

Pre-Calculus CP 1 – Section 7.6 HW
Linear Programming Day 1 Homework

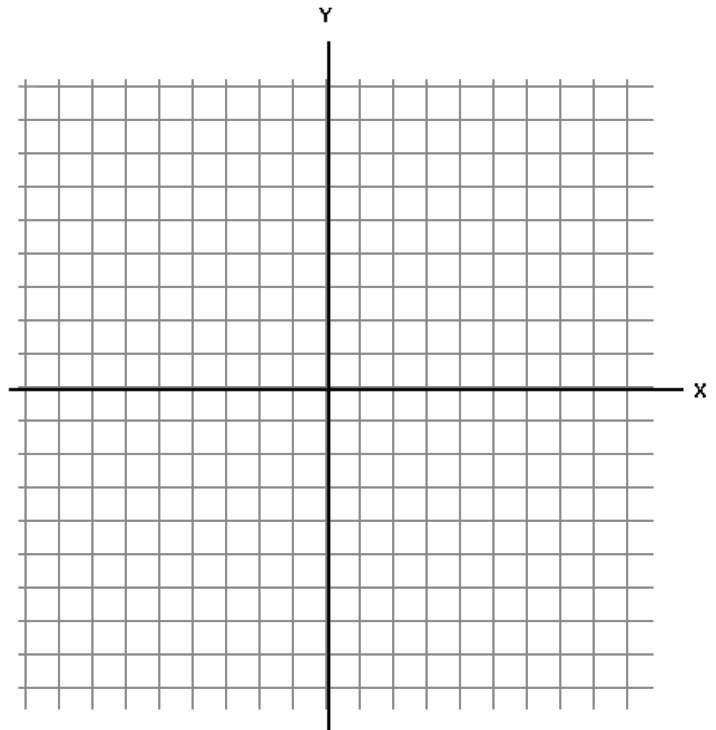
Name: _____

1. Find the maximum and minimum values, if they exist, of the objective function $T = 3x + 2y$ given the set of constraints below.

$$\begin{cases} x + y \leq 10 \\ x + 2y \geq 12 \\ 4x + y \geq 13 \end{cases}$$

min value of _____ at _____

max value of _____ at _____

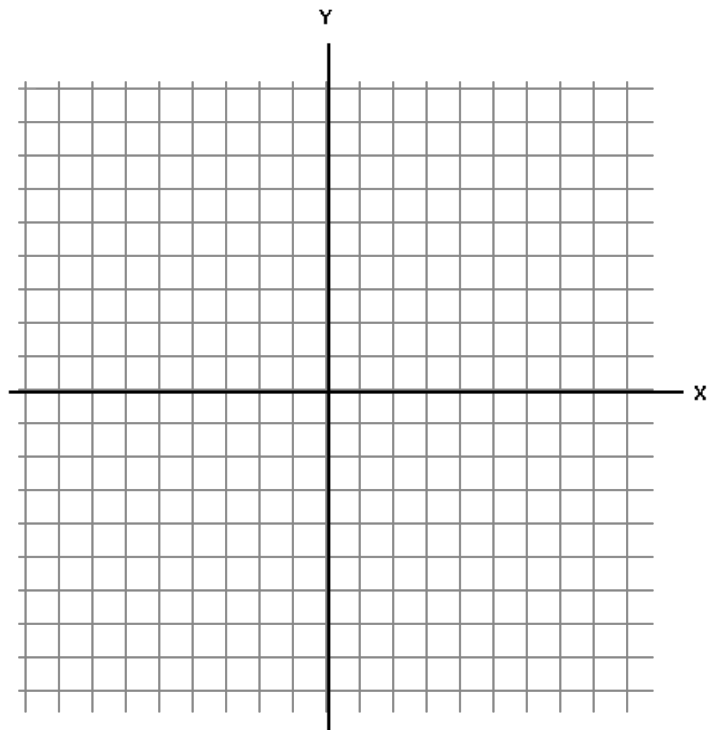


2. Find the maximum and minimum values, if they exist, of the objective function $P = x + 5y$ given the set of constraints below.

