Combine Like Terms

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Combine terms with matching variable parts.
- 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 score consists of 5x points plus 2x bonus points and 9 fixed points.

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

Represent the relationship

A score consists of 5x points plus 2x bonus points and 9 fixed points.

$$5x + 2x + 9 = 7x + 9$$

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

Worked example

Simplify $5x - 3 + 2x + 9$.

$$7x + 6$$

Check: Does the result match the original relationship?

Independent practice

1. Simplify $-3a + 10 + 8a - 4$.

2. Simplify $2.5y + 1.2y - 5$.

Check your reasoning

Question 1

$$5a + 6$$

Question 2

$$3.7y - 5$$

Group challenge

Explain why $4x + 3x^2$ cannot be combined as like terms.

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

Group challenge • solution

Different variable parts

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

Simplify 2.5y + 1.2y − 5.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

Simplify $-2m + 7m - 8$.

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$5m - 8$$

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