Module 13   Perimeter, Area, and Volume
Lesson 6   Surface Area: Pyramids and Cones

1. Find the lateral area and surface area
of the square pyramid.
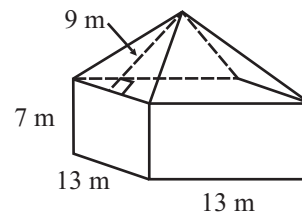

12 in.

20 in.

20 in.
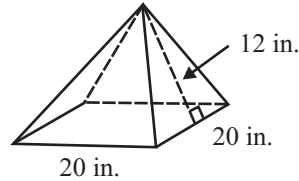
2. A square pyramid has a base whose perimeter is 32 square yards. The slant height of
the pyramid is six yards. Find the surface area of the pyramid.

3. The base of a tent is square with a perimeter of 24 feet. The slant height is eight feet.
What is the surface area of the tent?
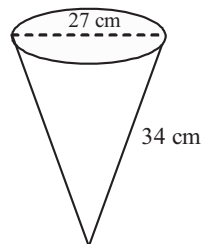
Complete the table.

	Square Pyramids		
	Base	Slant Height	Surface Area
4.	15 cm by 15 cm	10 cm	
5.	$A = 121 \text{ in.}^2$	14 in.	
6.	$P = 100 \text{ ft}$		825 ft^2

7. Find the surface area of the figure.

9 m

7 m

13 m

13 m

Find the lateral area.

8.

27 cm

34 cm

9.

7.5 in.

2 in.
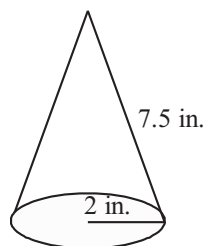
Find the surface area.

10.

16 ft

50 ft

11.

45 m

51 m

12.

24 in.   10 in.   24 in.
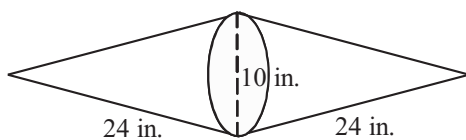
13.
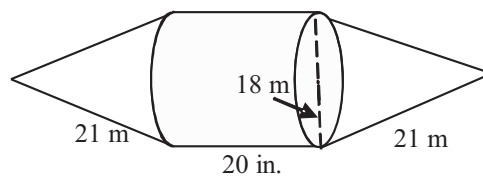
21 m   18 m   21 m

20 in.
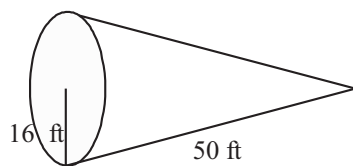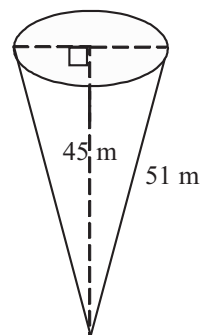
14. The lateral area of an ice cream cone is 86.35 square centimeters. Estimate the diameter of the cone if the slant height is 10 centimeters.

Independent Practice
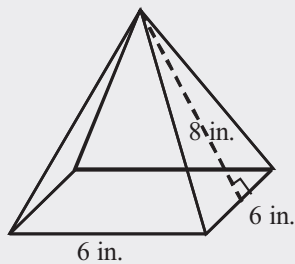
Journal

1. What is the difference between the height of a pyramid and the slant height of a pyramid?

2. Explain why the surface area of the figure below can be found using the formula $SA = \pi r l + 2\pi r h + \pi r^2$.
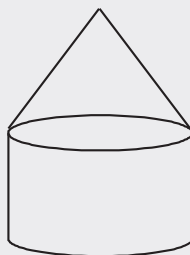
3. Explain the error made in finding the surface area of the pyramid below. Then, find the surface area.

8 in.

6 in.

6 in.

$$SA = \frac{1}{2}(12)(8) + 36$$
$$= 48 + 36$$
$$= 84 \text{ in.}^2$$

Cumulative Review

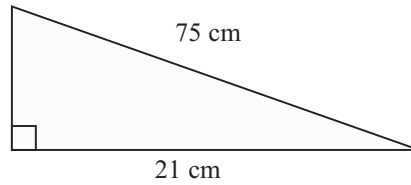1. Find the perimeter of an equilateral triangle whose side lengths are each $2\frac{1}{4}$ feet long.

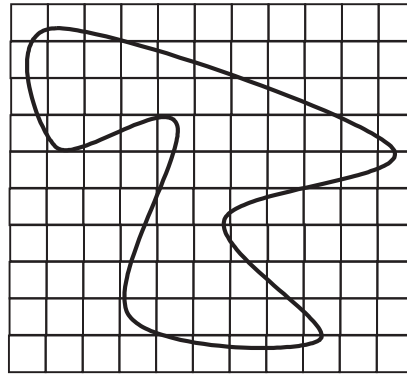**2.** A wheel has a diameter of 22 inches. Find the wheel's circumference.
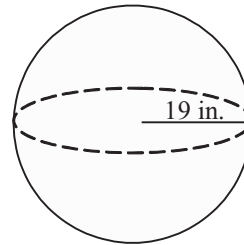
3. Find the area of the triangle.

75 cm

21 cm

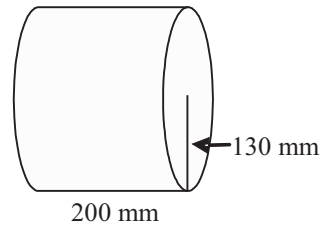**4.** Estimate the area of the shape.
Each ☐ is 1 ft².

5. Find the surface area of the sphere whose radius is 19 inches.

19 in.

6. Find the volume of the cylinder whose radius is 130 millimeters and whose height is 200 millimeters.

130 mm

200 mm

Additional Work Area