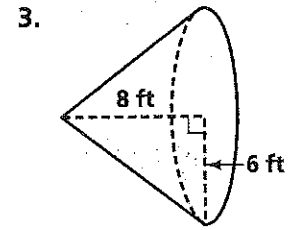
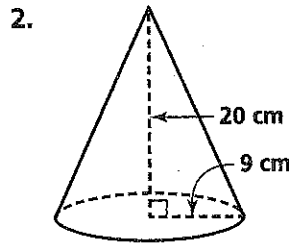
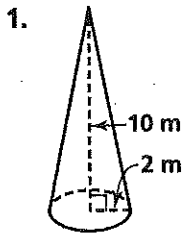


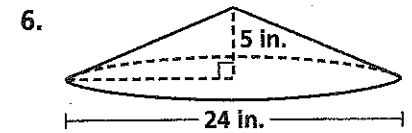
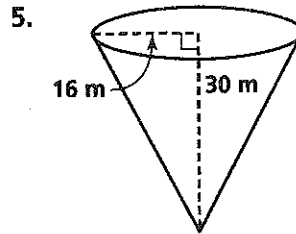
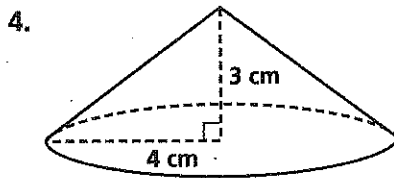
# Practice 10-4

## Surface Areas of Pyramids and Cones

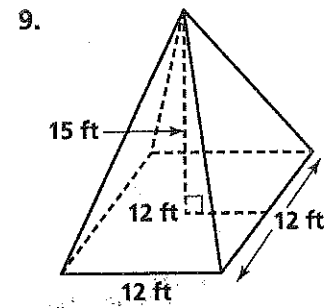
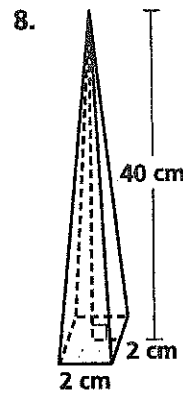
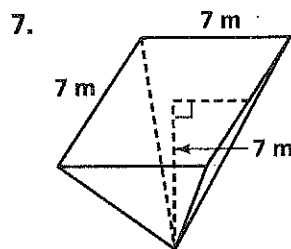
Find the lateral area of each cone to the nearest whole number.



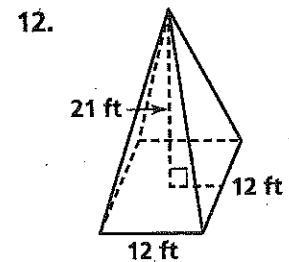
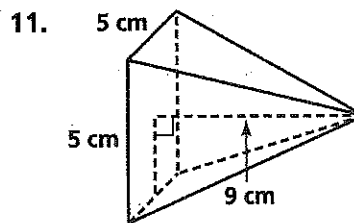
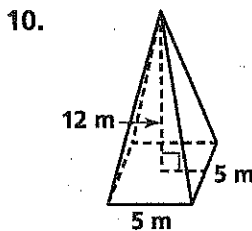
Find the surface area of each cone in terms of  $\pi$ .



Find the lateral area of each regular pyramid to the nearest tenth.



Find the surface area of each regular pyramid to the nearest tenth.



# Reteaching 10-3

## Surface Areas of Prisms and Cylinders

**OBJECTIVE:** Finding lateral areas and surface areas of cylinders and prisms

**MATERIALS:** Centimeter grid paper, scissors, tape

### Example

Draw a net for the cylinder to calculate its surface area.

From the net, we can see that the lateral surface area is a rectangle with length equal to the circumference of the base of the cylinder.

$$\begin{aligned} \text{Area of rectangle} &= b \cdot h \\ &= 2\pi r \cdot h \\ &= 2\pi(3) \cdot 8 \\ &= 48\pi \end{aligned}$$

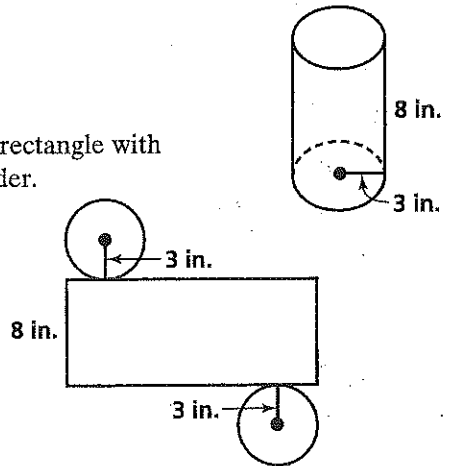
Each base is a circle with radius 3 in.

$$\begin{aligned} \text{Area of base} &= \pi r^2 \\ &= \pi(3)^2 \\ &= 9\pi \end{aligned}$$

The surface area is the sum of the lateral area and the area of the two bases.

$$\begin{aligned} \text{S.A.} &= \text{L.A.} + 2B \\ &= 48\pi + 2(9\pi) \\ &= 66\pi \approx 207.3 \end{aligned}$$

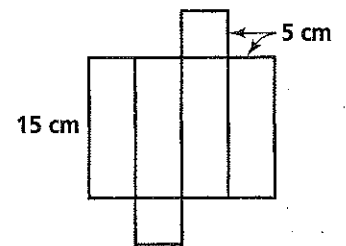
The surface area of the cylinder is about 207.3 in.<sup>2</sup>



### Exercises

Use the net at the right to complete the following.

1. Draw the net at the right on centimeter grid paper.
2. Cut out the net, and tape it together to make a prism.
3. Find the lateral area and surface area of the prism.



Find the surface area of each figure. Round your answers to the nearest tenth, if necessary.

