

W-A2 Algebra 2 Week 7

1.)

a) $8 \xrightarrow{\text{opposite}} -8 \xrightarrow{\text{inverse (reciprocal)}} \left(-\frac{1}{8}\right)$

$\left(-\frac{8}{1}\right)$

c) $-7 \xrightarrow{\text{change sign}} 7 \xrightarrow{\text{inverse (reciprocal)}} \left(\frac{1}{7}\right)$

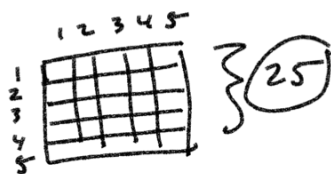
$\left(\frac{7}{1}\right)$

Reciprocal (Inverse)

$\frac{5}{7} \rightarrow \frac{7}{5}$

Simplify

$|7-10| = |-3| = \boxed{3}$



$-|-8| = -(8) = \boxed{-8}$

6.779 rational
 terminal decimal π irrational

0.678678678... rational
 repeating decimal $\sqrt{25}$ rational perfect square

8 rational
 whole, counting, integer

0 rational
 integer, whole

-7 rational, integer

$\sqrt{90}$ irrational

0.136571... irrational

0.4444... rational
 repeating

$\left(\frac{4}{9}\right)$

$$6a - 3(a + 4)$$

$$6a - 3a - 12$$

$$\boxed{3a - 12}$$

$$a(a - c) + c(c - a)$$

$$a^2 - ac + c^2 + ac$$

$$\boxed{a^2 - 2ac + c^2}$$

$$2a = a + a$$

$$7(g + h) - (g - h) \quad g = 4 \quad h = -5$$

$$7(4 + (-5)) - (4 - (-5))$$

$$7(-1) - (9) = -7 - 9 = \boxed{-16}$$

↓
PEMDAS

$$8r^2 + 4(r - s) - 3s \quad r = 3 \quad s = -2$$

$$8(3)^2 + 4(3 - (-2)) - 3(-2)$$

$$8(3)^2 + 4(3 + 2) - 3(-2)$$

$$8(3)^2 + 4(5) - 3(-2)$$

$$8(9) + 4(5) - 3(-2)$$

$$72 + 4(5) - 3(-2)$$

$$72 + 20 - 3(-2)$$

$$72 + 20 + 6$$

$$\boxed{98}$$

$$8(3)(3)$$
~~$$(24)(24)$$~~

$$3 \left(\frac{x+2y}{3} + 5y \right) = (4x)^3 \quad y =$$

$$x + 2y + 15y = 12x$$

$$\begin{array}{r} x + 17y = 12x \\ -x \end{array}$$

$$\frac{17y}{17} = \frac{11x}{17}$$

$$y = \frac{11x}{17}$$

$$z \left(\frac{x+y}{z} \right) = \left(\frac{3}{7} \right) z$$

$x =$

$$x = \frac{3z}{7} - y$$

$$\begin{array}{r} x + y = \frac{3z}{7} \\ -y \end{array}$$

$$\frac{x+y}{z} \neq \frac{3}{7}$$

$$-6(2-b) + 3b \geq 0$$

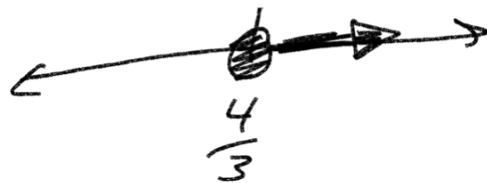
$$-12 + 6b + 3b \geq 0$$

$$\begin{array}{r} -12 + 9b \geq 0 \\ +12 \qquad +12 \end{array}$$

$$\frac{9b}{9} \geq \frac{12}{9}$$

$$b \geq \frac{12}{9}$$

$$b \geq \frac{4}{3}$$

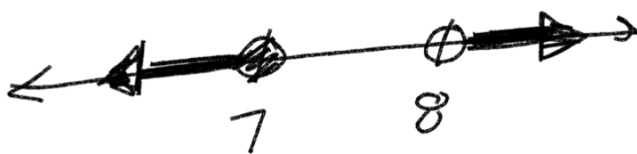


$$\frac{6x}{6} \leq \frac{42}{6} \quad \text{or} \quad \frac{-3x}{-3} < \frac{-24}{-3}$$

$$x \leq 7 \quad \text{diverges} \quad x > 8$$

flip when you
mult/div by a
negative

and \rightarrow converges



$$|x+4| = 9$$

$$|9| = 9$$

$$|-9| = 9$$

$$x+4=9$$

$$\begin{array}{r} -4 \\ -4 \end{array}$$

$$x=5$$

$$x+4=-9$$

$$\begin{array}{r} -4 \\ -4 \end{array}$$

$$x=-13$$

$$|4x-12| = 8x$$

$$8x$$

opposite

$$4x-12 = 8x$$

$$\begin{array}{r} -4x \\ -4x \end{array}$$

$$4x-12 = -8x$$

$$\begin{array}{r} -4x \\ -4x \end{array}$$

$$8x$$

$$8(-3)$$

$$=-24$$

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

$$\cancel{-3 = x}$$

$$\frac{-12}{-12} = \frac{-12x}{-12}$$

$$1 = x$$

$$8(1) = 8$$

$$\overbrace{|x+3|}^u + \begin{matrix} +8 \\ -8 \end{matrix} = \begin{matrix} 5 \\ -8 \end{matrix}$$

$$|x+3| = \textcircled{-3}$$

$$|3| \neq -3$$

NO SOLUTION!

$$\frac{-4|2x+5|}{-4} = \frac{-3}{-4}$$

$$|2x+5| = \textcircled{\frac{3}{4}}$$

HAS SOLUTIONS!

$$|3x-6| \leq 9$$

flip inequality
opposite

$$\begin{matrix} 3x-6 \leq 9 \\ +6 \quad +6 \end{matrix}$$

$$\frac{3x}{3} \leq \frac{15}{3}$$

$$x \leq 5$$

$$\begin{matrix} 3x-6 \geq -9 \\ +6 \quad +6 \end{matrix}$$

$$\frac{3x}{3} \geq \frac{-3}{3}$$

$$x \geq -1$$



$$|x-3| + 8 \leq 3$$

$$\begin{array}{cc} -8 & -8 \end{array}$$

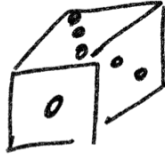
$$|x-3| \leq -5$$

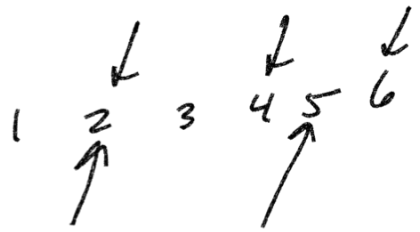
$$|x-3| \geq -5$$

No Solution

All real numbers

rn

P(even) $\frac{3}{6} = \frac{1}{2}$ 



P(2 or 5) = $\frac{2}{6} = \frac{1}{3}$

$\frac{1}{2}$ or 50%

Solomon went to taco bell

P(taco) $\frac{12}{30} = \frac{2}{5}$

12 soft tacos
8 burritos

P(taco or burrito)

+ $\frac{10}{30}$ gorditas
total

$\frac{20}{30} = \frac{2}{3}$

website
Quiz 5
due tonight

HW
Ch 1 Pre-Test
due Oct 29th

Quiz 6
due Oct 28th
classmarker -
Ch 1 Test
due Oct 29th