Literal Equations Review

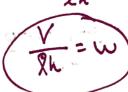
A literal equation is an equation that contains multiple variables.

- The goal of a literal equation is to isolate a particular variable (not always x)!
- 1. Solve for a.

$$ax + b = c$$

2. Solve for w.

$$\frac{V = lwh}{2h}$$



3. Solve for b.

2 .
$$A = \frac{y+b}{2} \cdot 2$$

4. Solve for x.

(combine like terms first)

$$3x + 5x - 7y = z$$

Solve for w.

$$\omega \cdot CD = \frac{12s}{w} \cdot \omega$$

CD

6. Solve for t.

$$\frac{t}{5} - 4r = 25$$

a. Solve for e.

$$ms = \omega - 10e$$
 $ms - \omega = -10e$
 $ms - \omega = 0$

b. **Using your formula from part a**, find the number of errors when you type 500 words for 10 minutes at a speed of 40 words per minute.

$$M = 10$$
 $S = 40$ $10(40) - 500$ $= 200 - 500$ $= 200 - 100$ $= 200$

8. The formula I = Prt can be used to determine the interest I that is earned on a principal amount of money P, when the money is invested at an annual percentage rate r for t years.

a. Solve the formula
$$I = Prt$$
 for t .

b. If a couple invests \$5000 in an account that earns a 3% interest rate, how long will they need to invest it to earn \$1200 in interest? (Hint: Convert the interest rate to a decimal.)

9.
$$\frac{2}{5}(-10a + 5b) = d$$
 Solve for a

$$-\frac{20}{5}a + \frac{10}{5}b = d$$

$$-4a + 2b = d$$

$$-4a = d - 2b$$

$$\alpha = \frac{1}{4}d + \frac{1}{2}b \quad or \quad \alpha = \frac{d - 2b}{-4}$$