

**Lesson 8: Solving Equations with Distributive Property**Remember:

1. Use Distributive Property FIRST!!!
  - a. Signs mean: positive & negative
2. Use Order of Operations BACKWARDS to solve the equation.
3. Integer Rules apply.

**Ex. 1:** Solve each equation. Check your solution.

A.  $4(y - 3) = 4$

$$\begin{array}{r} 4y - 12 = 4 \\ +12 \quad +12 \\ \hline 4y = 16 \\ \frac{4}{4} \quad \frac{16}{4} \\ \hline y = 4 \end{array}$$

check:  $4(4-3) = 4$   
 $4(1) = 4$   
 $4 = 4 \checkmark$

B.  $-2(g - 1) = -4$

$$\begin{array}{r} -2g + 2 = -4 \\ -2 \quad -2 \\ \hline -2g = -6 \\ \frac{-2}{-2} \quad \frac{-6}{-2} \\ \hline g = 3 \end{array}$$

C.  $3(2 - x) = -12$

$$\begin{array}{r} 6 - 3x = -12 \\ -6 \quad -6 \\ \hline -3x = -18 \\ \frac{-3}{-3} \quad \frac{-18}{-3} \\ \hline x = 6 \end{array}$$

D.  $(p - 8)(-2) = 8$

$$\begin{array}{r} -2p + 16 = 8 \\ -16 \quad -16 \\ \hline -2p = -8 \\ \frac{-2}{-2} \quad \frac{-8}{-2} \\ \hline p = 4 \end{array}$$

E.  $-3(-x - 4) = -3$

$$\begin{array}{r} 3x + 12 = -3 \\ -12 \quad -12 \\ \hline 3x = -15 \\ \frac{3}{3} \quad \frac{-15}{3} \\ \hline x = -5 \end{array}$$

F.  $(y + 7)(-3) = -7$

$$\begin{array}{r} -3y - 21 = -7 \\ +21 \quad +21 \\ \hline -3y = 14 \\ \frac{-3}{-3} \quad \frac{14}{-3} \\ \hline y = \frac{-14}{3} \end{array}$$