

## Lesson 2-3 One Step Equations

SWBAT: Use mental math to estimate and solve problems. They will also explore algebra tiles to help solve equations.

### **One Step Equations:**

Equation – \_\_\_\_\_.

- Both sides of the equation have to \_\_\_\_\_ the same number
- If they do not equal the same amount, the equation is false.
- Ex:  $8 + 4 = 3 \times 4$ . Since  $12 = 12$  this equation is true

Is this equation true or false?       $70 - 39 = 41$

### **Finding a solution with variables:**

Solution – \_\_\_\_\_

Ex: How many baseball cards do you need to add to the 14 cards you already have to get a total of 25 cards?

- First you need to make the equation:  $n + 14 = 25$
- Looking at this equation, what number plus 14 would equal 25? Use mental math to solve

Practice on these, using mental math as well:

$$17 - m = 8 \qquad w \div 4 = 20 \qquad 4.7 + c = 5.9$$

### **Solving using Algebra Tiles:**

Use an equation mat to solve for a variable by using the “legal moves”

- You can take away something as long as you take away the same thing from the other side.
- You can add something to one side of an equation you have to add the same thing to the other side.
- A positive and a negative tile of the same value will cancel out and make zero.

Try solving these examples on the equation mat:

$$x + 5 = 7 \qquad x - 4 = 8 \qquad x + 9 = 15 \qquad 3x + 1 = 16$$

$$2m + 4 = 3m \qquad 4x + 5 - 2 = 6x - 7 \qquad 5x + 6 - 2x = 10 - x + 4 + 3x$$