

Lesson 3-6

Reinforce Understanding

Ratio Reasoning: Convert Measurements within the Same System

I can use ratio reasoning to convert between units within the same measurement system.

Worked model

A bookshelf is 6 feet tall. How many inches is that? (1 foot = 12 inches)

1. Write the conversion factor. 1 ft = 12 in
2. Decide the direction. Feet → inches is LARGER to SMALLER, so multiply.
3. Multiply. $6 \times 12 = 72$
4. Check that it makes sense — inches are small, so the number got bigger. ✓

Answer: 6 feet = 72 inches.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. There are 4 cups in 1 quart. Complete the conversion table.

Complete the table. Show how you found each value.

Quarts	Cups
1	4
3	
6	

Show your work

2. There are 12 inches in 1 foot. How many inches are in 5 feet?

Circle the letter of the best answer. Show how you know.

- A. 7 inches
- B. 17 inches
- C. 50 inches
- D. 60 inches

Show your work

3. There are 1,000 milliliters in 1 liter. How many milliliters are in 3 liters?

Circle the letter of the best answer. Show how you know.

- A. 30 mL
- B. 300 mL
- C. 1,003 mL
- D. 3,000 mL

Show your work
