

Warm-up:

Solve the equation.

$$1. \quad \frac{x+15}{-12} = 7 \cdot -12$$

$$\begin{array}{r} x+15 = -84 \\ -15 \quad -15 \\ \hline x = -99 \end{array}$$

$$2. \quad -9x - 11 = -35$$

$$\begin{array}{r} -9x - 11 = -35 \\ +11 \quad +11 \\ \hline -9x = -24 \\ -9 \quad -9 \\ \hline x = \frac{8}{3} \end{array}$$

$$3. \quad 20 - 6x = 84$$

$$\begin{array}{r} 20 - 6x = 84 \\ -20 \quad -20 \\ \hline -6x = 64 \\ -6 \quad -6 \\ \hline x = -\frac{32}{3} \end{array}$$

$$4. \quad \frac{x}{4} - 24 = -37$$

$$\begin{array}{r} \frac{x}{4} - 24 = -37 \\ +24 \quad +24 \\ \hline \frac{x}{4} = -13 \cdot 4 \\ \hline x = -52 \end{array}$$

$$5. \quad 5x - 26 = -11$$

$$\begin{array}{r} 5x - 26 = -11 \\ +26 \quad +26 \\ \hline 5x = 15 \\ \hline x = 3 \end{array}$$

Review of Distributive Property & Like Terms:

Simplify.

$$1. \quad 3(x+5)$$

$$3x + 15$$

$$2. \quad -5(2x+7)$$

$$-10x - 35$$

$$3. \quad -3(-8x-2)$$

$$24x + 6$$

$$4. \quad 2x - 5y + 8x + 7y - 11$$

$$10x + 2y - 11$$

$$5. \quad -6w + 10x + 4(2w - 7x)$$

$$-6w + 10x + 8w - 28x$$

$$2w - 18x$$

Notes 1-5

Int 2

Multi-Step Equations w/Dist. Prop & Like Terms

Unit 1

Steps for Solving Multi-Step Equations:

1. Do any distributive property.
2. Combine Like Terms
3. Solve

Solve each equation.

Ex. 1: $2(y-3) = -18$

$$\begin{array}{r|l} 2y - 6 & = -18 \\ \hline 2y & = -12 \\ \frac{2y}{2} & = \frac{-12}{2} \end{array}$$

$y = -6$

Ex. 2: $12 + 8x - 5 = -9$

$$\begin{array}{r|l} 8x + 7 & = -9 \\ \hline 8x & = -16 \\ \frac{8x}{8} & = \frac{-16}{8} \end{array}$$

$x = -2$

Notes 1-5

Int 2

Multi-Step Equations w/Dist. Prop & Like Terms

Unit 1

$$\text{Ex. 3: } 8 = -4(2h - 1) + 4$$

$$8 = -8h + 4 + 4$$

$$8 = -8h + 8$$

$$\frac{0}{-8} = \frac{-8h}{-8}$$

$$h = 0$$

$$\text{Ex. 4: } 6 - 2(5x + 2) = 32$$

$$6 - 10x - 4 = 32$$

$$-10x + 2 = 32$$

$$\frac{-10x}{-10} = \frac{30}{-10}$$

$$x = -3$$

$$\text{Ex. 5: } 5w + 22 - 2w = -5$$

$$3w + 22 = -5$$

$$\frac{3w}{3} = \frac{-27}{3}$$

$$w = -9$$

$$\text{Ex. 6: } 8(t + 2) - 3(t - 4) - 6t = -34$$

$$8t + 16 - 3t + 12 - 6t = -34$$

$$-1t + 28 = -34$$

$$\frac{-1t}{-1} = \frac{-62}{-1}$$

$$t = 62$$