Day 10/11 Homework

Name:_____ Date:_____

1. Write the other side of this equation so that it is true for **all** values of x:

   $\frac{1}{2}(6x - 10) - x =$

2. Bill sais that the equation $2x + 2 = x + 1$ has no solutions because the left-hand side of the equation is **double** the right-hand side.

   a. Do you agree with Bill?

   b. Explain your reasoning (2-5 sentences).

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3. For the given set of equations, determine it has the following:

    1. No Solution
    2. Exactly one solution
    3. Infinitely many solutions

    Once you have determined the following, provide a written explanation as to how and you determined your choice. If an equation has **one** solution, solve the equation to solve for the variable.

    Set:

    a. $-5x - 3x + 2 = -8x + 2$ **b.** $-5x - 3x - 4 = -8x + 2$

    c. $-5x - 4x - 2 = -8x + 2$

4. Carlos was looking at the equation $6x - 4 + 2(5x + 2) = 16x$. He said "I can tell right away that there are no solutions because if you look at the left side, we have $6x + 10x$ and a bunch of constants, but you only have $16x$ on the right side".

    a. Do you agree with Carlos?

    b. Explain your reasoning using 2-5 sentences. Provide "proof" to your justification.

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5. Complete each equation so there are **Infinite number of solutions**:

   (HINT: a number goes in the blank)

a. $3x + 6 = 3(x + \_\_)$

b. $x - 2 = -(\_\_ - x)$

1. Complete each equation so there are **no solutions:**

   (HINT: a number goes in the blank)

a. $3x + 6 = 3(x + \_\_)$

b. $x - 2 = -(\_\_ - x)$