

Name	Date

Create Equivalent Expressions: Play Answer Sheet

Selected-Response Items—Indicate the letter(s) only.			
1	2	3	
4	5	6	
Fill-in-the-Blank Items			
7. (a)	8. (a)	9. (a)	
(b)	(b)	(b)	
(c)	(c)		
10	11	12	
13. (a)	14	15. (a)	
(b)		(b)	
(c)		(c)	
(d)		(d)	
		(e)	



Create Equivalent Expressions: Play

Number of Questions: 15

Questions 1–6 are selected-response questions. Write the letters of the correct answers on the answer sheet.

1. Are the expressions 4(x + 2) and 4x + 2 equivalent?

What is one way you know?

- **A**. Yes, the expressions are equivalent. When 0 is substituted for *x* both expressions are equal to 2.
- **B**. Yes, the expressions are equivalent because both expressions contain 4, *x*, and 2.
- **C.** No, the expressions are not equivalent because only one expression contains parentheses.
- **D**. No, the expressions are not equivalent. When 2 is substituted for *x*, the expressions have different values.
- **2**. Jacob identified 12m + 11n as an expression equivalent to 6(2m + 5n).

Was Jacob correct? How do you know?

- **A**. Yes, because Jacob distributed the 6 to 2*m* and 5*n*.
- **B.** Yes, because the expressions are equivalent when m = 1 and n = 0, so they must be equivalent expressions.
- **C.** No, because Jacob did not multiply 6 and 5*n* correctly.
- D. No, because Jacob was
- **E**. only supposed to multiply 6 by 2*m*.
- **3**. Which expression is equivalent to 64x + 72y?
 - **A.** 32x + 34y **B.** 16(4x + 5y)
 - **C.** 8x + 9y **D.** 8(8x + 9y)
- **4**. A student combined like terms to create the expression 15x + 39.

What could the original expression have been?

- **A.** (5x + 5x + x) + 39 + 5x**B.** 5x + 13 + 5x + 26 + 5x
- **C.** 3(5x + 39) **D.** 3(5x + 13)
- **E**. $(3 \cdot 5) + x + 39$
- 5. Select the expression that is NOT equivalent to the other expressions.
 - **A.** 3x + 5 + 2x + 10 **B.** 5(x + 3)
 - **C.** 4(x+3) + x **D.** 15 + 5x

- **6.** Which expressions are equivalent to 4(x + 7)? Select all that apply.
 - A. 4x + 7B. 4x + 28C. 2(2x + 7) + 14D. 3x + 20 + 8 + xE. x + 28

Questions 7–15 are fill-in-the-blank questions. Write the correct answers in the spaces provided on the answer sheet.

7. Determine the value for each expression when y = 3.

4*v* + *v* - 2 + 10: (a)_____ 8y - 2y + 8: (b)_____ Are the two expressions equivalent? Write yes or no: (c)_____ 8. Which expression(s) represents the property? Select all that apply. Associative Property: (a)_____ Commutative Property: (b)_____ Distributive Property: (c)_____ **A**. *ab* = *ab* **B.** a(b + c) = ab + ac**C.** 4 + 7 = 7 + 4**D**. 2(ab) = (2a)b**E**. 2(x - 3) = 2x - 69. Match the equivalent expressions. Select all that apply. 4*x* + 16: **(a)**_____ 9*x*+30: **(b)**_____ **B**. 4(x + 4)**A.** 3x + 16 + 6x + 14**D.** x + (3x + 8) + 8**C.** 3(3x + 10)**10**. Complete the expression that is equivalent to 24r + 36, using the greatest common factor (GCF) of the two terms.

Write the entire expression on the answer sheet.

24*r* + 36 = _____(_____*r* + _____)

11. Use the Distributive Property to combine the like terms in 3v + v.

Write the complete answer on the answer sheet.

3*v* + *v* = _____ (_____ + ____) = _____ *v*

12. Use the Distributive Property to write an expression equivalent to 4(5x + 11).

4(5x + 11) =_____

13. Which property is being applied to each step of the simplification of 2(3x + 10) + 50x? *Properties may be used more than once.*

2(3x + 10) + 50x: Original Equation

- 6*x* + 20 + 50*x*: **(a)**_____
- 6*x* + 50*x* + 20: (b)_____
- (6 + 50)*x* + 20: (c)_____
 - 56*x* + 20: **(d)**_____

- A. Associative Property
- **B**. Distributive Property
- **C**. Commutative Property
- D. Combine like Terms
- 14. Write the number that makes the expressions equivalent.

15x + 20y =_____(3x + 4y)

- **15**. Order the expressions according to the property being used in each step of the simplification of 3(2x + 18) + 4x.
 - (a) _____: Original equationA. 10x + 54(b) ____: Distributive PropertyB. 3(2x + 18) + 4x(c) ____: Commutative PropertyC. (6 + 4)x + 54(d) ____: Distributive Property (#2)D. 6x + 4x + 54(e) ____: Combine like TermsE. 6x + 54 + 4x

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