# 8-5 • Guided Problem Solving

**GPS** **Student Page 302, Exercise 22:**

A truck trailer has a length of 20 feet, a width of $8\frac{1}{2}$ feet, and a height of $7\frac{1}{2}$ feet. A second trailer has a base area of 108 square feet and a height of $8\frac{1}{2}$ feet. Which trailer has a greater volume? How much greater is it?

## Understand

**1.** Circle the information you will need to solve the problem.

**2.** Write the formula used to find the volume of a rectangular solid.

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## Plan and Carry Out

**3.** Substitute the values for the length, width, and height of the first trailer into the formula for the volume of a rectangular solid. What is the volume?

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**4.** Repeat Step 3 for the second trailer.

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**5.** What are the units for the volume of this solid?

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**6.** Which trailer has the greater volume?

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**7.** How much greater is the volume?

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## Check

**8.** How can you check your answer?

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## Solve Another Problem

**9.** A building is $32\frac{1}{2}$ feet tall and has a base area of 420 square feet. What is the volume of the building?

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