M-A1 Algebra 1 Week 15 1/16

1.) $6 - 5r - 8 < -22$

$-5r - 2 < -22$

$+2 \quad +2$

$\frac{-5r}{-5} < \frac{-20}{-5}$

$\boxed{r > 4}$

4

2.) $4 - 4r \geq -10 - 6r$

$+6r \quad +6r$

$4 + 2r \geq -10$

$-4 \quad -4$

$\frac{2r}{2} \geq \frac{-14}{2}$

$\boxed{r \geq -7}$

-7

3.) $-7x + 5 - 3x \leq -5$

$-10x + 5 \leq -5$

$-5 \quad -5$

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

$\boxed{x \geq 1}$

1

4.) $-1 + 6n > -11 + n$

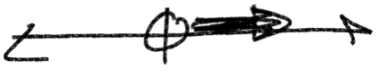
$+1 \quad +1$

$6n > -10 + n$

$-n \quad -n$

$\frac{5n}{5} > \frac{-10}{5}$

$\boxed{n > -2}$



-2

$8(1-5n) \leq -112$

$8 - 40n \leq -112$

$-8 \qquad -8$

$-40n \leq -120$

$\frac{-40n}{-40} \leq \frac{-120}{-40}$ ← flip!

$\boxed{n \geq 3}$

3

$2n - 29 \leq -(6n+8) + 5n$

$2n - 29 \leq -6n - 8 + 5n$

$2n - 29 \leq -n - 8$

$+n \qquad +n$

$3n - 29 \leq -8$

$+29 \qquad +29$

$\frac{3n}{3} \leq \frac{21}{3}$

$n \leq 7$

7

Compound Inequalities

$b + 9 < 3$ **or** $3\left(\frac{b}{3}\right) > (0)^3$ — divergent

$-9 \qquad -9$

$b < -6$

$b > 0$

−6 0

$m - 9 \leq -5$

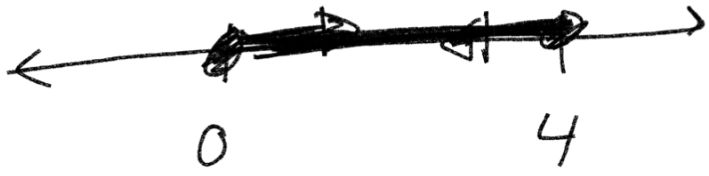
$+9 \quad +9$

$\boxed{m \leq 4}$

and $\left|\left(\frac{m}{7}\right)\right| \geq (0)7$

$m \geq 0$

convergent



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

$+2 \quad +2 \quad +2$

$8 \geq x - 2$

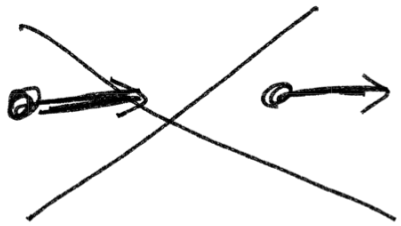
$x - 2 \geq -4$

$10 \geq x \geq -2$

$10 \geq x$

$x \leq 10$

$x \geq -2$



1.) $x - 7 \leq -3$ and $\frac{4x}{4} \geq \frac{8}{4}$

$+7 \quad +7$

$x \leq 4$ $\quad x \geq 2$

2.) $x + 8 < 5$ or $5\left(\frac{x}{5}\right) > (2)5$

$-8 \quad -8$

$x < -3$ $\quad x > 10$

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

$-2 \quad -2 \quad -2$

$\frac{6}{2} \geq \frac{2x}{2} \geq -\frac{6}{2}$

$3 \geq x \geq -3$