

Prealgebra ~ Lesson 17

Work the following examples as you listen to the recorded lecture.

Solving Linear Equations in One Variable

Steps for solving equations:

1. **Simplify each side** of the equation by distributing multiplication and/or combining like terms.
2. Get the **variable terms to the same side** by **adding or subtracting** the smaller term.
3. Get rid of **any number** that is **added or subtracted** on the **side with the variable** by performing the **opposite operation**.
4. **Divide** both sides by the **coefficient** of the variable.

Solve the following equations:

Example 1:

$$7x - 1 = 8x + 4$$

Example 2:

$$5x - 3 = 2x - 18$$

Example 3:

$$4 - 7m = -3m + 4$$

Example 4:

$$2x + 10 + 3x = -12 - x - 20$$

Example 5:

$$22 - 42 = 4(x - 1)$$

Example 6: $2(x + 5) + 8 = 0$

Example 7: $4(3t + 4) - 20 = 3 + 5t$