

9-5 • Guided Problem Solving

GPS Student Page 322, Exercise 14:

Carpentry Gina used 78 square feet of plywood to build a storage bin to hold her gardening supplies. How much plywood will she need to build a similar box for her hand tools if the dimensions of the box are half the dimensions of the bin?

Understand

1. What are you asked to do?

2. How many square feet of plywood did Gina use? _____

Plan and Carry Out

3. What is the ratio for the surface area of similar solids? _____

4. What are the dimensions of the similar box?

5. What is the ratio of the surface areas? _____

6. Write a proportion. _____

7. Solve. _____

Check

8. How can you tell if your answer is reasonable?

Solve Another Problem

9. In pottery class, Mark made a small cylindrical bowl with a volume of 75 in.^3 and a radius of 2 inches. He also made a larger bowl with a similar shape. It has a diameter of 8 inches. Find the volume of the larger bowl.
