Write and Solve Multiplication Equations

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Model equal groups using multiplication.
- 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

Eight equal baskets contain 116 apples. What is in one basket?

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

Represent the relationship

Eight equal baskets contain 116 apples. What is in one basket?

$$8b = 116$$

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

Worked example

Solve 8b = 116 and give units.

$$b = \frac{116}{8} = 14.5$$

Check: Does the result match the original relationship?

Independent practice

1. Solve 12d = 144.

2. Five identical ribbons total 47.5 m. Write and solve.

Check your reasoning

Question 1

$$d = 12$$

Question 2

$$5r = 47.5 \Rightarrow r = 9.5$$

Group challenge

A student writes 8 + b = 116 for 8 identical groups. Explain the modeling error.

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

Group challenge • solution

$$8b = 116$$

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

Explain 8b = 116 and give units.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

Solve $9x = 112.5$.

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$x = 12.5$$

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