

**WS 1-2 – Properties of Numbers**

**Match the term on the left with the definitions on the right.**

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|----------------------------------|--|
| 1. Distributive Property _____   | A. The opposite of the given number. (+/-) When added to the original number, the result is the identity.      |
| 2. Multiplicative Inverse _____  | B. You can add or multiply regardless of how numbers are grouped.  |
| 3. Additive Identity _____       | C. The number which you can multiply by any other number and not change the value.                             |
| 4. Associative Property _____    | D. The numerical part of a term.   |
| 5. Commutative Property _____    | E. The result of division.   |
| 6. Additive Inverse _____        | F. The multiplication of a term and two or more terms inside of parentheses.                                   |
| 7. Multiplicative Identity _____ | G. You can change the order of addition and multiplication.  |
| 8. Coefficient _____             | H. Something being multiplied.   |
| 9. Factor _____                  | I. Also called the “reciprocal,” it is a number when multiplied with the original number, yields the identity. |
| 10. Quotient _____               | J. The number which you can add to any other number and not change the value.                                  |

**Determine the property or operation being shown.**

11. $a + (-a) = 0$	12. $a \cdot b \cdot c \cdot d = b \cdot c \cdot a \cdot d$	13. $4(2x + 8) = 8x + 32$
14. $x \cdot 1 = x$	15. $(a + b) + c = a + (b + c)$	16. $\frac{5}{4} \cdot \frac{4}{5} = 1$
17. $4k - 7 - k + 4 = 3k - 3$	18. $-6 + 6 = 0$	19. $3\pi r^2 + 0 = 3\pi r^2$

**Simplify each expression.**

20)  $2n + 5n$

21)  $1 + 2a + 4$

22)  $7k + 10 + 9k$

23)  $3v - 7v$

24)  $-(3v - 10)$

25)  $3(v - 5)$

26)  $2(-8 + 8x)$

27)  $-4(2 - 9x)$

28)  $3x - 4(4x - 9)$

29)  $-5r - (5 + 5r)$

30)  $10x + 8(9x + 5)$

31)  $4n - 10(n + 6)$

32)  $-8(n + 5) - 10(n + 7)$

33)  $8(n + 4) - 2(6 + 2n)$

34)  $-3(2 + 9v) + 7(9 + 7v)$

35)  $-(1 + 9r) - 5(r + 9)$