Write and Evaluate Algebraic Expressions

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Translate word phrases and evaluate expressions.
- 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 theater charges $7 per seat plus a $12 reservation fee.

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

Represent the relationship

A theater charges $7 per seat plus a $12 reservation fee.

$$C = 7s + 12$$

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

Worked example

Evaluate $4n - 3$ for $n = -2$.

$$4(-2) - 3 = -11$$

Check: Does the result match the original relationship?

Independent practice

1. Evaluate $3x + 2y$ when $x = 4$, $y = -1$.

2. Write an expression: \$6 per ticket plus a \$10 fee.

Check your reasoning

Question 1

$$3(4) + 2(-1) = 10$$

Question 2

$$6t + 10$$

Group challenge

Explain why 2(x + 5) differs from 2x + 5.

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

Group challenge • solution

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

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

Interpret $4n - 3$ for $n = -2$.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

Evaluate $2p - 7$ for $p = 1.5$.

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$2(1.5) - 7 = -4$$

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