

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. Which of the following is equivalent to the equation shown below?

$$4(x + 2) = 2(x + 1)$$

- A.  $4x + 8 = 2x + 2$       B.  $4x + 2 = 2x + 1$   
 C.  $4x + 2 = 2x$       D.  $4x + 8 = 2x$

2. Which expression shows  $3(x + y)$  in its simplified form?

- A.  $3xy$       B.  $3x + y$       C.  $3x + 3y$       D.  $3 + x + y$

3. Which expression is equivalent to  $-3x + 4(3x + 2)$ ?

- A.  $4x + 6$       B.  $9x + 8$       C.  $9x + 2$       D.  $15x + 8$

4. Which expression is equivalent to  $2a^2 + 4 - 5a + 3a^2 - 7$ ?

- A.  $5a^2 - a - 7$       B.  $5a^4 - a - 7$   
 C.  $5a^2 - 5a - 3$       D.  $5a^4 - 5a - 3$

5. What is the simplified form for the expression below?

$$4k^2 + 5k - 3 + 5k^2 + 2$$

- A.  $4k^2 + 10k + 1$       B.  $9k^2 + 5k - 1$   
 C.  $9k^2 + 7k - 3$       D.  $14k^2 + 5k - 1$

6. Which expression is the result when  $2a - 5$  is subtracted from  $3a + 3$ ?

- A.  $a - 2$       B.  $5a - 2$       C.  $a + 8$       D.  $-a + 8$

7. Which of the following is equivalent to the expression below?

$$-2a(3 - a)$$

- A.  $-5a$       B.  $-7a$   
 C.  $-6a - 2a^2$       D.  $-6a + 2a^2$

8. Based on the commutative property, which of the following is equivalent to the expression below?

$$5p - 2$$

- A.  $2 - 5p$       B.  $2p - 5$       C.  $5(p - 2)$       D.  $-2 + 5p$

9. Which of the following is equivalent to the expression below?

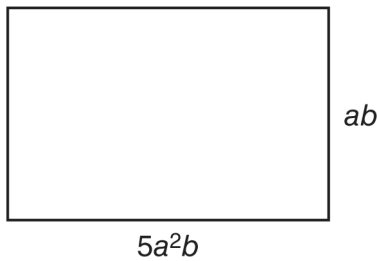
$$(5x + 6y - 3z) + (3x - 8y + z)$$

- A.  $8x - 14y - 4z$       B.  $8x - 2y - 2z$   
C.  $8x - 14y - 2z$       D.  $8x - 2y - 3z$

10. Which of these expressions is equivalent to  $3(x + 4)$ ?

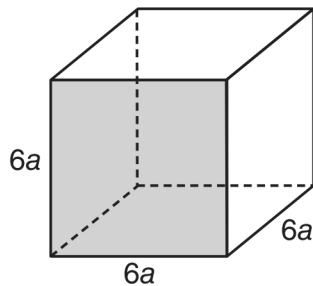
- A.  $3x + 4$     B.  $3x + 12$     C.  $4(x + 3)$     D.  $4x + 12$

11. What is the area of the rectangle shown?



- A.  $5a$       B.  $5a^2b$       C.  $5a^3b$       D.  $5a^3b^2$

12. What is the volume of the cube shown below?



- A.  $18a$       B.  $18a^3$       C.  $216a$       D.  $216a^3$

13. Which of the following is equivalent to the expression below?

$$(-3m + 5) + (m - 11)$$

- A.  $4m - 16$     B.  $-4m - 6$     C.  $2m - 16$     D.  $-2m - 6$

14. Which of the following is equivalent to the expression below?

$$2a(3a - 4)$$

- A.  $6a - 4$       B.  $6a - 8$       C.  $6a^2 - 4a$     D.  $6a^2 - 8a$

15. Which of the following is equivalent to the expression below?

$$6y^5 - 24y^2 - 18y$$

- A.  $6y(y^4 - 4y - 3)$       B.  $6y(y^4 - 24y - 18)$   
C.  $6y^5(1 - 24y^2 - 18y)$       D.  $6y^5(1 - 4y^3 - 3y^4)$