

## SOLVING EQUATIONS WITH VARIABLES ON BOTH SIDES – DAY 2

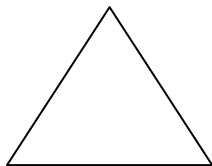
### BELL WORK

1. The length of a rectangle is 3 cm less than 4 times the width. If the perimeter is 54 cm, find the length.



Equation: \_\_\_\_\_

2. In a triangle the longest side is 4 inches longer than twice the shortest side. The third side is 3 inches less than twice the shortest side. If the perimeter of the triangle is 46 inches, find the length of the longest side.



Equation: \_\_\_\_\_

**EXAMPLES:** Solve each equation showing all steps. Check the solutions on the calculator.

1)  $3(2 + v) - 4v = v + 16$

2)  $2(g - 2) - 4 = 2(g - 3)$

$$3) \quad 3(m + 5) - 6 = 3(m + 3)$$

When solving equations with variables on both sides, when do you get each of the following?

***NO SOLUTION:***

***ALL REAL NUMBERS:***

**EXAMPLES: Write an equation for the situation and solve.**

4) There are two long-distance phone companies competing for Derrick's business. The 1<sup>st</sup> phone company charges a flat rate of \$5.50 per month and then \$0.03 per minute while the other company charges \$0.05 per minute. How many minutes would Derrick have to use in order for the two phone companies to cost the same?

Equation: \_\_\_\_\_