Objective 1  Find the Surface Area of a Pyramid

(1) A(n) ____________ is a polyhedron in which the base is any polygon and the lateral faces are triangles that meet at a common point.

(1) Surface Area of a Pyramid

The surface area $SA$ of a regular pyramid is

$$SA = B + \frac{1}{2} P\ell$$

where $B$ is the area of a base, $P$ is the perimeter of the base, and $\ell$ is the slant height.
Section 11.3 Surface Areas of Pyramids and Cones

Work Video Exercise 1 with me.

1. Find the surface area of the pyramid to the nearest whole number.

![Pyramid diagram](image)

Pause and work Video Exercise 2.

2. Find the lateral area of the pyramid to the nearest whole number.

![Pyramid diagram](image)

Play and check.
Objective 2  Find the Surface Area of a Cone

11 The ____________ of a(n) ____________ is a circle and the one vertex is not in the same plane as the base.

Right Cone

Surface Area of a Cone

The surface area of a cone is

\[ SA = B + \pi r \ell \]

where \( B \) is the area of the circular base \( \left( \pi r^2 \right) \), \( r \) is the radius of the base, and \( \ell \) is the slant height.

Work Video Exercise 3 with me.

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

Copyright © 2014 Pearson Education, Inc.
Section 11.3 Surface Areas of Pyramids and Cones

Pause and work Video Exercise 4.

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

Pause and work Video Exercise 5.

5. A traffic cone with a height of 28 in. is ideal for traffic control. Find the lateral area of a cone with a perpendicular height of 28 in. and a diameter of 10 in. Round your answer to the nearest whole number. (Hint: The height given is not the slant height.)