

## DO NOW

Solve  $3(2b + 1) - 7 = 50$

$$6b + 3 - 7 = 50$$

$$6b - 4 = 50$$

$$6b = 50 + 4$$

$$6b = 54$$

$$b = \frac{54}{6}$$

$$\boxed{b = 9}$$

## 2.1 Solving Linear Equations - Day 4

Recall: An equation is like a: *balanced scale*

*\*\*\* maintain balance*

- ★ What is "done" to one side must be "done" to the other.
- ★ Use inverse operations to undo what was "done" to the variable in reverse order.
- ★ Eliminate + and - before x or ÷
- ★ Eliminate ( ) and simplify first
- ★ Use + or - to group variable terms to one side and constants to the other.

### Practice:

1.  $9y - 7 = 5y + 5$

$$9y - 7 - 5y = 5$$

$$4y - 7 = 5$$

$$4y = 5 + 7$$

$$4y = 12$$

$$y = \frac{12}{4}$$

$$\boxed{y = 3}$$

2.  $x - 7 = 13 - 4x$

$$x - 7 + 4x = 13$$

$$x + 4x = 13 + 7$$

$$5x = 20$$

$$x = \frac{20}{5}$$

$$\boxed{x = 4}$$

3.  $8k - 36 = -4k$

$$-36 = -4k - 8k$$

$$-36 = -12k$$

$$\frac{-36}{-12} = k$$

$$\boxed{3 = k}$$

*OR*

$$8k - 36 + 4k = 0$$

$$8k + 4k = 0 + 36$$

$$12k = 36$$

$$k = \frac{36}{12}$$

$$k = 3$$

4.  $8m - 3 = 5m - m$

$$8m - 3 = 4m$$

$$-3 = 4m - 8m$$

$$-3 = -4m$$

$$\frac{-3}{-4} = m$$

$$\boxed{\frac{3}{4} = m}$$

5.  $3a + (2a - 5) = 13 - 2(a + 2)$

$$3a + 2a - 5 = 13 - 2a - 4$$

$$5a - 5 = 9 - 2a$$

$$5a - 5 + 2a = 9$$

$$5a + 2a = 9 + 5$$

$$7a = 14$$

$$a = \frac{14}{7}$$

$$\boxed{a = 2}$$

Check:

$$\begin{array}{r|l} 3a + (2a - 5) & 13 - 2(a + 2) \\ 3(2) + (2(2) - 5) & 13 - 2(2 + 2) \\ 6 + (4 - 5) & 13 - 2(4) \\ 6 - 1 & 13 - 8 \\ 5 & 5 \checkmark \end{array}$$

## HOMEWORK

Worksheet - HW 2.1 Day 4