

## HW #7 Systems of Equations and Inequalities

Date \_\_\_\_\_ Period \_\_\_\_\_

**Solve each system by elimination.**

$$\begin{aligned} 1) \quad & 3r + 2s - 2t = 24 \\ & -2r + 4s + 2t = -4 \\ & -4r + 4s + t = -2 \end{aligned}$$

$$\begin{aligned} 2) \quad & 2x - 2y + 2z = 8 \\ & -x - 2y - z = 8 \\ & 3x + 3y + 3z = -12 \end{aligned}$$

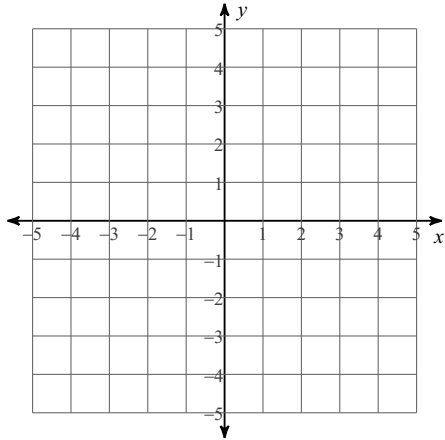
**Solve each system by substitution.**

$$\begin{aligned} 3) \quad & -2x = -6 \\ & y = -2x + 3z + 15 \\ & -4x - 3z = -6 \end{aligned}$$

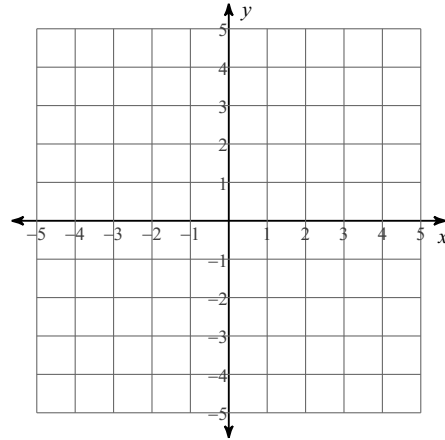
$$\begin{aligned} 4) \quad & -y = 2 \\ & 6x - 2y - z = 2 \\ & y = x + z - 4 \end{aligned}$$

**Solve each system by graphing.**

5)  $2x - 3y = -6$   
 $2x - y = 2$

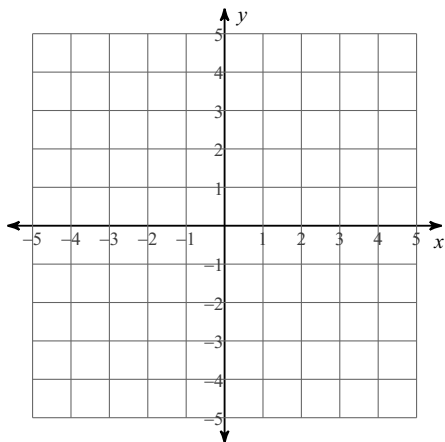


6)  $x = -4$   
 $7x + 4y = -16$

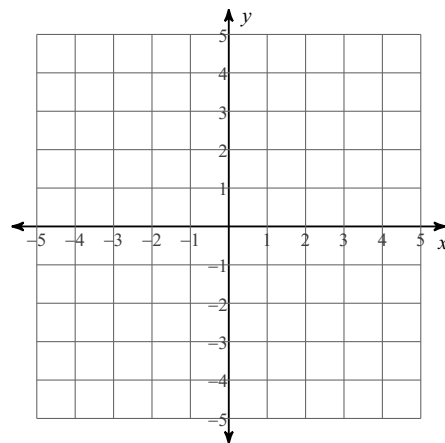


**Sketch the solution to each system of inequalities.**

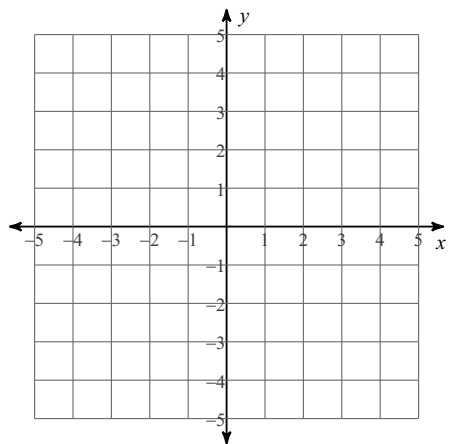
7)  $y < -2x + 1$   
 $y \leq -\frac{1}{2}x - 2$



8)  $y < x + 3$   
 $y \geq -5x - 3$



9)  $x - y \geq -2$   
 $5x - y \geq 2$



10)  $4x - y \leq -2$   
 $x - y > 1$

