Name: _____ **Date:** _____

AU1: HW #3 – Multi-Step Equations **Class:** _____

Directions: Solve the following equations, show the check when asked.

1. $-5c + 9c = -20$ *Check:*

2. $36 = 6b - 6 + b$

3. $\frac{2}{3}g + \frac{1}{2}g = 14$

4. $6(7k - 10) = 24$ *Check:*

5. $4(g + 2) + 8g = 56$

6. $6(2k + 5) - 3k = 66$

7. Two angles form a complementary pair (sum is 90^o), one angle is $3x-10$ the other angle is $x+8$. Using an equation determine the measure of each angle.

8. If a number is added to itself and the sum is multiplied by 2, the product is 4. What is the number?

Determine whether the following number sentences are TRUE of FALSE.

9. $(123+54)\bullet 4 = 123+(54\bullet 4)$

10. $xy=-2$ if $x=-3$ & $y=\frac{2}{3}$

Spiral:

11. $-1\frac{7}{9} \div -4\frac{4}{11}$

12. The variables *a, b, c* are each represented by a different whole number.

Given that $c = 2$, use the properties to determine the values of *a* and *b*.

$a \times b = b$	$a =$ _____
$a - a = b$	$b =$ _____
$a + c = 5$	$c =$ _____

13. The diagram below, when completed, shows all possible ways to build equivalent expressions of $3x^2$ using multiplication. The equivalent expressions are connected by labeled segments stating which property of operations, **A** for Associative and **C** for Commutative Property, justifies why the two expressions are equivalent.

Fill in the empty circles with **A** or **C** and the empty rectangle with the missing expression to complete the diagram.