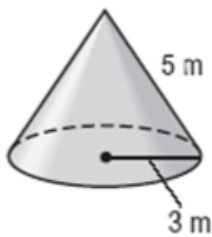


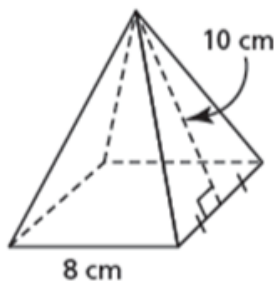
Warm up

February 12

Find the surface of the following shapes.



$$\begin{aligned}
 SA &= \pi r^2 + \pi r s \\
 &= \pi (3)^2 + \pi (3)(5) \\
 &= 9\pi + 15\pi \\
 &= 24\pi \\
 &= 75.4 \text{ m}^2
 \end{aligned}$$



$$\begin{aligned}
 A &= \left(\frac{1}{2} b h \right) 4 + lw \\
 &= \frac{1}{2} (8)(10)(4) + (8)(8) \\
 &= 160 + 64 \\
 &= 224 \text{ cm}^2
 \end{aligned}$$

Problems with the homework...

Surface area of pyramids & cones.

Name _____

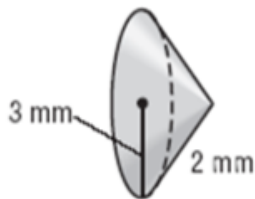
Quiz

February 12

Find the surface area of each solid. Round to the nearest tenth if necessary.

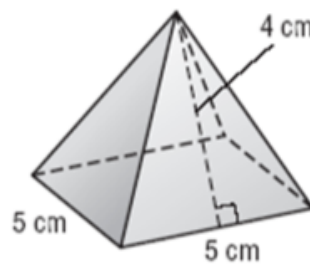
$$S.A. = \pi r^2 + \pi r s$$

1.



$$\begin{aligned} S.A. &= \pi(3)^2 + \pi(3)(2) \\ &= 9\pi + 6\pi \\ &= 15\pi \\ &= 47.1 \text{ mm}^2 \end{aligned}$$

2.



$$\begin{aligned} A &= \frac{1}{2}bh \times 4 + lw \\ &= \frac{1}{2}(5)(4) \times 4 + (5)(5) \\ &= 40 + 25 \\ &= 65 \text{ cm}^2 \end{aligned}$$

The diameter of a baseball is approximately 3 in.
Determine the surface area of a baseball to the nearest square inch.



✓ **SOLUTION**

(Erase to reveal)

$$\begin{aligned}\text{Surface Area} &= 4\pi r^2 \\ \text{(Sphere)} & \\ &= 4\pi(1.5)^2 \\ &= 28.3 \text{ in}^2\end{aligned}$$

2. The surface area of a soccer ball is approximately 250 square inches. What is the diameter of a soccer ball to the nearest tenth of an inch?

$$\begin{aligned} S.A. &= 4\pi r^2 \\ 250 &= \frac{4\pi r^2}{4\pi} \\ \frac{250}{4\pi} &= r^2 \end{aligned}$$

→

$$\begin{aligned} r &= \sqrt{\frac{250}{4\pi}} \\ &= 4.5 \\ \text{diameter} &= 2(4.5) \\ &= 9.0 \text{ in} \end{aligned}$$



[

Class / Homework

Worksheet

Surface Area of Cones & Spheres