Write and Solve Addition Equations

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Write an equation before finding an unknown addend.
- 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 club receives 19 new members and now has 54 members. How many joined before?

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

Represent the relationship

A club receives 19 new members and now has 54 members. How many joined before?

$$m + 19 = 54$$

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

Worked example

Let m be the original members. Solve m + 19 = 54.

$$m = 54 - 19 = 35$$

Check: Does the result match the original relationship?

Independent practice

1. A box has x pens; 13 are added to make 47. Write and solve.

2. A jar has y coins; 6.5 are added to make 20.5 (model only).

Check your reasoning

Question 1

$$x + 13 = 47 \Rightarrow x = 34$$

Question 2

$$y + 6.5 = 20.5 \Rightarrow y = 14$$

Group challenge

Make your own story for u + 18 = 61; explain what u represents.

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

Group challenge • solution

$$u = 61 - 18 = 43$$

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

Let m be the original members. Explain m + 19 = 54.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

Solve $k + 12.75 = 40$.

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$k = 27.25$$

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