

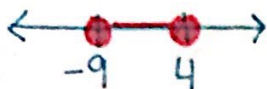
## Day 7 – Solving Compound Inequalities – Practice

Directions: Solve and graph each compound inequality.

$$1. -17 \leq x - 8 \leq -4$$

$$\begin{array}{ccc} +8 & +8 & +8 \\ \hline \end{array}$$

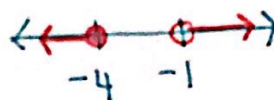
$$\boxed{-9 \leq x \leq 4}$$



$$2. -3n \geq 12 \text{ OR } n + 2 > 1$$

$$\div \text{ by } \begin{array}{ccc} -3 & -3 & -2 \\ \hline \end{array}$$

$$\boxed{n \leq -4 \text{ OR } n > -1}$$



$$3. 6x + 5 > 23 \text{ OR } -3x + 6 \geq 27$$

$$\begin{array}{ccc} -5 & -5 & -6 \\ \hline \end{array}$$

$$\begin{array}{ccc} 6x & > 18 & -3x \geq 21 \\ \hline \end{array}$$

$$\begin{array}{ccc} \div \text{ by } - & & \div \text{ by } - \\ \hline \end{array}$$

$$\boxed{x > 3 \text{ OR } x \leq -7}$$



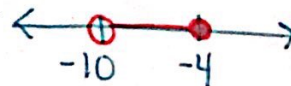
$$4. 31 \leq 7 - 6x < 67$$

$$\begin{array}{ccc} -7 & -7 & -7 \\ \hline \end{array}$$

$$\begin{array}{ccc} 24 & \leq 7 - 6x < 60 \\ \hline \end{array}$$

$$\begin{array}{ccc} \div \text{ by } -6 & & \div \text{ by } -6 \\ \hline \end{array}$$

$$-4 \geq x > -10 \rightarrow \boxed{-10 < x \leq -4}$$



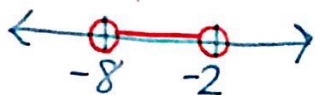
$$5. -39 < 5x + 1 < -9$$

$$\begin{array}{ccc} -1 & -1 & -1 \\ \hline \end{array}$$

$$\begin{array}{ccc} -40 & < 5x < -10 \\ \hline \end{array}$$

$$\begin{array}{ccc} \div \text{ by } 5 & & \div \text{ by } 5 \\ \hline \end{array}$$

$$\boxed{-8 < x < -2}$$



$$6. 7x + 1 \geq 22 \text{ OR } 8x - 6 < -6$$

$$\begin{array}{ccc} -1 & -1 & +6 \\ \hline \end{array}$$

$$\begin{array}{ccc} 7x \geq 21 & & 8x < 0 \\ \hline \end{array}$$

$$\begin{array}{ccc} \div \text{ by } 7 & & \div \text{ by } 8 \\ \hline \end{array}$$

$$\boxed{x \geq 3 \text{ OR } x < 0}$$



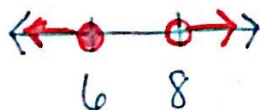
$$7. -6 - 5x < -46 \text{ OR } 2x - 4 \leq 8$$

$$\begin{array}{ccc} +6 & +6 & +4 \\ \hline \end{array}$$

$$\begin{array}{ccc} -5x & < -40 & 2x \leq 12 \\ \hline \end{array}$$

$$\begin{array}{ccc} \div \text{ by } -5 & & \div \text{ by } 2 \\ \hline \end{array}$$

$$\boxed{x > 8 \text{ OR } x \leq 6}$$



$$8. -11 \leq 3x - 5 \leq 22$$

$$\begin{array}{ccc} +5 & +5 & +5 \\ \hline \end{array}$$

$$\begin{array}{ccc} -6 & \leq 3x \leq 27 \\ \hline \end{array}$$

$$\begin{array}{ccc} \div \text{ by } 3 & & \div \text{ by } 3 \\ \hline \end{array}$$

$$\boxed{-2 \leq x \leq 9}$$

