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

Guided Practice

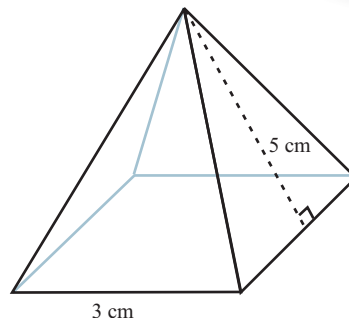
13.6

Set 1

- 1 Find the surface area of the square pyramid.

$$\begin{aligned}
 SA &= B + \frac{1}{2}Pl \\
 &= (3 \text{ cm})^2 + \frac{1}{2} \times (4 \times 3 \text{ cm}) \times 5 \text{ cm} \\
 &= 9 \text{ cm}^2 + 30 \text{ cm}^2 \\
 &= 39 \text{ cm}^2
 \end{aligned}$$

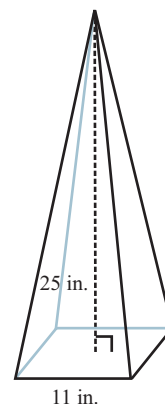
The surface area is 39 cm^2 .



- 2 Find the surface area of the square pyramid.

$$\begin{aligned}
 SA &= B + \frac{1}{2}Pl \\
 &= (11 \text{ in.})^2 + \frac{1}{2} \times (4 \times 11 \text{ in.}) \times 25 \text{ in.} \\
 &= 121 \text{ in.}^2 + 550 \text{ in.}^2 \\
 &= 671 \text{ in.}^2
 \end{aligned}$$

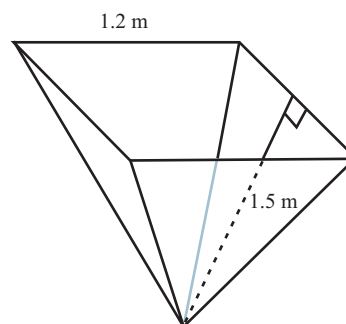
The surface area is 671 square inches.



- 3 Find the lateral area of the square pyramid.

$$\begin{aligned}
 L &= \frac{1}{2}Pl \\
 &= \frac{1}{2} \times (4 \times 1.2 \text{ m}) \times 1.5 \text{ m} \\
 &= 3.6 \text{ m}^2
 \end{aligned}$$

The lateral area is 3.6 m^2 .



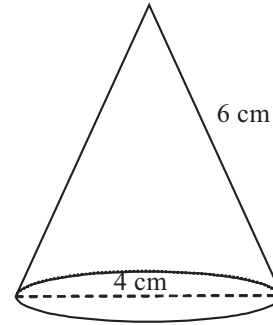
Set 2

1

Find the surface area of the cone.

$$\begin{aligned}
 SA &= \pi r^2 + \pi rl \\
 &= 3.14(2 \text{ cm})^2 + 3.14 \times 2 \text{ cm} \times 6 \text{ cm} \\
 &= 12.56 \text{ cm}^2 + 37.68 \text{ cm}^2 \\
 &\approx 50.24 \text{ cm}^2
 \end{aligned}$$

The surface area is about 50.24 cm^2 .

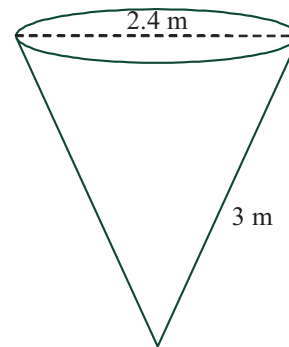


2

Find the lateral area of the cone to the nearest square meter.

$$\begin{aligned}
 L &= \pi rl \\
 &= 3.14 \times 1.2 \text{ m} \times 3 \text{ m} \\
 &\approx 11.304 \text{ m}^2
 \end{aligned}$$

The lateral area is about 11 m^2 .



3

Find the surface area of the figure.

$$\begin{aligned}
 L &= \pi rl \\
 &= 3.14 \times 5 \text{ ft} \times 13 \text{ ft} \\
 &= 204.1 \text{ ft}^2
 \end{aligned}$$

$$2 \times 204.1 \text{ ft}^2 \approx 408.2 \text{ ft}^2$$

The surface area is about 408.2 ft^2 .

