Represent Relationships with Tables

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Make and interpret ordered pairs for a rule.
- 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 registration costs $12 and each visit costs $4.

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

Represent the relationship

A registration costs $12 and each visit costs $4.

$$C = 12 + 4v$$

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

Worked example

Find C for v = 0, 1, 2, 3.

$$(0, 12),\ (1, 16),\ (2, 20),\ (3, 24)$$

Check: Does the result match the original relationship?

Independent practice

1. Use y = 3x + 2 for x = 0, 1, 2.

2. For p = 5n, find p when n = 0, 3, 6.

Check your reasoning

Question 1

$$y = 2, 5, 8$$

Question 2

$$p = 0, 15, 30$$

Group challenge

A table lists (0,6),(1,10),(2,14). Explain the change each step.

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

Group challenge • solution

$$\Delta y = 4$$

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

For p = 5n, find p when n = 0, 3, 6.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

For C = 12 + 4v, what is the starting value?

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$C(0) = 12$$

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