Unit 2
Day 13

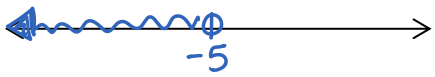
key

Inequality and Interval Notation Homework

1) $-5x > 25$

$\frac{-5x}{-5} > \frac{25}{-5}$

$x < -5$

Graph: 

Inequality: $x < -5$

Interval: $(-\infty, -5)$

2) $12x \leq 36$

$\frac{12x}{12} \leq \frac{36}{12}$

$x \leq 3$

Graph: 

Inequality: $x \leq 3$

Interval: $(-\infty, 3]$

3) $5x - 5 < 2x + 4$

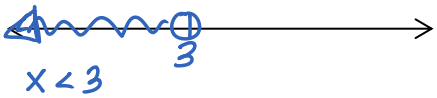
$-2x \quad -2x$

$3x - 5 < 4$

$+5 \quad +5$

$\frac{3x}{3} < \frac{9}{3}$

$x < 3$

Graph: 

Inequality: $x < 3$

Interval: $(-\infty, 3)$

4) $3(x - 3) \geq 2x + 5$

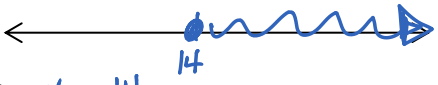
$3x - 9 \geq 2x + 5$

$-2x \quad -2x$

$x - 9 \geq 5$

$+9 \quad +9$

$x \geq 14$

Graph: 

Inequality: $x \geq 14$

Interval: $[14, \infty)$

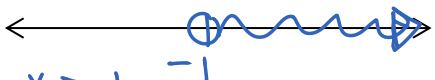
5) $-6x - 5 - 5x < 6$

$-11x - 5 < 6$

$+5 \quad +5$

$\frac{-11x}{-11} < \frac{11}{-11}$ ← flip sign

$x > -1$

Graph: 

Inequality: $x > -1$

Interval: $(-1, \infty)$

6) $-4x - 12 < 2(x + 3)$

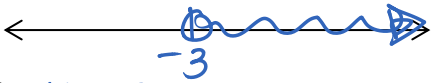
$-4x < 12 + 2x + 6$

$-4x < 18 + 2x$

$-2x \quad -2x$

$\frac{-6x}{-6} < \frac{18}{-6}$ → flip!

$x > -3$

Graph: 

Inequality: $x > -3$

Interval: $(-3, \infty)$