The Distributive Property — Homework

Lesson 6-14 • Standard 6.AT.7

Name: _____ **Period:** _____ **Date:** _____

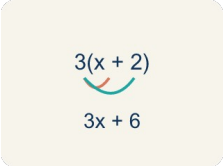
Today's Goals

Content: I can use the distributive property to expand and factor expressions.
Language: I can explain my steps using the words distributive property, factor, expand, and equivalent.

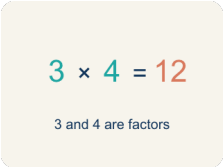
Key Words



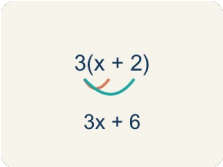
The Distributive Property (La propiedad distributiva) — Multiply a factor by every term inside parentheses.



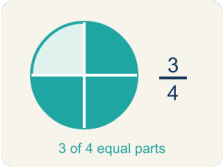
Distributive Property (Propiedad distributiva) — Multiplying a number by everything inside the parentheses: a(b + c) = ab + ac.



Factor (Factor) — A factor of a whole number divides it evenly, with no remainder. For example, 3 is a factor of 12 because 12 ÷ 3 = 4.



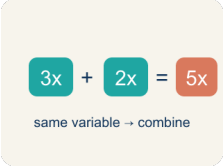
Expand (Desarrollar) — To multiply out the parentheses in an expression.



Equivalent (Equivalente) — Expressions that always have the same value.



Coefficient (Coeficiente) — The number in front of a letter, like the 3 in 3x.



Like terms (Términos semejantes) — Terms with the same letter raised to the same power, like 2x and 5x.

Practice

Show your work. Use the blank space under each problem.

1. Expand 6(n + 3) using the distributive property.

A. 6n + 18
B. 6n + 3
C. 6n + 9
D. n + 18

2. Expand 4(5 − 2) using the distributive property.

A. 9
B. 12
C. 20 − 2
D. 22

3. Use the distributive property to expand each expression.

Factored Form	Expanded Form
3(2x + 5)	
7(a − 4)	
2(3m + 8)	
5(6 − y)	

4. Match each factored form to its expanded form.

Item	Answer choices
____ 2(x + 9)	F. 8x − 24
____ 5(3n − 2)	E. 12m + 6
____ 4(a + 6)	D. 21 − 3y
____ 3(7 − y)	C. 4a + 24
____ 6(2m + 1)	B. 15n − 10
____ 8(x − 3)	A. 2x + 18

5. Expand each expression, then sort by whether the expanded form has a constant greater than 15 or not.

Groups: Constant > 15 | Constant ≤ 15

- 3(x + 7) → _____
- 2(n + 5) → _____
- 5(a + 4) → _____
- 4(y − 2) → _____
- 6(m + 3) → _____
- 2(3x + 1) → _____

6. Spot the Common Mistake

Step 1 (Expression): 5(3x + 2)
Step 2 (Distribute): 5 × 3x + 2
Step 3 (Simplify): 15x + 2
Which step has the mistake? Explain and fix it:

7. Light Cue 1: Expand 3(x + 4) for the stage-light controller.

A. 3x + 12
B. 3x + 4
C. 3x + 7
D. x + 12

8. Light Cue 2: Expand 5(2 + n) to set two spotlight banks.

A. 7 + 5n

B. 10 + 5n
C. 10 + n
D. 10 + 5

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9. Light Cue 3: Expand 4(a + 2) for the back-row beam.

A. 4a + 8
B. 4a + 2
C. 4a + 6
D. a + 8

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10. Match each a(b + c) light cue to its ab + ac expanded form.

Item	Answer choices
____ 2(b + c)	D. 5p + 5
____ 6(x + 2)	C. 3m + 15
____ 3(m + 5)	B. 6x + 12
____ 5(p + 1)	A. 2b + 2c
