**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 |