$$\begin{cases} 2x + y \leq 10 \\ x - y \leq 2 \\ x \geq 0 \\ y \geq 0 \end{cases}$$

min value of _____ at _____

max value of _____ at _____

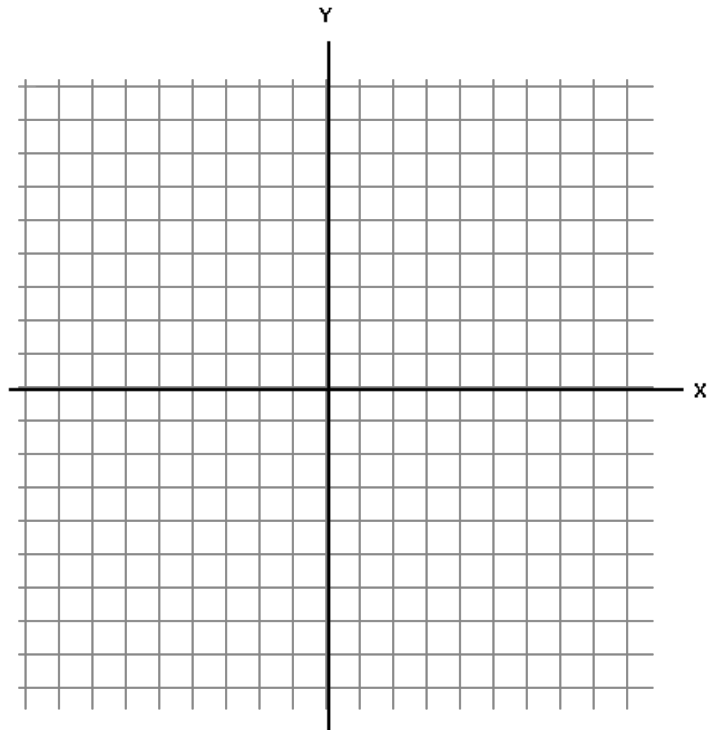


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3. Find the maximum and minimum values, if they exist, of the objective function $F = 12x - 5y$ given the set of constraints below.

$$\begin{cases} 2x - y \leq 10 \\ x + 2y \leq 10 \\ x \geq 0 \\ y \geq 0 \end{cases}$$

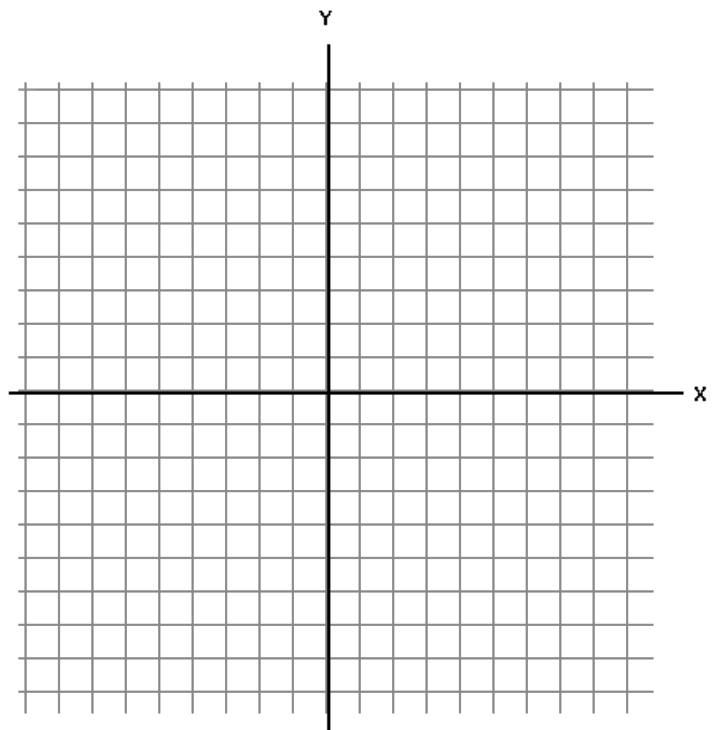


min value of _____ at _____

max value of _____ at _____

4. Graph and find the **vertices** of the feasible region (there will be fractions).

$$\begin{cases} x + 2y \geq 3 \\ 3x + 4y \leq 8 \\ x \geq 0 \\ y \geq 0 \end{cases}$$



vertices: _____
