

Lesson 3-7

Reinforce Understanding

Ratio Reasoning: Convert Measurements Between Systems

I can use ratio reasoning to convert measurements between the customary and metric systems.

Worked model

A room is 5 meters wide. How many feet is that? (1 meter $\approx$ 3.28 feet)

1. Write the conversion factor. 1 m $\approx$ 3.28 ft
2. Ask which unit is BIGGER. A meter is bigger than a foot.
3. A bigger unit becomes MORE of the smaller unit, so multiply. $5 \times 3.28 = 16.4$
4. Check reasonableness: 16.4 ft is more than 5 — correct direction. ✓

Answer: 5 meters $\approx$ 16.4 feet.

Practice

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

1. 1 kilometer $\approx$ 0.6 mile. Complete the ratio table.

Complete the table. Show how you found each value.

Kilometers	Miles
1	0.6
10	
100	

Show your work

2. 1 kilometer $\approx$ 0.6 mile. About how many miles is 5 kilometers?

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

- A. 3 miles
- B. 5.6 miles
- C. 8 miles
- D. 30 miles

Show your work

3. 1 pound $\approx$ 0.45 kilogram. About how many kilograms is 10 pounds?

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

- A. 4.5 kg
- B. 10.45 kg
- C. 22 kg
- D. 45 kg

Show your work
