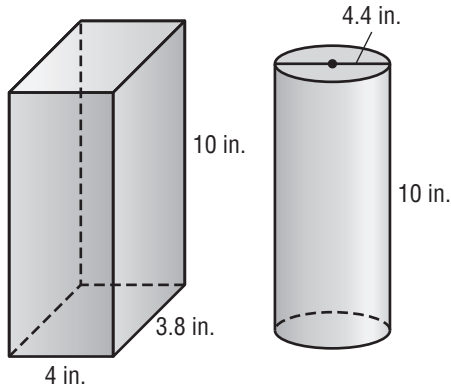# Lesson 4 Problem-Solving Practice

Surface Area of Cylinders

1. **CONTAINERS** A company is comparing the amount of cardboard needed for the two containers shown. The volume of the containers is about the same. Find the surface area of the rectangular prism container. Round to the nearest tenth. **186.4 in²**

4.4 in.

10 in.

10 in.

3.8 in.

4 in.

2. **CONTAINERS** Find the total surface area of the cylindrical container in Exercise 1. Round to the nearest tenth. Which container has the smaller surface area? **168.6 in²; cylinder**

3. **PILLOW** Brooke is making a cylindrical bolster pillow for her couch. The pillow is 18 inches long and has a radius of 5 inches. Find the amount of fabric needed for the pillow. Round to the nearest tenth. **722.6 in²**

4. **STAIRWELL** The stairwell in a museum is in the shape of a cylinder. The diameter is 20 feet and the height is 100 feet. The museum needs to paint the inside of the stairwell. Find total the surface area. Round to the nearest tenth. **6,911.5 ft²**

5. **WATER SLIDE** A tube for a water slide is cylindrical. The tube is 40 yards long and has a radius of 2 yards. Find the lateral surface area. Round to the nearest tenth.
502.7 yd²

6. **TUNNEL** A tunnel over a highway is in the shape of half a cylinder as shown. Find the lateral surface area of the inside of the tunnel. Do not include the bottom which is the highway. Round to the nearest tenth.
15,708.0 ft²

200 ft

50 ft

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