

W-A2 Algebra 2 Week 3

opposite and reciprocal

$$\frac{3}{4} \rightarrow \frac{-3}{4} \longrightarrow \frac{-4}{3}$$

$$|20 - 24| = |-4| = \textcircled{4}$$

$$-|8| = -8 \quad -|-6| = -(6) = \textcircled{-6}$$

- 7 rational counting integers whole
- 0.35 rational terminal decimal
- 3 rational integer
- 0.678678678... rational repeating decimal
- 0.134133132... irrational
- 0.7777... rational repeating decimal

- 0 rational whole integer
- $\sqrt{81}$ rational perfect square
- $\sqrt{20}$ irrational
- 0.14783 rational terminal
- $\frac{4}{3}$ rational fraction

$$5y^2 + y + 1 \quad y = 4$$

$$5(4)^2 + 4 + 1$$

$$5(16) + 4 + 1$$

$$80 + 4 + 1 = \boxed{85}$$

$$k + 2 - 4k - 1 \quad k = -3$$

$$(-3) + 2 - 4(-3) - 1$$

PEMDAS

$$(-3) + 2 + 12 - 1$$

$$-1 + 12 - 1$$

$$+11 - 1 = \boxed{10}$$

$$12b - 3 + b^2 \quad b = 9$$

$$12(9) - 3 + (9)^2$$

$$12(9) - 3 + 81$$

$$108 - 3 + 81$$

$$105 + 81 = \boxed{186}$$

$$5 + 0 = 5$$

Identity Property

$$8 * 6 = 6 * 8$$

Commutative Property
order does not matter

$$(7 + 6) + 5 = 7 + (6 + 5)$$


Associative Property
switch parenthesis

$$8 * 1 = 8 \quad \text{Identity Property}$$

$$\frac{4}{9} * \frac{9}{4} = 1 \quad \text{Inverse Property}$$

$$8 + (-8) = 0 \quad \text{Inverse Property}$$

$$\begin{array}{r} 3x + 5 = 14 \\ \longrightarrow \quad -5 \quad \quad -5 \\ \hline 3x = 9 \\ \frac{3x}{3} = \frac{9}{3} \quad \quad x = 3 \end{array}$$

Solve for 

$$\begin{array}{c} \triangle \quad \square + \bigcirc = \text{rectangle with horizontal lines} \\ - \bigcirc \quad \quad - \bigcirc \end{array}$$

$$\begin{array}{c} \triangle \quad \square = \text{rectangle with horizontal lines} - \bigcirc \\ \hline \triangle \quad \quad \triangle \end{array}$$

$$\begin{array}{c} \square = \frac{\text{rectangle with horizontal lines} - \bigcirc}{\triangle} \end{array}$$

1-3 Solving Equations

$$\left\{ \begin{array}{l} 3m - n = 2m + n \\ -2m \qquad -2m \\ \\ m - n = n \\ +n \qquad +n \\ \\ \boxed{m = 2n} \end{array} \right.$$

$m =$
combine like terms

$$\begin{array}{r} \underline{ax} + b = \underline{cx} + d \\ -cx \qquad -cx \end{array}$$

$x =$

$$\begin{array}{r} ax - cx + b = d \\ -b \qquad -b \\ \curvearrowleft \underline{ax} - \underline{cx} = d - b \end{array}$$

$$\boxed{x = \frac{d-b}{a-c}}$$

$$\frac{x(a-c)}{a-c} = \frac{d-b}{a-c}$$

$x =$

$$\begin{array}{r} \curvearrowleft \underline{a(x-3)} = \underline{b(x+2)} \\ ax - 3a = bx + 2b \\ -bx \qquad -bx \end{array}$$

$$\begin{array}{r} ax - bx = 3a + 2b \\ \underline{x(a-b)} = \underline{3a + 2b} \\ a-b \qquad a-b \end{array}$$

$$\begin{array}{r} ax - bx - 3a = 2b \\ +3a \qquad +3a \end{array}$$

$$\boxed{x = \frac{3a + 2b}{a-b}}$$

$$2 \left(\frac{1}{2}r + 3s = 1 \right) \quad r =$$

$$\frac{2}{2}r + 6s = 2$$

$$r + 6s = 2$$
$$\quad -6s \quad -6s$$

$$r = 2 - 6s$$

$$r = -6s + 2$$

$$21 \left(\frac{a}{3} + \frac{2b}{7} = \frac{a}{21} \right) \quad a =$$

$$\frac{21a}{3} + \frac{42b}{7} = \frac{21a}{21}$$

$$7a + 6b = a$$
$$-7a \quad -7a$$

$$a = -b$$

$$\frac{6b}{-6} = \frac{-6a}{-6}$$

$$\frac{x+k}{j} \neq \frac{3}{4}$$

x =

$$\frac{4}{5} \neq \frac{x}{10}$$

$$4(x+k) = 3j$$

$$(4)(10) = (5)(x)$$

$$\downarrow$$

$$4x + 4k = 3j$$

$$-4k \quad -4k$$

$$\frac{4(x+k)}{4} = \frac{3j}{4} \quad \frac{40}{5} = \frac{5x}{5}$$

$$x+k = \frac{3j}{4}$$

$$-k \quad -k$$

$$8 = x$$

$$\frac{4x}{4} = \frac{3j-4k}{4}$$

$$x = \frac{3j-4k}{4}$$

$$x = \frac{3j}{4} - k$$

x =

$$\frac{x+y}{8a} \neq \frac{3x-2}{6}$$

$$6(x+y) = 8a(3x-2)$$

$$6x+6y = 24ax-16a$$

$$-24ax \quad -24ax$$

$$x = \frac{-16a-6y}{6-24a}$$

$$6x-24ax+6y = -16a$$

$$-6y \quad -6y$$

$$6x-24ax = -16a-6y$$

$$x \frac{(6-24a)}{6-24a} = \frac{-16a-6y}{6-24a}$$

Quiz 2
due Sep 30 HW
Quiz 1
due tonight 1-3 evens
on HW #3 (Fri)
Quiz 3 (Fri)
due Oct 7th