

Graph each system of constraints. Name all vertices. Then find the values of x and y that maximize or minimize the objective function. Find the maximum or minimum value.

$$4. \begin{cases} y \leq -3x + 7 \\ 2y + x \leq 9 \\ x \geq 0, y \geq 0 \end{cases}$$

Minimum for
 $P = 2x + y$

$$5. \begin{cases} y - 5 \leq 4x \\ y + x \leq 10 \\ x \geq 0, y \geq 3 \end{cases}$$

Maximum for
 $P = 7x - 5y$

$$6. \begin{cases} 3y \leq -x + 9 \\ y + 2x \leq 8 \\ x \geq 0, y \geq 0 \end{cases}$$

Maximum for
 $P = 4x + y$

