

# Agenda

## Homework:

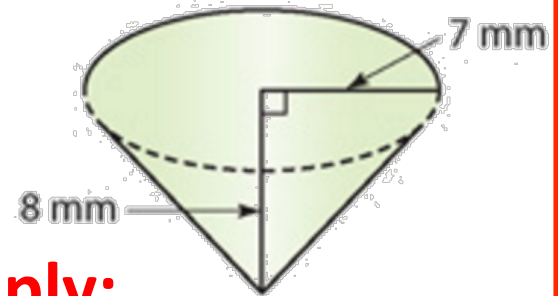
- GM pg. 415 #11-18
- AM

## Materials:

- Go Math book
- Calculator (if needed)

## Do Now:

1. Tear out Go Math pages 414 & 415
2. Take out homework
3. Find the volume



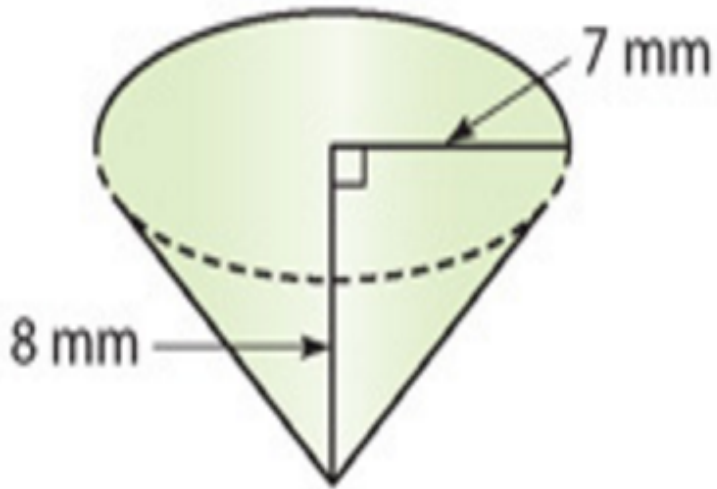
4. Multiply:

