

$\frac{4}{7}$ opposite $\frac{5}{8}$ reciprocal
 $\frac{4}{7}$ $-\frac{4}{7}$ $\left(\frac{5}{8}\right)$ $\frac{8}{5}$

$\frac{9}{11} \rightarrow -\frac{9}{11} \rightarrow \left(-\frac{11}{9}\right)$

Rational Number \rightarrow number that can be put into a fraction.

- | | | |
|-------------------|----------------------|---|
| { | - counting numbers | Irrational numbers
non-repeating decimals
non-perfect squares |
| | - whole numbers | |
| | - integers | |
| | - terminal decimals | |
| | - repeating decimals | |
| - perfect squares | | |

Commutative property home work work home
 numbers move $9 + 3 = 3 + 9$
 order does not matter

associative property $(8 * 3) * 7 = 8 * (3 * 7)$

identity property switching parenthesis
 mirror
 $7 * 1 = 7$

$6 + 0 = 6$

Inverse Property

$$8 + (-8) = 0$$

opposite

$$\frac{7}{8} * \frac{8}{7} = 1$$

reciprocal

Distributive

$$6(a + 3) = 6a + 18$$

simplify

$$4a - 5(a + 1) = \underbrace{4a - 5a - 5}$$

$$4a - 5a - 5(1)$$

$$\boxed{-a - 5}$$

$$xy \cdot xy = \underbrace{(xy)^2}_{x^2y^2}$$

$$x(x - y) + y(y - x)$$

$$x^2 \boxed{-xy} + y^2 \boxed{-xy}$$

1 2

$$\boxed{x^2 - 2xy + y^2}$$

$$a(3b + a^2)$$

$$a = 2 \quad b = 5$$

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

$$2(15 + 4) = 2(19) = \boxed{38}$$

$$30 + 8 = \boxed{38}$$

1-3 Solving Equations

Ideal Gas Law

$$\frac{PV}{nR} = \frac{nRT}{nR}$$

$$T = \frac{PV}{nR}$$

$$P = \frac{nRT}{V}$$

$$\frac{PV}{V} = \frac{nRT}{V}$$

$$\frac{E}{c^2} = \frac{mc^2}{c^2}$$

$$\frac{8}{4} = \frac{4m}{4}$$

$$m = \frac{8}{4} = 2$$

$$m = \frac{E}{c^2}$$

$$\frac{F}{AR} = \frac{ART}{AR}$$

$$\boxed{T = \frac{F}{AR}}$$

$$\begin{array}{r} 3m - n \\ +n \end{array} = \begin{array}{r} 2m + n \\ +n \end{array}$$

$$\begin{array}{r} 3m \\ -2m \end{array} = \begin{array}{r} 2m + 2n \\ -2m \end{array}$$

$$\boxed{m = 2n}$$

$$\underline{m} = 2n$$

$$ax + b = cx + d \quad x =$$

$$\begin{array}{r} \xrightarrow{x} \\ ax = cx + d - b \\ -cx \quad -cx \end{array}$$

$$\overbrace{ax} - \overbrace{cx} = d - b$$

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

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

all x's on one side

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

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

$$\begin{array}{r} r + 6s = 2 \\ -6s \quad -6s \end{array}$$

$$r = 2 - 6s$$

$$\begin{array}{r} \frac{1}{2}r + 3s = 1 \\ -3s \quad -3s \end{array}$$

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

$$r = 2 - 6s$$

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

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

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

$$\frac{3}{4} \times \frac{9}{x}$$

$$3x = 4 \cdot 9$$

$$\frac{3x}{3} = \frac{36}{3} \quad x = 12$$

$$\begin{array}{r} 4x + 4k = 3j \\ -4k \quad -4k \end{array}$$

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

4*x

$$\frac{V}{\frac{\pi}{3}r^2} = \frac{\left(\frac{\pi}{3}r^2\right)h}{\frac{\pi}{3}r^2}$$

$$h = \frac{V}{\frac{\pi}{3}r^2} = \frac{3V}{\pi r^2}$$

$$S = LW + WH + LH$$

$$W = \frac{S - LH}{L + H}$$

$$S - LH = LW + WH$$

$$\frac{S - LH}{L + H} = \frac{W(L + H)}{L + H}$$

$$\frac{9}{4} \left(\frac{4}{9} (x + 3) \right) = \frac{9}{4}$$

$$x = \frac{9}{4} - 3$$

$$x + 3 = \frac{9}{4} - 3$$

$$5w + 8 - 12w = 16 - 15w$$

w =

$$-7w + 8 = 16 - 15w$$

$$+15w$$

$$8w + 8 = 16$$

$$-8 \quad -8$$

$$\frac{8w}{8} = \frac{8}{8}$$

$$w = 1$$

1-3 evens
*HW #2 1-2-1-3
Q2 due Sep 17th
re-take if you want
*Q3 due Sep 24th
1-2-1-3

* Online by
Friday