

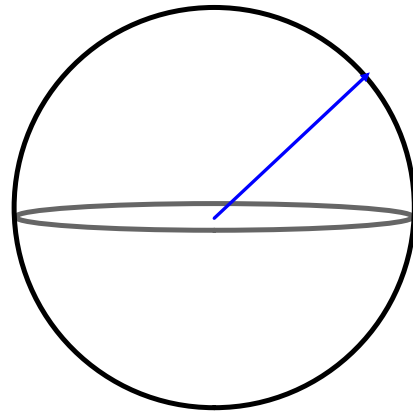
## Volume of a Sphere

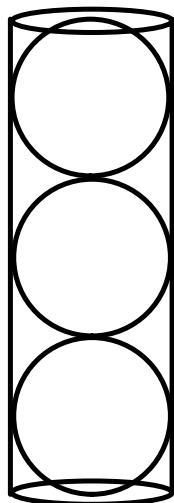
Learning Goal:

By the end of today, I will be able to find the volume of a sphere when given either the radius or diameter.

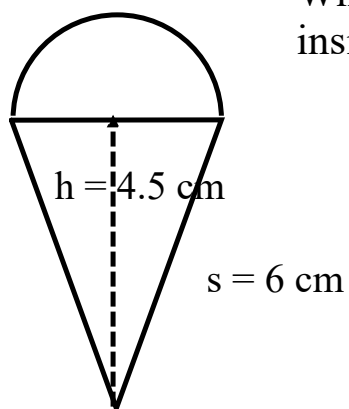
## Volume of a Sphere

$$V = \frac{4}{3} \pi r^3$$





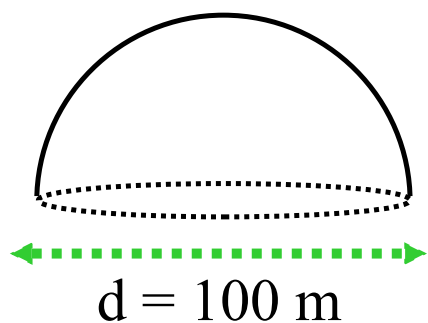
Find the amount of empty space in the tennis ball container. The radius of a tennis ball is 3.4 cm.



What is the volume of ice cream that can be fit inside and on top of the ice cream cone?

## Surface Area of a Sphere

$$A = 4\pi r^2$$



I wish to paint the outside of the Golf Dome. How much surface area do I have to paint?

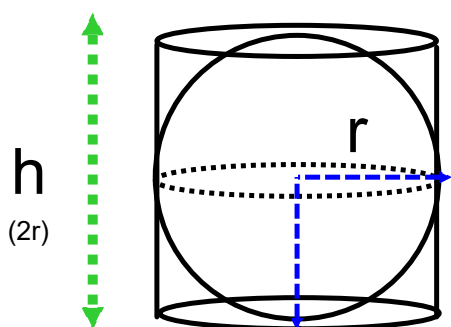
I wish to paint all of the inside of the Golf Dome. How much surface area do I have to paint?

What is the radius of a circle that has the same area as a square with a side length of 12 cm?

Homework

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Cylinder

Sphere

Volume  
Formula

$$v = \pi r^2 h$$

$$v = \frac{4}{3} \pi r^3$$

$$v = \pi r^2 (2r)$$

$$v = 2\pi r^3 > v = \frac{4}{3} \pi r^3$$