

Name: \_\_\_\_\_

## ***Lesson Guide***

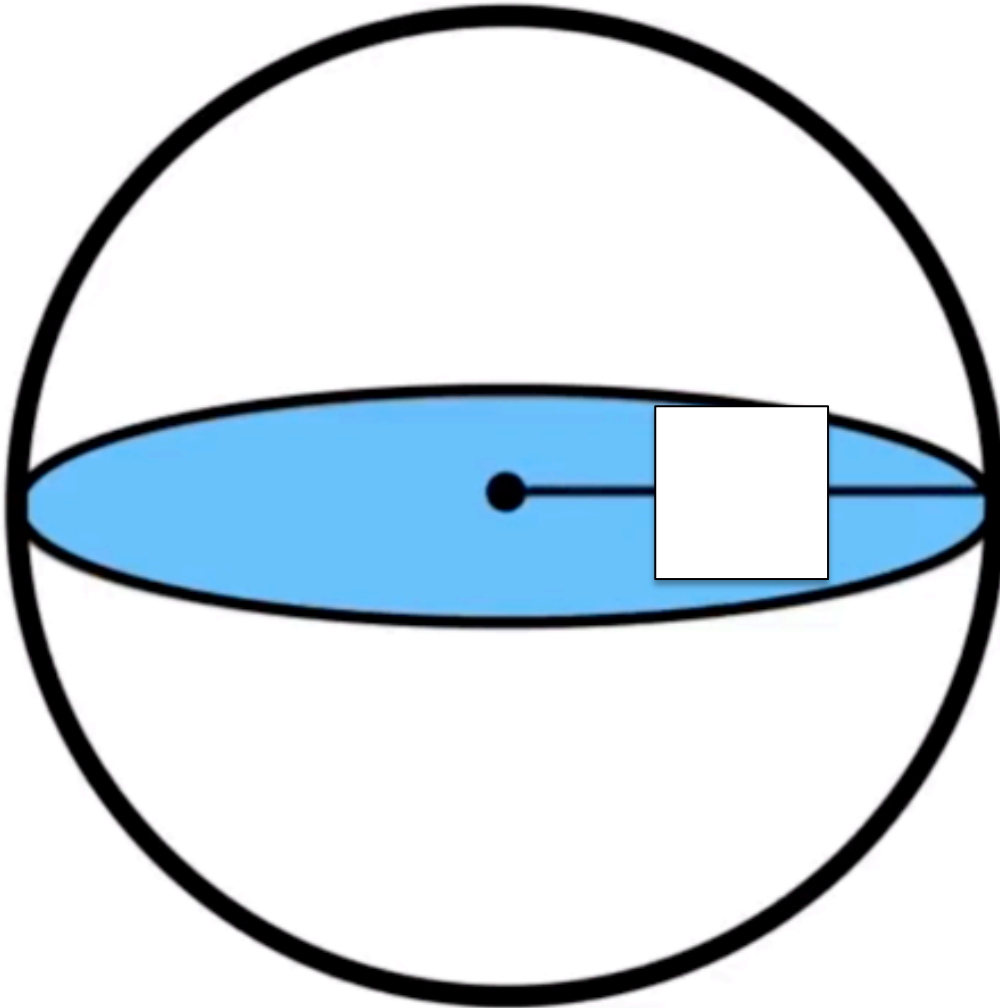
This lesson guide accompanies the following video lesson:

### **Volume and Surface Area of Spheres**



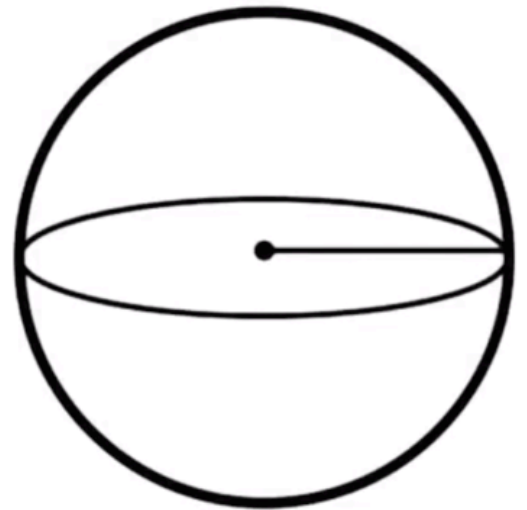
#### ***Key Questions***

- What does a sphere look like?
- How can you find the volume of a sphere?
- How can you find the surface area of a sphere?

