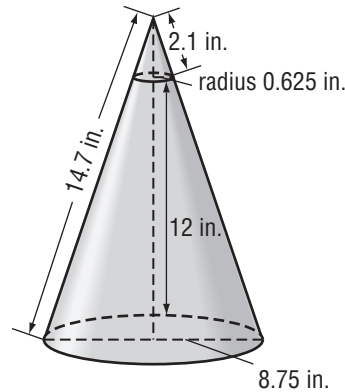# Lesson 5 Problem-Solving Practice

Surface Area of Cones

1. **PARTY HATS** Cone-shaped paper hats have a radius of 8 centimeters and the slant height is 20 centimeters. How many square centimeters of paper are needed to make each hat? Round your answer to the nearest tenth.
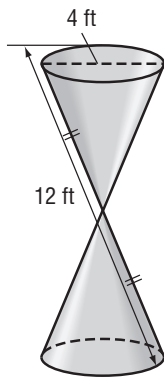**502.7 cm²**

2. **TRAFFIC CONES** A 12-inch highway traffic cone is a "truncated cone". That is, a small cone is cut off the top. Calculate the lateral area of the truncated cone. Round to the nearest tenth.   **197.7 in²**

2.1 in.
radius 0.625 in.
14.7 in.
12 in.
8.75 in.

3. **TEEPEES** Julie trying to build a teepee for a school project on Native Americans. Teepees are approximately the shape of a cone. If the diameter is to be 12 feet and the slant height is about 15.4 feet, what is the lateral area of the cone? Round to the nearest tenth.
290.3 ft²

4. **SCOOPS** Audrey uses a metal scoop to measure the correct amount of food to give to her horse. The scoop is shaped like a cone with a diameter of 6 inches and a slant eight of 8.5 inches. What is the lateral area of the cone? Round to the nearest tenth.   **80.1 in²**

5. **ART** Find the total surface area of the sculpture shown below.   **100.5 ft²**

4 ft
12 ft

6. **COSTUMES** Adrienne is making costumes for the school play. She needs to make eight medieval hats in the shape of cones. She wants each hat to be 18 inches for a slant height and the bases of have a diameter of 7 inches. How much material will she use to make the hats? Round to the nearest tenth.   **1,583.4 in²**