Write and Solve Division Equations

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Understand division equations and inverse 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

A delivery splits 27 kg of rice equally among 6 bags.

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

Represent the relationship

A delivery splits 27 kg of rice equally among 6 bags.

$$\frac{m}{6} = 4.5$$

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

Worked example

Solve m ÷ 6 = 4.5 for total mass m.

$$m = 6(4.5) = 27$$

Check: Does the result match the original relationship?

Independent practice

1. Solve z ÷ 9 = 13.

2. A length divided into 4 equal pieces has length 2.75 m each. Find total.

Check your reasoning

Question 1

$$z = 117$$

Question 2

$$\frac{L}{4} = 2.75 \Rightarrow L = 11$$

Group challenge

Compare $x \div 5 = 4$ and $5 \div x = 4$. Why do they differ?

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

Group challenge • solution

$$x = 20 \quad \text{versus} \quad x = 1.25$$

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

Explain m ÷ 6 = 4.5 for total mass m.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

Solve $v \div 12 = 3.25$.

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$v = 39$$

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