

## Solve Literal Equations for a Specific Variable

**Solving an equation for a specific variable:** Your goal is to isolate the equation for the indicated variable. You will use reverse order of operations. Look to add or subtract before multiplying and dividing.

**Example 1:**  $d = rt$  Solve for  $t$

$$\frac{d}{r} = \frac{rt}{r} \quad \text{Divide both sides by } r$$

$$\frac{d}{r} = t$$

**Example 2:**  $y = mx + b$  Solve for  $x$

$$-b \quad -b \quad \text{Subtract } b$$

$$y - b = mx$$

$$\frac{y-b}{m} = \frac{mx}{m} \quad \text{Divide by } m$$

$$\frac{y-b}{m} = x$$

**Try These:**

1.  $d = \frac{m}{v}$  Solve for  $v$

2.  $y = mx + b$  Solve for  $b$

3.  $F = ma$  Solve for  $a$

4.  $F = ma$  Solve for  $m$

5.  $3x + 2y = 6$  Solve for  $x$

6.  $5x - 3y = 15$  Solve for  $y$

7.  $y = mx + b$  Solve for  $m$

8.  $d = rt$  Solve for  $r$

9.  $4x - 2y = 8$  Solve for  $x$

10.  $6x - 2y = 9$  Solve for  $y$