

Solving Inequalities

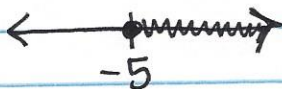
← Less than < Greater than >

○ - >, <

● - ≥, ≤

$$\frac{-2x}{-2} \leq \frac{10}{-2}$$

$$x \geq -5$$



$$3 - (x - 5) > 7$$

$$3 - x + 5 > 7$$

$$8 - x > 7$$

$$-x > -1$$

$$x < 1$$



Compound Inequalities

And <, ≤

- Intersection



OR >, ≥

- Union



$$3 < 2m - 1 < 9$$

$$\frac{4}{2} < \frac{2m}{2} < \frac{10}{2}$$

$$2 < m < 5$$



$$2p + 9 > 8p - 9, \geq 9 - p$$

$$2p + 9 > 8p - 9 \text{ and } 8p - 9 \geq 9 - p$$

$$-6p + 9 > -9$$

$$-6p > -18$$

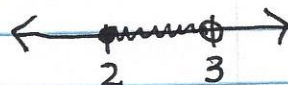
$$p < 3$$

$$9p - 9 \geq 9$$

$$9p \geq 18$$

$$p \geq 2$$

$$2 \leq p < 3$$



$$6n + 6 < -18 \text{ OR } 9n + 8 > -10$$

$$6n < -24$$

$$\frac{9n}{9} > \frac{-18}{9}$$

$$n < -4 \text{ OR } n > -2$$

