

General Algebra II Worksheet #5 Unit 4 Selected Solutions

Graph each of the following systems of linear inequalities. Find the x and y coordinates of any vertex.

1. $x + 4 \geq 0$
 $y + 2 \geq 0$
 $x + 2y \leq 12$
 $x + y \leq 8$

$$\begin{aligned} x + 4 &\geq 0 \\ x &\geq -4 \end{aligned}$$

$$\begin{aligned} y + 2 &\geq 0 \\ y &\geq -2 \end{aligned}$$

$$\begin{aligned} x + 2y &\leq 12 & x + y &\leq 8 \\ 2y &\leq -1x + 12 & y &\leq -1x + 8 \\ y &\leq -\frac{1}{2}x + 6 \end{aligned}$$

4. $-x + 2y \leq 8$
 $2x + y \leq 9$
 $x - 2y \leq 12$
 $-2x - y \leq 6$

$$-x + 2y \leq 8$$

$$2x + y \leq 9$$

$$2y \leq x + 8$$

$$y \leq -2x + 9$$

$$y \leq \frac{1}{2}x + 4$$

$$\begin{aligned} x - 2y &\leq 12 & -2x - y &\leq 6 \\ -2y &\leq -1x + 12 & -y &\leq 2x + 6 \\ y &\geq -\frac{1}{2}x + 6 & y &\geq -2x - 6 \end{aligned}$$

