leq 4$$
$$x_1, x_2 \geq 0$$

What is the dual of this problem? Write down the values of the dual variables at optimality without using Simplex; using inspection only (*Hint: Complementary Slackness*) (7 pts)

2. Exercise 4.21 (6 pts)

3. Exercise 5.1 (7 pts)