MATH 2602, Quiz 4

June 17th, 2012

Name: _____ **GTID:**_____
Use the back of the paper if you need more room.

A company makes two products, tables and chairs. A table requires two hours of labor and $8 of materials. The profit per table is $20. A chair requires three hours of labor and $4 of material. The profit per chair is $15. The company can afford to spend $24 each week for the cost of the materials. If an employee works 12 hours a week, how many tables and chairs should the employee make in order to maximize profit?

Problem 1 (5 points) Set up a linear program to solve this problem, making sure to identify what your variables mean. Then, solve this problem with the graphical approach (i.e. draw the feasible region, find the extreme points, and use that to determine the optimal solution).

Extra Credit (2 points) Set up the simplex tableau that you would use in order to solve this problem. Then solve it using the simplex method.