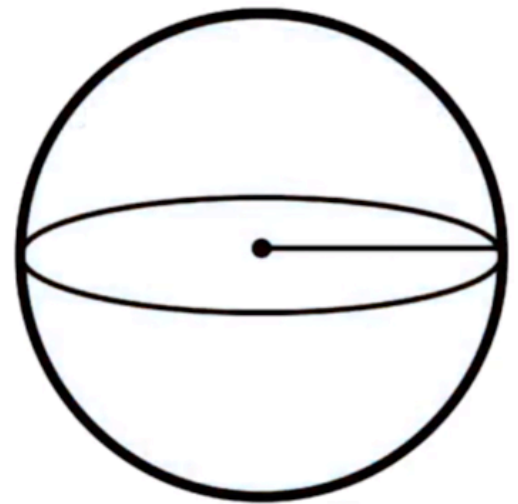


***What is the difference between VOLUME and SURFACE AREA?***

**VOLUME**



**SURFACE  
AREA**



## Formula Reference

# VOLUME

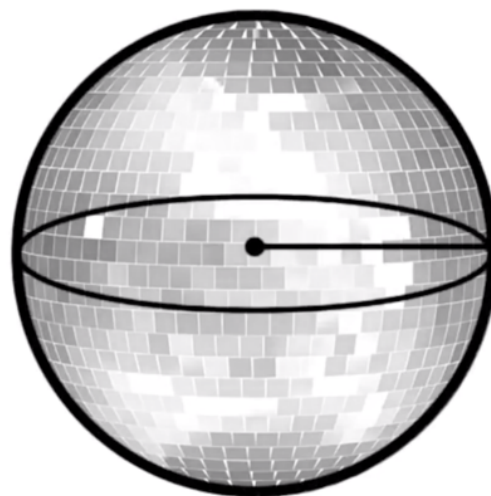
$$V = \frac{4}{3}\pi r^3$$

# SURFACE AREA

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

### Practice Problem #1

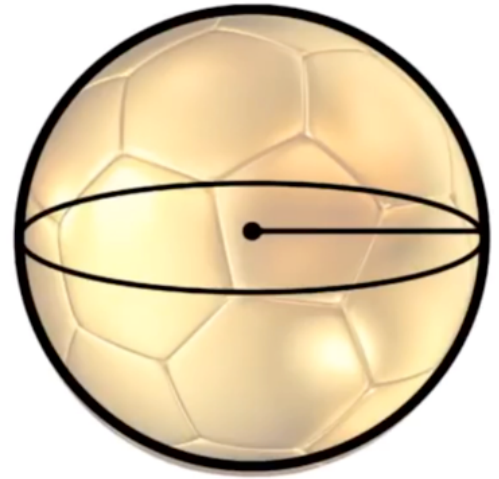
What is the surface area of a disco ball with a radius of 10 feet?



**My Answer=** \_\_\_\_\_

## Practice Problem #2

How many cubic centimeters of air would be needed to completely fill a soccer ball with a diameter of 22cm?

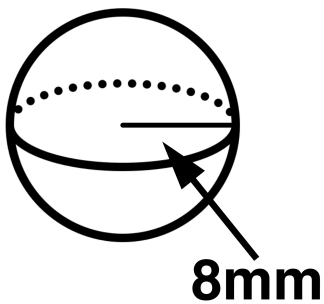


My Answer= \_\_\_\_\_

## YOUR TURN!

Find the volume and surface area of each of the following:

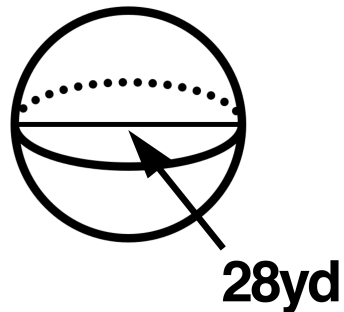
1.)



V= \_\_\_\_\_

A = \_\_\_\_\_

2.)



V= \_\_\_\_\_

A = \_\_\_\_\_

## **ANSWER KEY**

**Practice Problem #1:** Surface Area  $\approx 1,256.6 \text{ ft}^2$

**Practice Problem #2:** Volume  $\approx 5,575.3$  cubic centimeters

**Your Turn!**

1.)  $V \approx 2144.66$  cubic mm,  $A \approx 804.25$  square mm

2.)  $V \approx 11494.04$  cubic yd,  $A \approx 2463.01$  square yd