Algebra Study Guide Name: _____

Simplify each expression.

1. $9(x - 6)$
2. $20 + 8d$
3. $30p + 5 - 14p + 8$
4. $4(5 + 6k)$
5. $15 + 5d$
6. $4x + 5(x + 6)$
7. $7(5m - 6)$
8. $4(6m - 5)$
9. $17x + 9 - 5x - 7$
10. $8(6 + y)$
11. $12m + 9j - 10m - 7j + 3m$
12. $16k + 2(4 + 5k) - 10k$
13. $8m + 3m + 12 + 2m - 8 - 8m$
14. $6y^2 + y + y + 13$
15. $r + r + 9r - 2$

Name : _____ Score : _____

Teacher : _____ Date : _____

Working with the Properties of Mathematics

1) Which property is used in the following expression ? (6 x 9) x 8 = 9 x (8 x 6)

A. Commutative Property of Addition **B.** Distributive Property of Multiplication _____

C. Associative Property of Multiplication **D.** Associative Property of Addition

2) Which of the following does not show the Commutative Property of Addition ?

A. a + b = b + a **B.** ab = ba _____

C. 3x + 4y = 4y + 3x **D.** 3 + x = x + 3

3) Which of the following is an example of Commutative Property of Addition ?

A. (8 + 3) + 4 = 8 + (3 + 4) **B.** 2 + 7 = 6 + 2 _____

C. 5 + 8 = 8 + 5 **D.** 9 x 1 = 9

4) Which property of addition is used in the following ? (3 + 8) + 6 = 3 + (8 + 6)

A. Commutative Property **B.** Associative Property _____

C. Identity Property **D.** Distributive Property

5) Which property would you use to simplify the following expression ? 3(y + 8)

A. Commutative Property **B.** Associative Property _____

C. Distributive Property **D.** Multiplication Property of Zero

6) Which property is used in the following expression ? (a x b) x c = a x (b x c)

A. Associative Property of Addition **B.** Associative Property of Multiplication _____

C. Distributive Property **D.** Commutative Property of Addition

7) Which is an example of Identity Property of Addition ?

A. (4 + 2) + 9 = 4 + (2 + 9) **B.** 8 x 1 = 8 _____

C. 5 + 0 = 5 **D.** 7 + 4 = 4 + 7

8) Which equation shows the Commutative Property of Multiplication ?

A. 2 x 9 = 9 x 2 **B.** 8 x 7 - 3 x 7 = (8 - 3) x 5 _____

C. 4 x 1 = 4 **D.** 5 x 3 = 5 + 5 + 5

9) Which of the following does not show the Commutative Property ?

A. yx = xy **B.** xy - 2 = xy _____

C. x + y = y + x **D.** 6 + y = y + 6

10) Which equation shows the Identity Property of Multiplication ?

A. (a + b) + 4 = a + (4 + b) **B.** a + a + a = 3 x a _____

C. a x 1 **D.** a(b + c) = ab + ac