UNIT 6 · STANDARD 6.EE.3

The Distributive Property

Lesson 6-5

Name: Type your name **Date:** Today's date **Class:** Class period

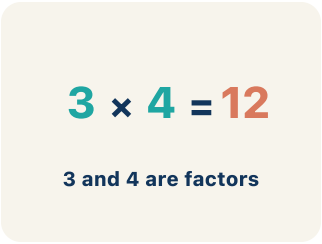
Key Vocabulary Level 2 Standard

Picture first, then the word, then a plain-language meaning. Say each word out loud.

3(4 + 5) = 3×4 + 3×5 = 12 + 15 = 27 — the 3 gets 'distributed' to both the 4 and the 5

Distributive Property

Write the definition:



In 3(x + 2), the 3 is the factor outside the parentheses that multiplies each term inside

Factor

Write the definition:

Expand 2(n + 6): multiply 2 × n = 2n and 2 × 6 = 12, so 2(n + 6) = 2n + 12

Expand

Write the definition:

3(x + 4) and 3x + 12 always give the same answer: when x = 2, both = 18; when x = 10, both = 42

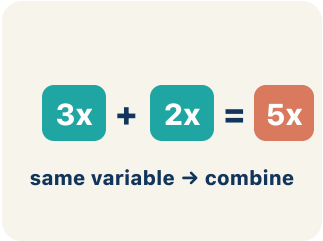
Equivalent

Write the definition:

In 6x + 15, the coefficient of x is 6 — it came from distributing in 3(2x + 5)

Coefficient

Write the definition:



4x + 2x = 6x (combine coefficients); 4x + 2y cannot be combined (different variables)

Like terms

Write the definition:

Guided Notes Level 2 Standard

🎯 **WHAT WE'RE LEARNING TODAY**

I can use the distributive property to expand and factor expressions.

✏️ **Fill in each blank as we go. Use the Word Bank to help you.**

📚 **WORD BANK — FILL EACH BLANK WITH THE BEST WORD**

Distributive Property | Factor | Expand | Equivalent | Coefficient | Like terms

🤟 *Tap any word to see what it means and a picture.*

1. The rule that a(b + c) = ab + ac is the _____.

2. To rewrite a sum as a product, like 3x + 12 = 3(x + 4), is to _____.

3. To multiply out a product over a sum, like 3(x + 4) = 3x + 12, is to _____.

4. Two expressions that always have the same value are _____.

5. A number multiplied by a variable is a _____.

6. Terms with the same variable part are _____.

🧱 Watch & Try — Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

👀 **I do — watch**

Follow each step as your teacher solves it.

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

A. 6n + 18

B. 6n + 3

C. n + 18

D. 6n + 9

Step 1 6(n + 3) = 6 × n + 6 × 3 = 6n + 18.

✅ **Answer:** A. 6n + 18

🤝 **We do — together**

Solve this one with your class using the same steps.

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

A. 12

B. 20 − 2

C. 9

D. 22

Step 1 _____

Step 2 _____

Answer: _____

✏️ **You do — your turn**

Now try one on your own. Show every step.

Problem: Expand 3(x + 4) using the distributive property.

A. 3x + 12

B. 3x + 4

C. x + 12

D. 7x

Show your work:

Try It

Solve on your own. Check the answer key when you are done.

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

A. 10 + 5n

B. 10 + n

C. 7 + 5n

D. 10 + 5

Show your work:

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

A. 4a + 8

B. 4a + 2

C. a + 8

D. 4a + 6

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

Use the distributive property to explain why 6 × 98 can be calculated as 6 × 100 − 6 × 2 = 588. Then create your own example of using the distributive property to make multiplication easier.

Sentence starter: 6 × 98 = 6(100 − 2) = 6 × ____ − 6 × ____ = ____ − ____ = ____. My example: ____ × ____ = ____(____ ± ____) = ____.

Show your work:

Reflect — Exit Ticket

Which expression is equivalent to 7(x + 3)?

A. 7x + 21

B. 7x + 3

C. x + 21

D. 7x + 10

Your answer: