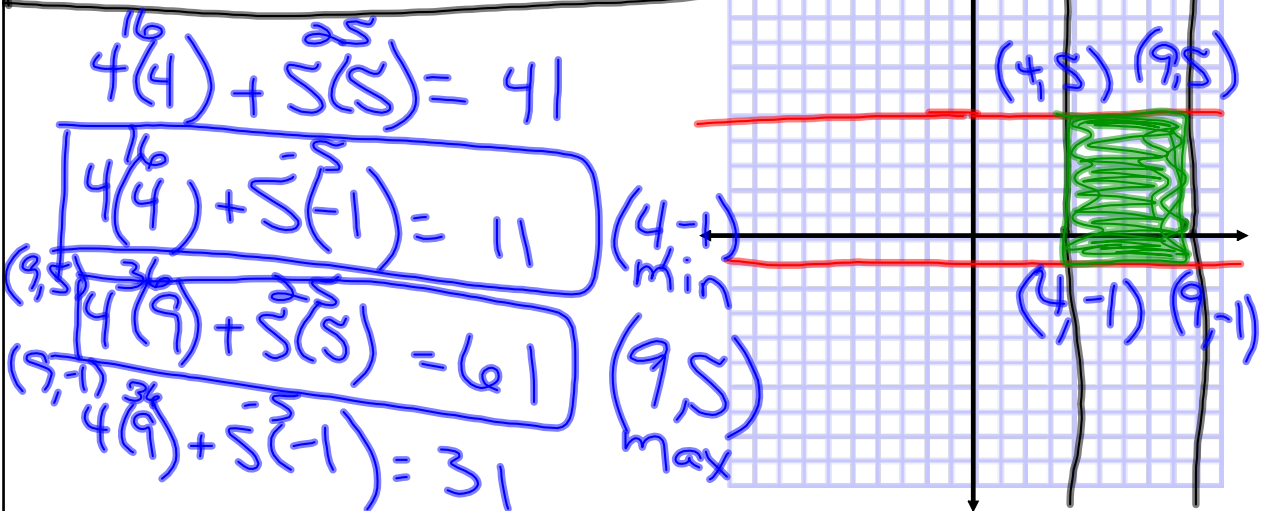


Optimization/Linear Programming

Find the minimum and maximum values of the objective function subject to the given restraints.

Objective function: $C = 4x + 5y$

Constraints: $x \geq 4, x \leq 9, y \geq -1, y \leq 5$



Find the minimum and maximum values of the objective function subject to the given restraints.

Objective function: $C = 2x + 8y$

Constraints: $x \geq 0, y \geq 0, x + 2y \leq 4$

$$0 = -\frac{1}{2}x + 2$$

$$-2 = -\frac{1}{2}x$$

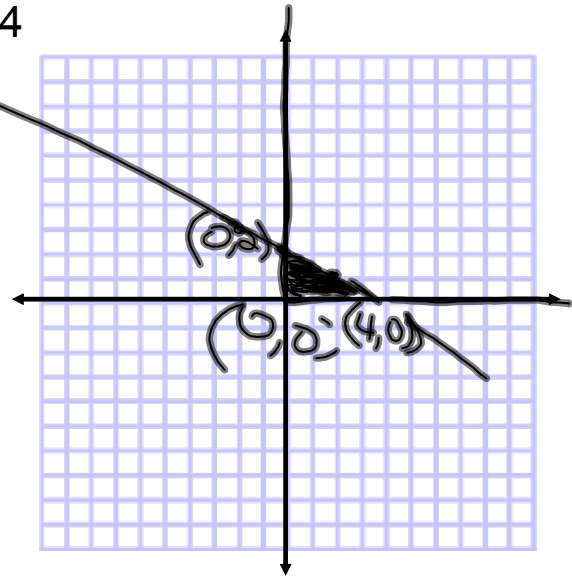
$$4 = x$$

$$2y \leq -x + 4$$

$$y \leq -\frac{1}{2}x + 2$$

$$0 \leq 2$$

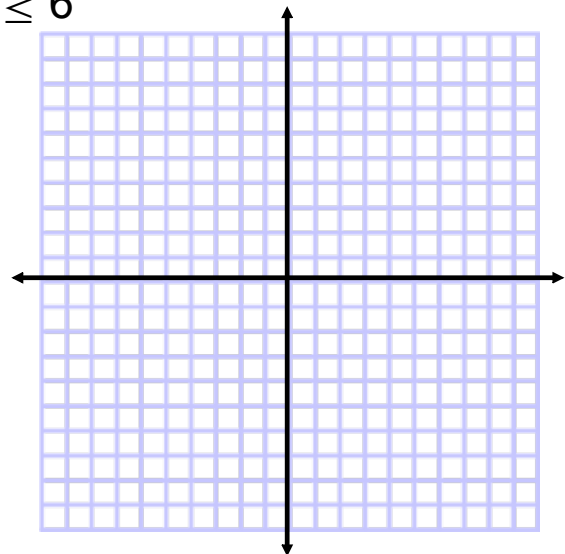
$(0,0) \rightarrow 0$
 $(0,2) \rightarrow 16$
 $(4,0) \rightarrow 8$



Find the minimum and maximum values of the objective function subject to the given restraints.

Objective function: $C = -4x + 5y$

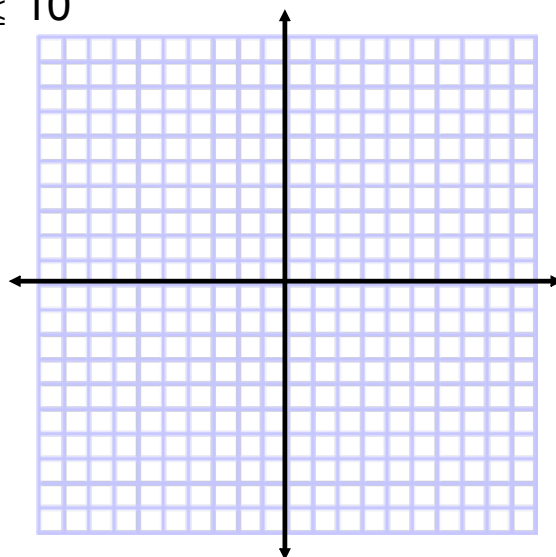
Constraints: $x \geq 2, y \geq 1, 2x - 3y \leq 6$



Find the minimum and maximum values of the objective function subject to the given restraints.

Objective function: $C = 7x + 3y$

Constraints: $x \geq 0$, $y \geq 3$, $2x + y \leq 10$



Assignment: p. 166 #10-20 even

