

Name _____

CC.6.EE.3 Apply the properties of operations to generate equivalent expressions.

1. Which of the following is equivalent to $x + x + x + y + y + y$?
- A** $3x + y$
B $3x + 3y$
C $6 + x + y$
D $6xy$
2. Which of the following expressions is equivalent to $5(6x + 3)$?
- A** $6x + 8$
B $5 \times 9x$
C $11x + 8$
D $30x + 15$
3. Use the Distributive Property to write an expression that is equivalent to $32x - 8y$.
- _____
- _____
4. Which expression is equivalent to $12a + 9b$?
- A** $3(4a + 3b)$
B $4(3a + 3b)$
C $4(4a + 3b)$
D $6(2a + 3b)$
5. Write an expression that is equivalent to $5t$.
- _____
6. Amy wrote the expression $27x - 18y$ on the board. Lin used the Distributive Property to write an equivalent expression. Which expression did Lin write?
- A** $3(9xy - 6xy)$
B $6(3x - 3y)$
C $7(20x - 11y)$
D $9(3x - 2y)$
7. Which of the following is equivalent to $4a + 3b$?
- A** $ab + ab + ab + ab$
B $4 + a + 3 + b$
C $a + a + a + a + b + b + b$
D $a + a + a + b + b + b + b$
8. Which expression is equivalent to $4(2a + 7)$?
- A** $6a + 11$
B $8a + 28$
C $8a + 7$
D $36 + a$

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9. Write an expression that is equivalent to n^6 .
- _____
- _____
10. Which expression is equivalent to $45c + 18d$?
- A** $3(15c + 6d)$
- B** $6(9c + 3d)$
- C** $9(5c + 3d)$
- D** $15(9c + 3d)$
11. Which expression is equivalent to $a \times a \times a \times a$?
- A** $4 + a$
- B** a^4
- C** $4a$
- D** $\frac{a}{4}$
12. Which of the following is equivalent to $7(3x + 9)$?
- A** $10x + 15$
- B** $10x + 63$
- C** $77 + x$
- D** $21x + 63$
13. Which expression is equivalent to $3b$?
- A** $b + b + b$
- B** $b \times b \times b$
- C** $3 + b$
- D** $3 + b + b + b$
14. Which expression is equivalent to $2y + 12z$?
- A** $2(2y + 6z)$
- B** $2(y + 12z)$
- C** $2(y + 6z)$
- D** $2(2y + 12z)$
15. Use the Distributive Property to write an expression that is equivalent to $6(a + 9)$.
- _____
16. Dimitri wrote the expression below.
- $$9(5p - 3q)$$
- If Maria wrote an expression equivalent to Dimitri's, which of the following did she write?
- A** $13p - 12q$
- B** $27p - 18q$
- C** $45p - 27q$
- D** $63p - 27q$