

opposite \rightarrow change the sign

1.)

a) 8

(-8)

c) -7

$-(-7) = (7)$

2.)

reciprocal or inverse

a) $(\frac{4}{1})$

flip

$(\frac{1}{4})$

c) $-\frac{1}{2}$

$\frac{-2}{1} = (-2)$

3.) Simplify

a) $|(7-10)| = |-3| = \boxed{3}$

c) $0.3|-4| = 0.3(4) = \boxed{1.2}$

$-|-3|$ $-|-3| = (3) = (-3)$

$(=)$ $(=)$

4.) a) 6.779 rational terminal decimal

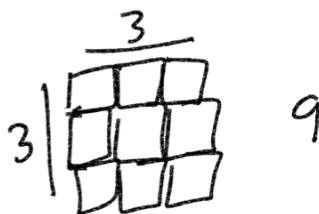
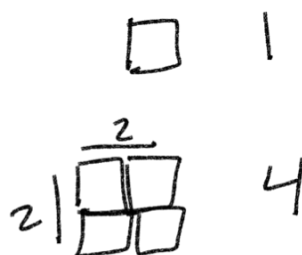
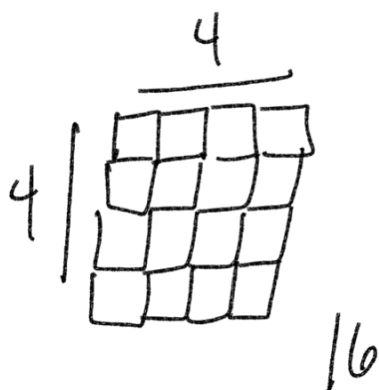
b) 0 rational, integer, whole

c) -3 rational, integer

d) $\sqrt{16}$ rational perfect square

Counting
whole
integer
terminal dec
repeating dec.
perfect square

rational \rightarrow put it into a fraction



5.) a) Simplify by combining like terms

$$6a - 4(a+1)$$

$$6a - 4a - 4$$

$$\boxed{2a - 4}$$

$$b.) c) \quad a(a-c) + c(c-a)$$

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

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

$$7.) \quad 7(g+h) - (g-h)$$

$$g=4 \quad h=-5$$

$$7(\underbrace{4+(-5)}) - (\underbrace{4-(-5)}) \quad 4+5$$

$$7(-1) - (9)$$

$$-7 + (-9)$$

$$-7 - 9 = \boxed{-16}$$

$$9.) \quad -n(3m+2) - 2m^2$$

$$m=3 \quad n=5$$

$$-5(\underbrace{3(3)+2}) - 2(3)^2$$

$$-5(9+2) - 2(3)^2$$

$$-5(11) - 2(3)^2$$

$$-5(11) - 2(9)$$

$$-55 - 18 = \boxed{-73}$$

$$11.) \quad \begin{array}{r} 5t - 3f = 2t \quad t = \\ -2t \qquad -2t \end{array}$$

$$\begin{array}{r} 3t - 3f = 0 \\ +3f \quad +3f \end{array}$$

$$\frac{3t}{3} = \frac{3f}{3}$$

$$\boxed{t = f}$$

$$12.) \quad \left(\frac{x + 2y}{3} + 5y \right) = (4x) \cdot 3 \quad y =$$

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

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

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

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

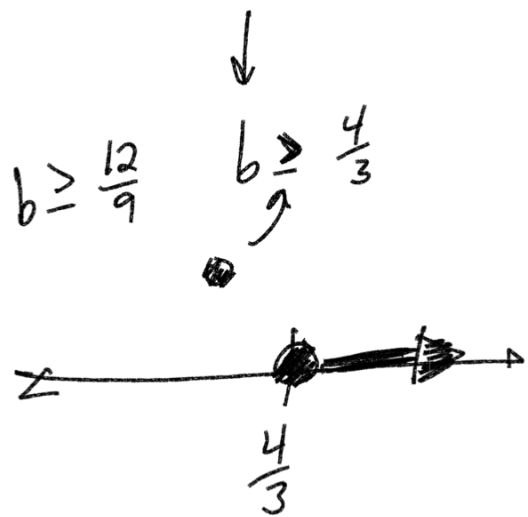
$$15.) \quad -6(2-b) + 3b \geq 0$$

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

$$-12 + 9b \geq 0$$

$$\begin{array}{r} +12 \qquad +12 \end{array}$$

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

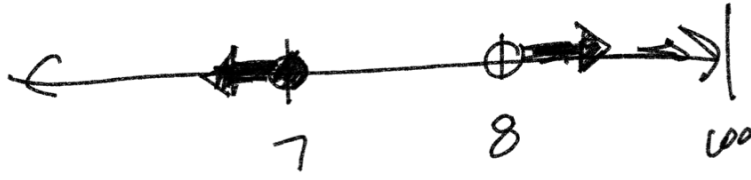


16.)

$$\frac{3x}{3} \leq \frac{21}{3} \quad \text{or} \quad \frac{-9x}{-9} < \frac{-72}{-9}$$

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

flip inequality
divergent
"and"



19.)

$$|3x - 5| = 10 + 2x$$

$$-(10 + 2x)$$

$$3x - 5 = -10 - 2x$$

$$3x = -5 - 2x$$

$$\frac{5x}{5} = \frac{-5}{5}$$

$$x = -1$$

$$3x - 5 = 10 + 2x$$

$$3x = 15 + 2x$$

$$x = 15$$

$$10 + 2(-1) = 10 - 2 = 8$$

$$10 + 2(15) = 10 + 30 = 40$$

21.)

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

$$-|4x - 12| = -2$$

$$4x - 12 = 8x$$

$$-12 = 4x$$

$$x = -3$$

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

$$-12 = -12x$$

$$x = 1$$

$$8(-3) = -24$$

$$8(1) = 8$$

$$23.) \quad |x-9| - 7 \leq -4$$

$$\quad \quad \quad +7 \quad \quad +7$$

$|x-9| \geq -4$
all solutions

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

flip
↓

$$x-9 \leq 3$$

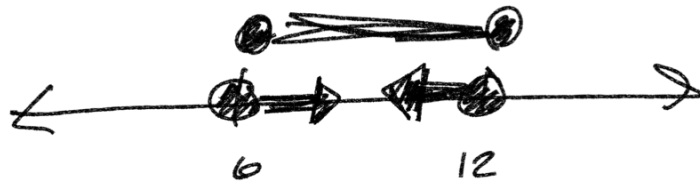
$$+9 \quad +9$$

$$x \leq 12$$

$$x-9 \geq -3$$

$$+9 \quad +9 \quad \text{change sign}$$

$$x \geq 6$$



25.)

a)

$$\frac{10 \div 2}{24 \div 2} = \boxed{\frac{5}{12}}$$

c)

$$\frac{24 - (10 + 4 + 4)}{24} = \frac{24 - 18}{24} = \frac{6 \div 6}{24 \div 6} = \boxed{\frac{1}{4}}$$

Probability

Ch 1 Test due Oct 8th HW
 Quiz 4 due tonight online HW (Sat)
 Quiz 5 due Oct 8th no Quiz
 Pre-Test



