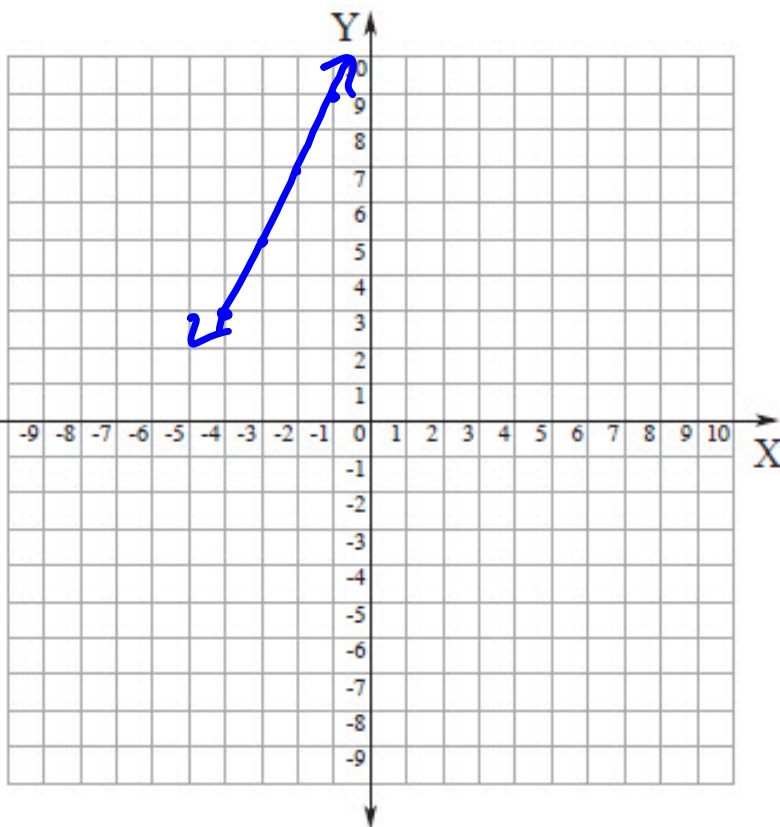


Warm up

$$1) \underline{y - 3} = \underline{2}(\underline{x + 4})$$

$$Pt = (-4, 3)$$

$$M = \frac{2}{1}$$



## **3-3: Solving Inequalities**

**Objectives: I can solve a multi-step inequality**

## Vocab

$3 < 5$  Greater than or less than  $5 > 3$

$4 \leq 4$  Greater than or less than + equal to  $\geq$

## REVIEW:

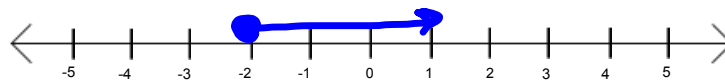
 $\circ$   $<$   $>$  $\bullet$   $\leq$   $\geq$ 

Graph the inequalities on a number line

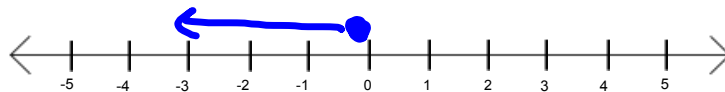
$x < 5$



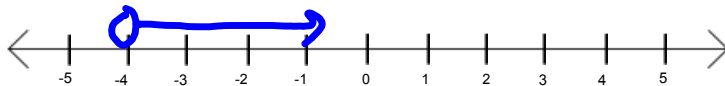
$x \geq -2$



$x \leq 0$



$x > -4$



$$\begin{array}{r|l} \text{Solve } k - 17 = -3 & \\ +17 & +17 \\ \hline k = & 14 \end{array}$$

Solve  $k - 17 < -3$

$$\begin{array}{r|l} +17 & +17 \\ \hline k & < 14 \end{array}$$

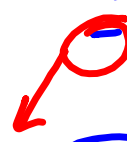
$$\frac{n}{15} < -14$$

$$n < -210$$

$$\begin{array}{r} 8 + m \leq -1 \\ -8 \quad \quad -8 \\ \hline m \leq -9 \end{array}$$



$$\frac{-17}{-17} \geq \frac{-17r}{-17}$$
$$1 \leq r$$

$$\begin{array}{r} -122 \leq 4 - 7p \\ \underline{-4 \quad -4} \\ -126 \leq -7p \\ \underline{-7 \quad -7} \\ 18 \geq p \end{array}$$


$$\begin{array}{r} -3 > \frac{b}{4} - 5 \\ +5 \quad +5 \end{array}$$

$$4 \cdot 2 > \frac{b}{\cancel{4}} \cdot \cancel{4}$$

$$8 > b$$

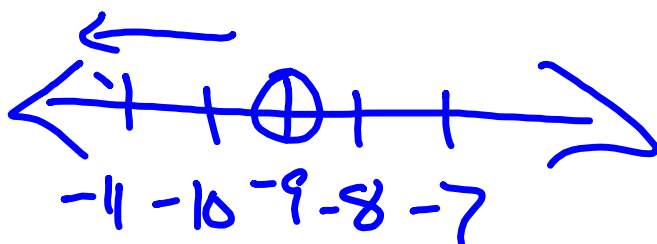
$$\exists \cdot 5 \geq \frac{x-1}{3} \cdot \exists$$

$$15 \geq x-1 \quad < > \circ$$

+1                    +1

$$16 \geq x \quad \leq \geq \bullet$$

$$-9 > n \Rightarrow n < -9$$



$$\begin{array}{r} -4 - 3P \geq 26 \\ +4 \qquad +4 \end{array}$$

$$\begin{array}{r} -30 > 3P \\ \hline -10 > P \end{array}$$

$$\begin{array}{r} -3P \geq 30 \\ +3P \qquad +3P \\ 0 \geq 30 + 3P \end{array}$$

$$\begin{array}{r} -3P \geq 30 \\ \hline -3 \qquad -3 \\ P \leq -10 \end{array}$$