Understand and Write Inequalities

TOPIC 4 / MATHEMATICS

Write. Represent. Explain.

45-minute lesson • Original classroom examples

What will we learn today?

- Translate at most, at least, above, and below into symbols.
- 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 museum room permits no more than 35 visitors.

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

Represent the relationship

A museum room permits no more than 35 visitors.

$$v \leq 35$$

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

Worked example

Write an inequality for no more than 35 visitors.

$$v \leq 35$$

Check: Does the result match the original relationship?

Independent practice

1. A rider must be at least 48 inches tall. Write an inequality.

2. A temperature is below −4 degrees. Write an inequality.

Check your reasoning

Question 1

$$h \geq 48$$

Question 2

$$T < -4$$

Group challenge

Explain why “at most 35” includes 35 but “less than 35” does not.

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

Group challenge • solution

$$v \leq 35 \quad \text{vs.} \quad v < 35$$

Compare methods. Does the answer make sense in context?

Additional Practice — If Time Allows

A temperature is below -4 degrees. Write an inequality.

Extension: Create a similar problem with different numbers.

2-minute exit ticket

Write: a cart holds more than 12 kilograms.

Work independently. Show enough steps to explain your thinking.

Exit ticket • answer

$$m > 12$$

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