**Unit 2 #4 LITERAL EQUATIONS**

**What is a LITERAL EQUATION and how is it different from other equations?**Some equations contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ so you can’t just “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”. Instead you need to “solve for” or isolate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_! This is the same as “isolating the variable”, except you are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (not always x).

STEPS TO SOLVING LITERAL EQUATIONS:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_ the variable you are solving for.

2. What \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are happening with that variable?

3. Work \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to solve for the variable.

**REMEMBER:** You are not solving the equation for a \_\_\_\_\_\_\_\_\_\_\_\_\_\_! You are just rearranging it to “\_\_\_\_\_\_\_\_\_\_\_\_\_\_” for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. You will end up with a different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

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| **Common Formulas** | |
| Slope-intercept form |  |
| Area of a triangle |  |
| Area of a circle |  |
| Distance Formula |  |
| Simple Interest |  |
| Volume of a cylinder |  |
| Perimeter of a rectangle |  |
| Area of a rectangle |  |
| Perimeter of a square |  |
| Volume of a prism |  |
| Volume of a cone |  |
| Measure of angles in a triangle |  |
| Pythagorean Theorem |  |

**Practice Problems**

1. a2 + b2 = c2, solve for b

2. Rewrite the equation for the area of a rectangle in   
 terms of the width.

3. 2x + 3y = 6, solve for y

**Application Problems**

4. The area of a circle is pi times the radius squared. Rearrange this formula in terms of the radius.

5. Ms. Santos wants to visit her family in Chicago. If Chicago is 600 miles away, and Ms. Santos wants to get there in 10 hours, how fast does she need to drive? Write an equation to express the rate at which Ms. Santos needs to drive and solve.