

$$2(\underline{u} + 3v) = w - 5\underline{u}$$

$u =$

$$2u + 6v = w - 5u$$

$$+5u \qquad \qquad \qquad +5u$$

$$7u + 6v = w$$

$$-6v \qquad -6v$$

$$u = \frac{w - 6v}{7}$$

$$\frac{7u}{7} = \frac{w - 6v}{7}$$

$$k(y + 3z) = 4(y - 5)$$

$y =$

$$ky + 3kz = 4y - 20$$

$$-4y \qquad \qquad \qquad -4y$$

$$ky - 4y + 3kz = -20$$

$$-3kz \qquad -3kz$$

$$ky - 4y = -3kz - 20$$

$$\frac{y(k-4)}{k-4} = \frac{-3kz - 20}{k-4}$$

$$y = \frac{-3kz - 20}{k-4}$$

$$12 \left[\frac{2}{3} f + \frac{5}{12} g = 1 - fg \right]$$

$$\frac{24}{3} f + \frac{60}{12} g = 12 - 12fg$$

$$\begin{array}{r} 8f + 5g = 12 - 12fg \\ +12fg \qquad \qquad +12fg \end{array}$$

$$\begin{array}{r} 12fg + 8f + 5g = 12 \\ \qquad \qquad \qquad -5g \qquad \qquad -5g \end{array}$$

$$\frac{a-3y}{b} \times \frac{8a}{(3)}$$

$$3(a-3y) = (8a)(b)$$

$$\begin{array}{r} 3a - 9y = 8ab \\ -3a \qquad \qquad -3a \end{array}$$

$$-9y = 8ab - 3a$$

$$\frac{-9y}{8b-3} = \frac{a(8b-3)}{8b-3}$$

$$a = \frac{-9y}{8b-3}$$

$$\begin{array}{l} f = \\ 12fg + 8f = 12 - 5g \\ f(12g + 8) = 12 - 5g \\ \frac{12g + 8}{12g + 8} \qquad \frac{12 - 5g}{12g + 8} \end{array}$$

$$f = \frac{12 - 5g}{12g + 8}$$

$$a = \frac{3}{8} \times \frac{x}{24}$$

$$\frac{3}{8} \times \frac{x}{24}$$

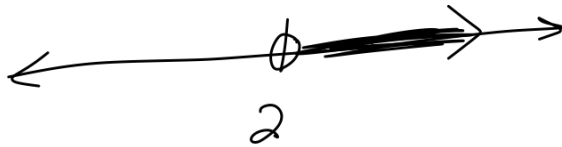
1-4 Solving Inequalities

$$\boxed{x} > 2$$

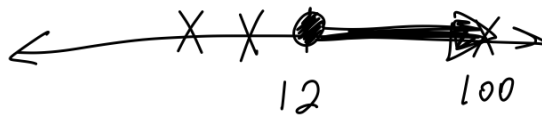
variable on left → follow the norm

">" greater than

"<" less than



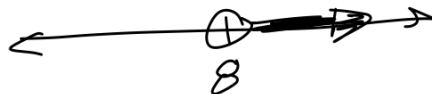
$$x \geq 12$$



$$x \leq 3$$



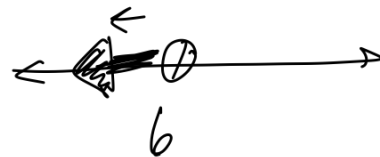
$$x > 8$$



← →
-3 ≥ \boxed{x} right
opposite



6 > \boxed{x} right
opposite



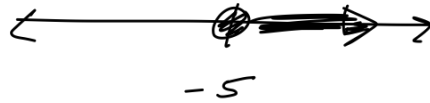
6 is great than
x

$$1.) \quad 16 - 4t \leq 36$$

divide by
negative
inequality

$$\frac{-4t}{-4} \leq \frac{20}{-4}$$

$$t \geq -5$$



$$3.) \quad 7 + 13(x+1) \leq 3x$$

$$7 + 13x + 13 \leq 3x$$

$$13x + 20 \leq 3x$$

$$\frac{20}{-10} \leq \frac{-10x}{-10}$$

$$-2 \geq x$$



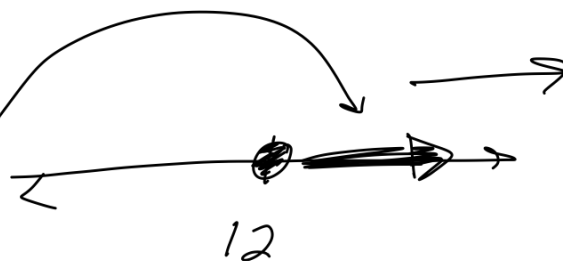
$$7.) \quad 8(x-5) \geq 56$$

$$8x - 40 \geq 56$$

$$\frac{8x}{8} \geq \frac{96}{8}$$

$$x \geq 12$$

$$20 \leq -10x$$



"x is greater than 12"

Compound inequality

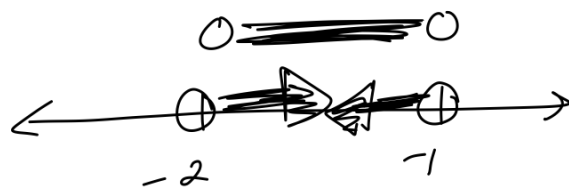
$$15.) \quad 4 < 1 - 3x < 7$$

$$\frac{3}{-3} < \frac{-3x}{-3} < \frac{6}{-3}$$

$$-1 > x > -2$$

$$-1 > x > -2$$

$$-1 > x \quad \boxed{x} > -2$$



11.) $\frac{16x}{16} \leq \frac{32}{16}$ ~~or~~ $\frac{-5x}{-5} < \frac{-40}{-5}$ flip $x > 8$

$x \leq 2$ $x > 8$

← divergent →

17.) $\frac{3x-5}{+5} \geq \frac{-8}{+5}$ and $\frac{3x-5}{+5} \leq \frac{1}{+5}$ $\frac{3x}{3} \leq \frac{6}{3}$ $x \leq 2$

$\frac{3x}{3} \geq \frac{-3}{3}$ $x \geq -1$ $0 \leq 2$

← convergent →

1-5 Absolute Value Equations and Inequalities

1.) $|2x+7| = 5$

$|5| = 5$
 $|-5| = 5$

5 -5 $2x+7=5$ $2x+7=-5$

$|2(-1)+7|$ -7 -7 -7 -7

$|2+7| = |5| = 5$ $\frac{2x}{2} = \frac{-2}{2}$ $\frac{2x}{2} = \frac{-12}{2}$

$|2(-6)+7|$

$|-12+7| = |-5| = 5$

$x = -1$

$x = -6$

HW
1-4 evens

Quiz 2
due today

Quiz 3
due Sep 24th

Quiz 4
due Oct 1st

HW
1-4 evens
Online HW (sat)