**Chapter 3 TEST-RETAKE**

**Algebraic Expressions & Properties**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_ Score: \_\_\_\_\_\_

|  |  |
| --- | --- |
| 1. Write:  **The product of a number x and 5 is added to 20**  As an Algebraic Expression. | 2. Write:  **A number z decreased by 5**  As an Algebraic Expression |
| 3. Evaluate (show work)  3y - 2 for y = 5 | 4. What is the value of the expression below if x=3 and y=5? (show work)  3x + y |
| 5. Evaluate: (show work)  3(5x) for x = 6 | 6. Give an example of each property:  Commutative Property of Addition: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Commutative Property of Multiplication: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  Associative Property of Addition: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Associative Property of Multiplication: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Distributive Property: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 7. Write an equation that best describes the table.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **x** | 2 | 4 | 6 | 10 | | **y** | 8 | 16 | 24 | 40 | | 8. Complete the Table:   |  |  | | --- | --- | | x | 2x +5 | | 2 |  | | 3 |  | | 4 |  | | 5 |  | |
| 9. Simplify the expression by combining like terms.  2*x* + *x* + 5*x* + 4 | 10. Simplify the expression:  3x + 3(x + 2) + 8? |
| 11. Simplify the Expression:  3x + 4y + 5x -2y | 12. Use the distributive property to simplify the expression:  4(y + 2) |
| 13. Use the “break apart” method to find the value of **56 x 5**? Then write using the Distributive property.  a. Break apart: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  b. Distributive Property: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  c. Value: \_\_\_\_\_\_\_\_\_\_\_\_\_ | 14. Simplify the expression:  2(3a + b) – 3a + 4 |
| 15. Simplify each expression…Then circle witch one is equivalent to 4x.  a. 4 • 4 •4 • 4= \_\_\_\_\_\_\_\_  b. x • x • x • x = \_\_\_\_\_\_\_\_  c. x + x + x + x = \_\_\_\_\_\_\_\_\_  d. 4x + 4x + 4x + 4x= \_\_\_\_\_\_ | 16. Factor the expression using the GCF:  12 + 18 |
| 17. Factor the expression using the GCF:    5x + 10 | 18. Playing time is added at the end of a soccer game to make up for stoppages. An expression for the length of a 90 minutes soccer game with x minutes of stoppage time is 90 + x. How long is a game with 4 minutes of stoppage time? |
| 19. The expression 10 • w • 5 represents the volume of a rectangular prism with length of 10 inches, a width of (w) inches, and a height of 5 inches.  If w = 3 what is the volume of the rectangular prism? | 20. Write the Algebraic Expression as a phrase. (use words)  5n + 2 |