

1.9 Notes – Equations & Formulas

Name: hey

Date: _____

Rectangles

$$\text{Area} = \text{LENGTH} * \text{WIDTH} \longrightarrow A = L * W$$
$$A = L * W$$

$$\text{Length} = \frac{\text{AREA}}{\text{WIDTH}} \longrightarrow L = \frac{A}{W}$$

$$L = \frac{A}{W}$$

$$\text{Width} = \frac{\text{AREA}}{\text{LENGTH}} \longrightarrow W = \frac{A}{L}$$

Circles

$$\text{Diameter} = 2 * \text{RADIUS} \longrightarrow D = 2R$$

$$\text{Circumference} = \pi * \text{DIAMETER} \longrightarrow C = \pi D$$

($\pi \approx 3.14$)

$$\text{Area} = \pi * \text{RADIUS}^2 \longrightarrow A = \pi R^2$$

Speed

$$\text{Distance} = \text{RATE} * \text{TIME} \longrightarrow D = RT$$

Temperature

$$\text{Fahrenheit} = \frac{9}{5} * \text{CELSIUS} + 32 \longrightarrow F = \frac{9}{5}C + 32$$

$$F = 1.8C + 32$$

$$\text{Celsius} = \frac{5}{9} (\text{FAHRENHEIT} - 32) \longrightarrow C = \frac{5}{9} (F - 32)$$

$$C = 0.56 (F - 32)$$

Simple Interest

$$i = \text{PRINCIPAL} * \text{RATE} * \text{TIME}$$

$$i = PRT$$

(i = INTEREST EARNED)

Compound Interest

$$A = \text{PRINCIPAL} (1 + \text{RATE})^{\text{TIME}}$$

$$A = P(1 + r)^t$$

(A = TOTAL AMOUNT)

Examples:

- 1) Find the area of a rectangle whose width is 7in and length is 8in.

$$A = L * W$$
$$A = 8 * 7$$
$$A = 56 \text{ in}^2$$

- 2) Find the width of a rectangle whose area is 30in² and length is 5in.

$$W = \frac{A}{L}$$
$$W = \frac{30}{5}$$
$$W = 6 \text{ in}$$

- 3) Find the diameter of a circle whose radius is 6.2in.

$$D = 2 * R$$
$$D = 2 * 6.2$$
$$D = 12.4 \text{ in}$$

- 4) Find the area of a circle whose radius is 4.8in.

$$A = \pi * r^2$$
$$A = 3.14 * 4.8^2$$
$$A = 3.14 * 23.04$$
$$A = 72.3456 \text{ in}^2$$

- 5) If it is 84°F outside, what is the temperature in Celsius?

$$C = \frac{5}{9} (F - 32)$$
$$C = \frac{5}{9} (84 - 32)$$
$$C = \frac{5}{9} (52)$$
$$C = 28.89^\circ$$

- 6) Find the simple interest earned after 6 years if there was \$400 initially invested at a rate of 12%.

$$i = prt$$
$$i = 400 * .12 * 6$$
$$i = 48 * 6$$
$$i = \$288$$