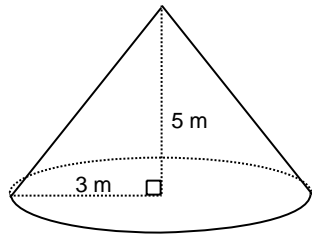


Right Pyramids and Cones

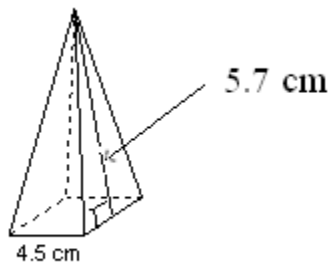
1. Determine the **surface area** and **volume** of the following right cones and pyramids.

a.



b.

*note: This is a right **square** pyramid.



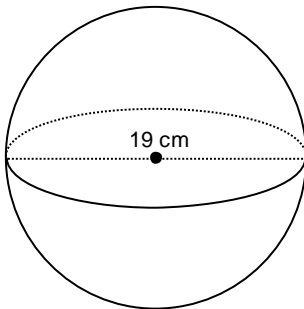
2. A right rectangular pyramid has base dimensions 8 ft. by 6 ft. and a height of 12 ft. Calculate the surface area of the pyramid to the nearest square foot.

3. A right pyramid has a square base with side length 12 m and a height of 7 m. Calculate the surface area of the pyramid to the nearest square metre.

4. The surface area of a right cone is 400.2 m^2 . The radius of the cone is 6.0 m. Determine the height of the cone to the nearest metre.

Spheres and Hemispheres

1. Determine the surface area and volume of the following sphere:

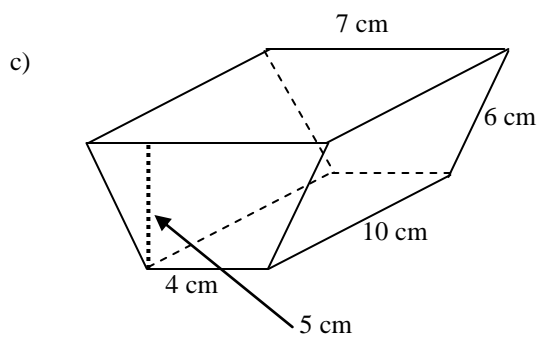
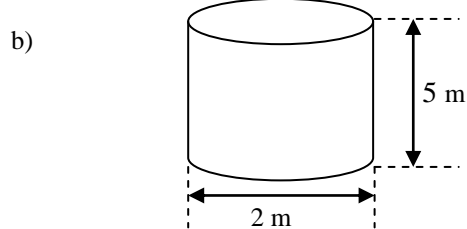
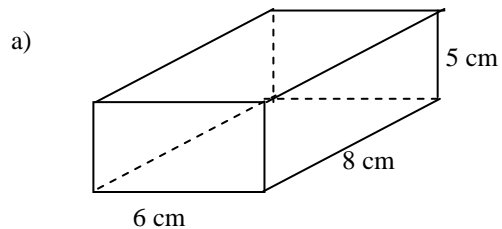


2. A solid hemisphere has radius 7 ft. Determine the surface area of the hemisphere to the nearest square foot.

3. A sphere has a surface area of 10.1 m^2 . What is the radius of the sphere to the nearest tenth of a metre?

Cylinders, Cubes and Prisms

Find the **surface area** and **volume** of the following shapes.



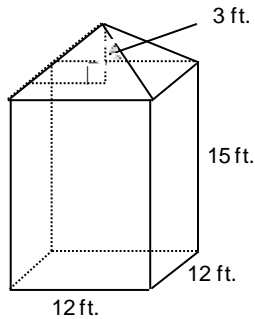
1. The Grampbell's soup company needs to make labels for their soup cans. If their cans have a **circumference** of 25 cm and a **height** of 10 cm, calculate the following...
 - a. What is the radius of the soup can?

 - b. Using your **rounded** answer from part a, calculate the surface area of the soup can label.

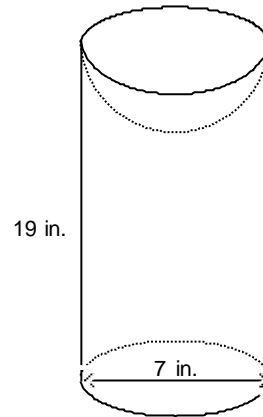
 - c. If it costs $\$0.00045/\text{cm}^2$ to print the soup can labels, how much will it cost to make 950 labels?
Use your rounded answer from part c.

Composite Shapes

1. Calculate the **surface area** and **volume** of the following 3-D composite shape.



2. A right cylinder has a hemisphere removed from the top. Determine the **volume** of the object, to the nearest cubic inch.



3. A right square pyramid with a height of 5.8 m and side length of 2.6 m is completely filled with water. If the water is allowed to drip from the pyramid into a rectangular prism with a length of 3 m and a width of 2 m, what height will the water reach? *Assume the entire volume of water is transferred into the rectangular prism.*

ANSWER KEY

Right Pyramids and Cones 1. a. $SA = 83.2 \text{ m}^2$, $V = 47.1 \text{ m}^3$ b. $SA = 71.6 \text{ cm}^2$, $V = 35.4 \text{ cm}^3$
 2. $SA = 223 \text{ ft}^2$ 3. $SA = 365 \text{ m}^2$ 4. $h = 14 \text{ m}$

Spheres and Hemispheres 1. $SA = 1134 \text{ cm}^2$, $V = 3591 \text{ cm}^3$ 2. $SA = 462 \text{ ft}^2$ 3. $r = 0.9 \text{ m}$

Cylinders, Cubes and Prisms 1. a) $SA = 236 \text{ cm}^2$, $V = 240 \text{ cm}^3$ b) $SA = 37.7 \text{ m}^2$, $V = 15.7 \text{ m}^3$ c) $SA = 285 \text{ cm}^2$, $V = 275 \text{ cm}^3$
 2. a) $r = 4.0 \text{ cm}$ b) 251.3 cm^2 c) $\$107.43$

Composite Shapes 1. $SA = 1025 \text{ ft}^2$, $V = 2304 \text{ ft}^3$ 2. $V = 641 \text{ in}^3$ 3. Height of water = 2.2 m