Attendance Quiz for Lecture 5

NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1. (a) Sketch the set of feasible solutions to the given linear programming problem (b) Draw the indicated objective function $z = \mathbf{c}^T \mathbf{x} = k$, for the indiated values of k and (c) conjecture the optimal value of z.

Maximize $z = 2x + y$ subject to the constraints

$$x + 3y \leq 12 \quad , \quad 3x + y \leq 12 \quad , \quad x + y \geq 5 \quad , \quad x \geq 0 \quad , \quad y \geq 0 \quad ,$$

$$k = 6, 9, 12 \quad .$$