

Lesson 3-7 • Group 2

Reinforce Understanding

3.7 Small Group • Group 2

I can use ratio reasoning to convert measurements between the customary and metric systems, explain why the method works, and use it on a problem I have not seen before.

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 pound $\approx$ 0.45 kilogram. Complete the ratio table, then use it to place a 31-pound dog.

Complete the table. Show how you found each value.

Pounds	Kilograms
1	0.45
10	
30	
40	

Show your work

2. Converting between systems: sort each conversion by what happens to the number.

Write the name of the correct group on each line.

Groups: The number gets smaller The number gets bigger

- _____ Kilometers $\rightarrow$ miles
- _____ Miles $\rightarrow$ kilometers
- _____ Pounds $\rightarrow$ kilograms
- _____ Kilograms $\rightarrow$ pounds
- _____ Inches $\rightarrow$ centimeters
- _____ Centimeters $\rightarrow$ inches