8-4 • Guided Problem Solving

Music A hammer dulcimer is shaped like a trapezoid. The top edge is 17 in. long, and the bottom edge is 39 in. long. The distance from the top edge to the bottom edge is 16 in. What is the area of the dulcimer?

Understand

1. Circle the information you will need to solve the problem.
2. What are you being asked to do?
3. How do you find the area of a trapezoid?

Plan and Carry Out

4. What is the height of the dulcimer?
5. What are the bases of the dulcimer?
6. Substitute the values for the bases and the height into the formula for area.
7. What is the area of the dulcimer?

Check

8. Explain how you chose which measurements are the bases.

Solve Another Problem

9. Suppose the dulcimer had bases of 20 in. and 36 in. with the same height. What would be the area of the dulcimer? How do the areas compare? Explain.