

Oct 27th

3-2 + 3-3 Solving

Inequalities

①

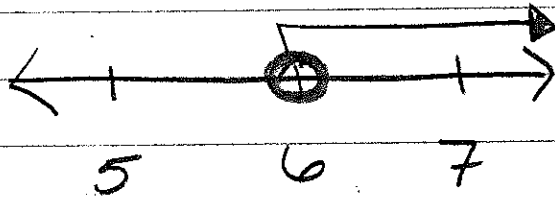
$$\frac{x}{5} > \frac{30}{5}$$

$$\checkmark 5(10) > 30$$

$$50 > 30$$

True

$$x > 6$$



②

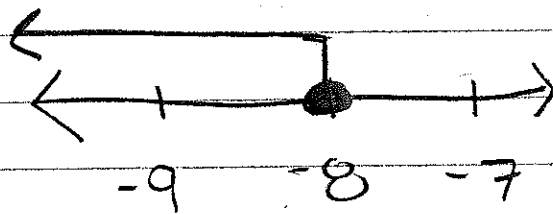
$$y - 11 \leq -19$$

$$\checkmark -10 - 11 \leq -19$$

$$-21 \leq -19$$

True

$$y \leq -8$$



17th

$$\frac{-4y}{-4} < \frac{20}{-4}$$

$$\checkmark -4(-6) < 20$$

$$y < -5$$

$$24 < 20$$

False

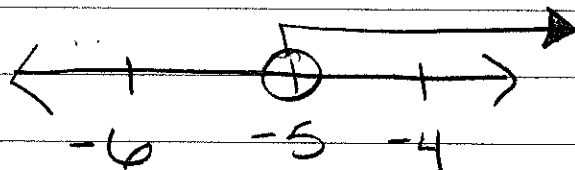
$$\frac{-4y}{-4} < \frac{20}{-4}$$

$$\checkmark -4(0) < 20$$

$$0 < 20$$

True

$$y > -5$$



* when multiplying or dividing by a negative the inequality symbol flips *

- when checking your solution ALWAYS evaluate in the original inequality

$$\textcircled{1} \frac{2}{3}x \leq 4 \left(\frac{3}{2} \right)$$

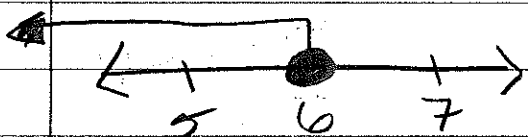
$$x \leq \frac{12}{2}$$

$$x \leq 6$$

$$\checkmark \frac{2}{3}(0) \leq 4$$

$$0 \leq 4$$

True



$$\textcircled{2} -8 > x - 7$$

$$+7$$

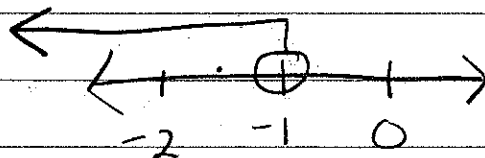
$$+7$$

$$-1 > x \text{ or}$$

$$x < -1$$

$$\checkmark -8 > -2 - 7$$

$$-8 > -9 \text{ True}$$



$$\textcircled{3} -2x + 8 < 16$$

$$\frac{-8}{-2} \quad \frac{-8}{-2}$$

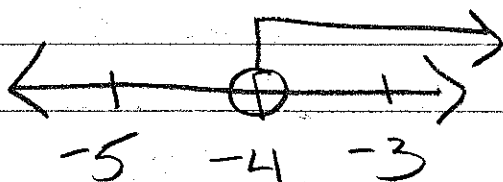
$$\frac{-2x}{-2} < \frac{8}{-2}$$

$$x > -4$$

$$\checkmark -2(0) + 8 < 16$$

$$0 + 8 < 16$$

$$\text{True } 8 < 16$$



$$\textcircled{4} -10 \geq \frac{x+5}{4} \left(\frac{4}{1} \right)$$

$$\frac{-40}{-5} \geq \frac{x+5}{1}$$

$$-45 \geq x$$

$$x \leq -45$$

$$\checkmark -10 \geq \frac{-45+5}{4}$$

$$-10 \geq \frac{-40}{4}$$

$$-10 \geq -10$$

True