Homework 3
Due Friday 01/25

1. Model the following, graph the feasible region, and find the optimal solution:

   A company wants to advertise its products, and has two options of ad types to run. A television commercial will cost them \$10 and a magazine ad will cost \$4. Suppose each television commercial reaches 4 new men and 2 new women, while each magazine ad is seen by 1 new man and 4 new women. The company wants to minimize their costs while running enough ads to reach 8 new men and 12 new women.

2. Convert the model of the previous problem into the standard form, using e for excess and all $e > 0$.

3. Problem 1 on page 55 of the text book.

4. Convert the model you just came up with for Farmer Jones into the standard form.

5. Provide at least 2 basic solutions to the standard form of the Farmer Jones problem. At least one of those 2 should be a basic feasible solution.

6. In the solutions to Homework 2 problem 3, I identified a number of points on the graph. For each point identify if it is a basic solution. If it is a basic solution identify if it is a basic feasible solution. If it is a basic feasible solution, identify the basic feasible solutions it is adjacent to.