S-A1 Algebra 1 Session 10 7/11

1.) $x \geq 3$

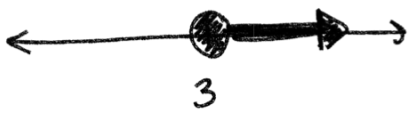
$\geq$

$>\ <$

$\circ$

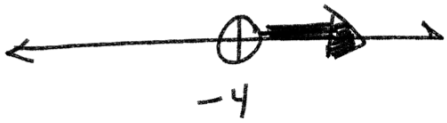
$\geq\ \leq$

$\bullet$



$\geqq \rightarrow \geq$

2.) $-4 < x$

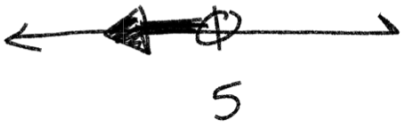


3.) $8 \geq x$

4.) $x < 5$

$>\ <$

$\circ$



$\geq\ \leq$

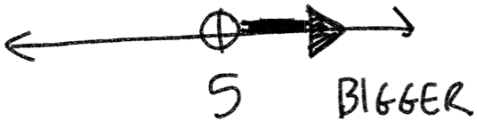
$\bullet$

$x + 4 > 9$

$-4 \quad -4$

$x > 5$

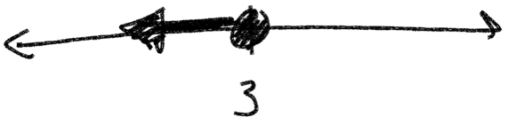
BIGGER



$-9 * x$

$\frac{-9x}{-9} \geq \frac{-27}{-9}$ flip

$x \leq 3$



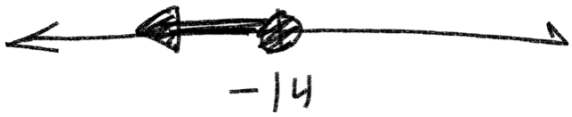
1.) $\frac{5x}{5} < \frac{35}{5}$

$x < 7$

2.) $-2\left(\frac{x}{-2}\right) \geq (7)(-2)$

flip!!

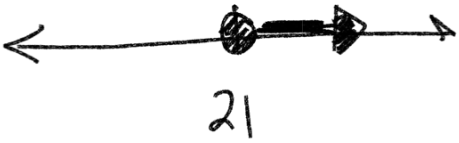
$x \leq -14$



3.) $18 \leq x - 3$

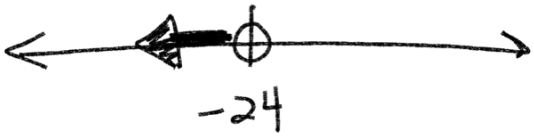
$+3 \qquad +3$

$21 \leq x$



4.) $4\left(\frac{x}{4}\right) < (-6)4$

$x < -24$



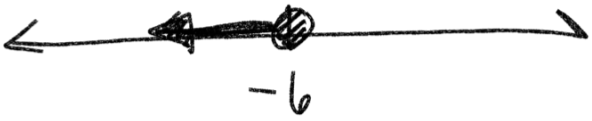
$-21 \geq 4x \underbrace{-2+5}$

$-21 \geq 4x + 3$

$-3 \qquad -3$

$\frac{-24}{4} \geq \frac{4x}{4}$

$-6 \geq x$



$-21 = 4x \underbrace{-2+5}$

$-21 = 4x + 3$

$-3 \qquad -3$

$\frac{-24}{4} = \frac{4x}{4}$

$\boxed{-6 = x}$

$7x + 5 - 3x < -5$ Solve and graph

$7x + (-3x)$

$4x + 5 < -5$

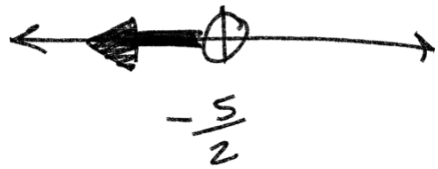
$-5 \quad -5$

$\longrightarrow \frac{4x}{4} < \frac{-10}{4}$ No flip

$x < \frac{-10}{4}$

$\frac{-10 \div 2}{4 \div 2} \quad -\frac{5}{2}$

$x < \frac{-5}{2}$



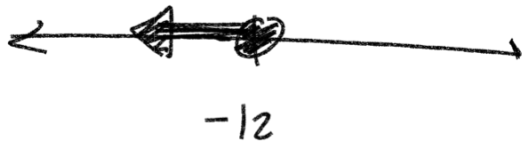
$-4 - 3x \geq -2x + 8$

$+3x \quad +3x$

$-4 \geq x + 8$

$-8 \quad -8$

$-12 \geq x$



$$8 - 5x < 12 + 7x$$
$$-7x \qquad\qquad -7x$$

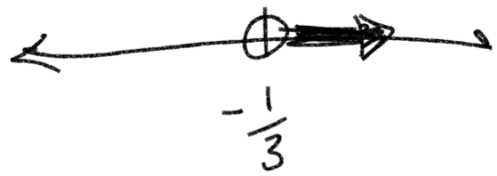
$$8 - 12x < 12$$
$$-8 \qquad\qquad -8$$

$$\frac{-12x}{-12} < \frac{4}{-12}$$

$$x > -\frac{4}{12}$$

$$\frac{-4 \div 4}{12 \div 4} \qquad -\frac{1}{3}$$

$$x > -\frac{1}{3}$$



$$-3(4x + 3) \geq -105$$

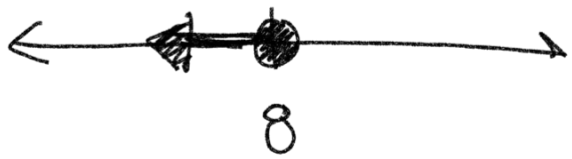
$$-12x - 9 \geq -105$$
$$+9 \qquad +9$$

$$\frac{-12x}{-12} \geq \frac{-96}{-12}$$

$$x \leq 8$$

$$\frac{-3(4x + 3)}{-3} \geq \frac{-105}{-3}$$

$$4x + 3 \leq 35$$



$$8(5-2x) < 4x + 4$$

$$40 - 16x < 4x + 4$$

$$+16x \quad +16x$$

$$40 < 20x + 4$$

$$-4 \quad -4$$

$$\frac{36}{20} < \frac{20x}{20}$$

$$\frac{36 \div 4}{20 \div 4} < x$$

$$\frac{9}{5} < x$$