

## Solving Literal Equations

To solve a literal equation:

- 1) Locate the \_\_\_\_\_ that you want to solve for
- 2) Follow the rule for \_\_\_\_\_ to get the variable all by itself (isolated)

Examples:

**Solve for x:**

.....instructions for what to solve for

$$x + b = a$$

.....original equation

$$\begin{array}{r} \textcircled{x} + b = a \\ -b \quad -b \\ \hline \end{array}$$

.....locate what you are solving for  
.....subtract "b" on both sides

$$\textcircled{x = a - b}$$

.....simplify the equation

**Solve for d:**

.....instructions for what to solve for

$$cd = 10$$

.....original equation

$$\frac{\textcircled{cd}}{c} = \frac{10}{c}$$

.....locate what you are solving for  
.....divide both sides by "c"

$$\textcircled{d = \frac{10}{c}}$$

.....simplify the equation

**Solve for a:**

.....instructions for what to solve for

$$4a - b = c$$

.....original equation

$$\begin{array}{r} \textcircled{4a} - b = c \\ + b \quad + b \\ \hline 4a = \frac{c + b}{4} \end{array}$$

.....locate what you are solving for  
.....add "b" to both sides  
.....simplify the equation  
.....divide both sides by 4

$$\textcircled{a = \frac{c + b}{4}}$$

.....simplify the equation

## Solving Literal Equations Practice

1) Solve for  $k$ .

$$k + 20 = t$$

2) Solve for  $v$ .

$$\frac{v}{5} = w$$

3) Solve for  $m$ .

$$2m - p = 11f$$

4) Solve for  $C$ .

$$F = \frac{9}{5}C + 32$$

5) Solve for  $b$ .

$$A = bh$$

6) Solve for  $L$ .

$$P = 2L + 2W$$

For questions 7-10, solve for  $y$ .

7)  $2y = 4x + 10$

8)  $19 = 7x + y$

9)  $8y - 4x = 2$

10)  $3y - 12x = 18$