Apply the Distributive Property

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Multiply every term inside grouping symbols.
- Use an equation, inequality, table, or diagram to justify your reasoning.
- Explain your answer using mathematical vocabulary and units.

5-minute warm-up

Discuss with a partner: What previous algebra or number skill will help with today’s lesson?

Show one calculation or example in your notebook.

Why this lesson matters

A rectangular garden has width 6 and length $2x - 3$.

What is known? What is unknown? Which quantities are related?

Represent the relationship

A rectangular garden has width 6 and length $2x - 3$.

$$6(2x - 3) = 12x - 18$$

Explain the meaning of the variable, numbers, and operations.

Worked example

Expand $6(2x - 3)$.

$$12x - 18$$

Check: Does the result match the original relationship?

Independent practice

1. Expand $4(3a + 2)$.

2. Expand $2(5y - 7)$.

Check your reasoning

Question 1

$$12a + 8$$

Question 2

$$10y - 14$$

Group challenge

A learner writes $5(x - 2) = 5x - 2$. Use five equal groups to explain the mistake.

Each group member must explain one step or defend one claim.

Group challenge • solution

$$5(x - 2) = 5x - 10$$

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

Expand $2(5y - 7)$.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

Expand 7(k + 3).

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$7k + 21$$

Reflect: What would you check before moving to the next lesson?