$$\frac{4}{3}(3.14 * 3^3)$$

# Do Now

1. Find the volume

2. Solve:



$$\frac{4}{3}(3.14 * 3^3)$$

# Homework Review

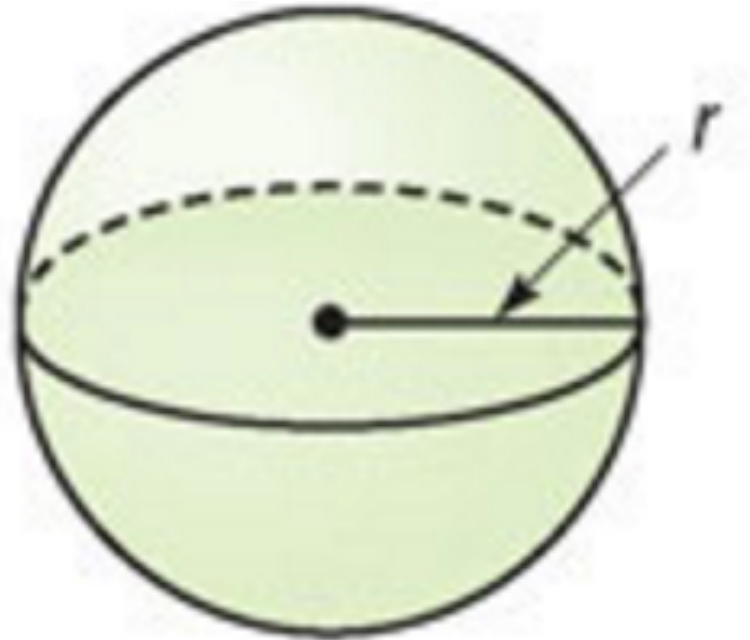


# What is a sphere?

Module 13.3

pg.411

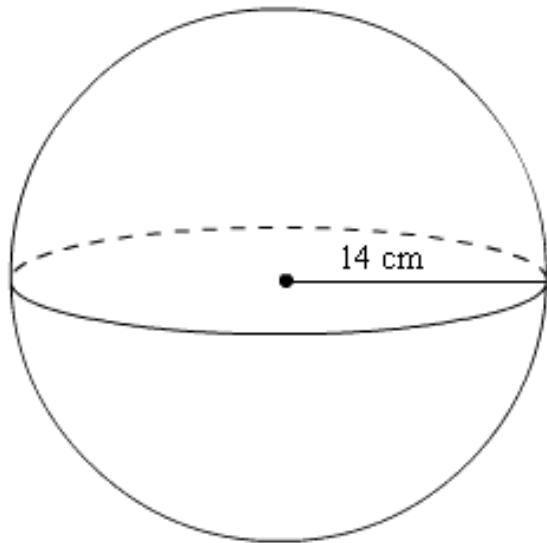
- A 3D shape with **all points the same distance from the center**. The **radius** of a sphere is the **distance from the center to any point on the sphere**



# How do you find the volume of a sphere?



- Volume =  $\frac{4}{3} \pi r^3$  units <sup>3</sup>



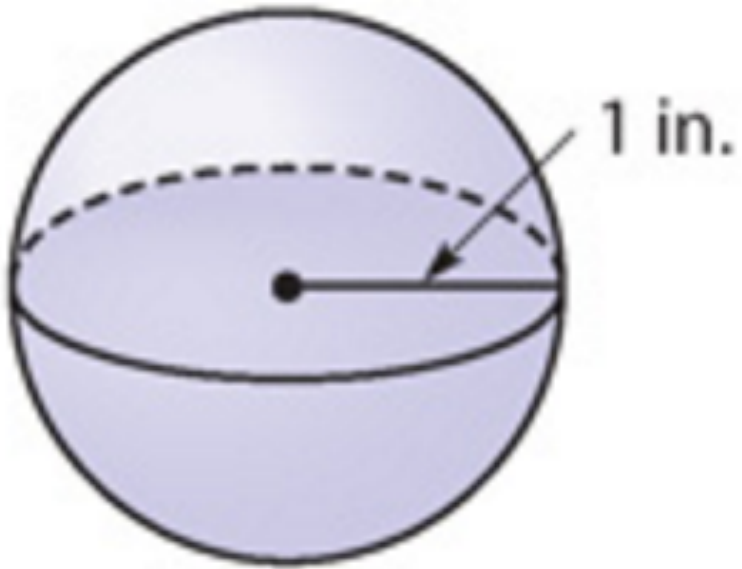
$$\frac{4}{3} (3.14 * 14^3)$$
$$\frac{4}{3} (3.14 * 2744)$$
$$\frac{4}{3} (8616.16)$$

11,488.2 cm<sup>3</sup>

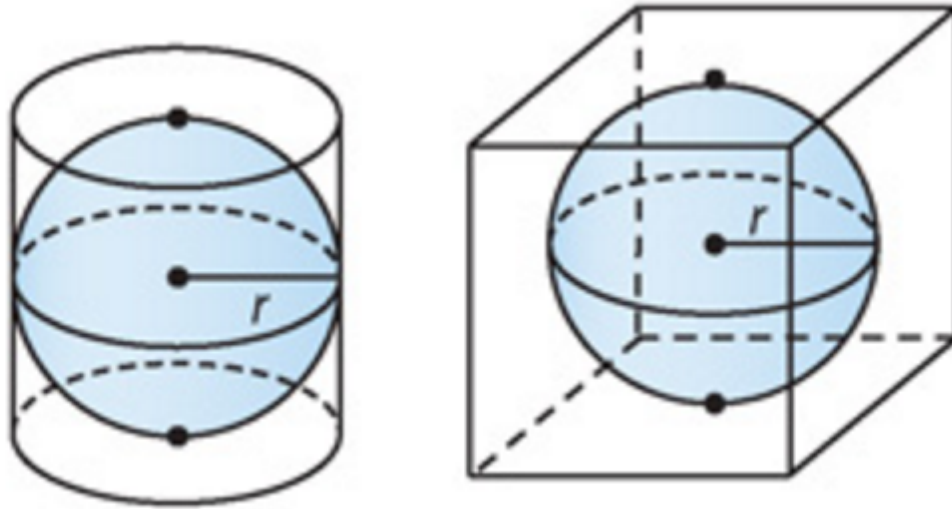


## Guided Practice #3

Volume:  $\frac{4}{3} \pi r^3$



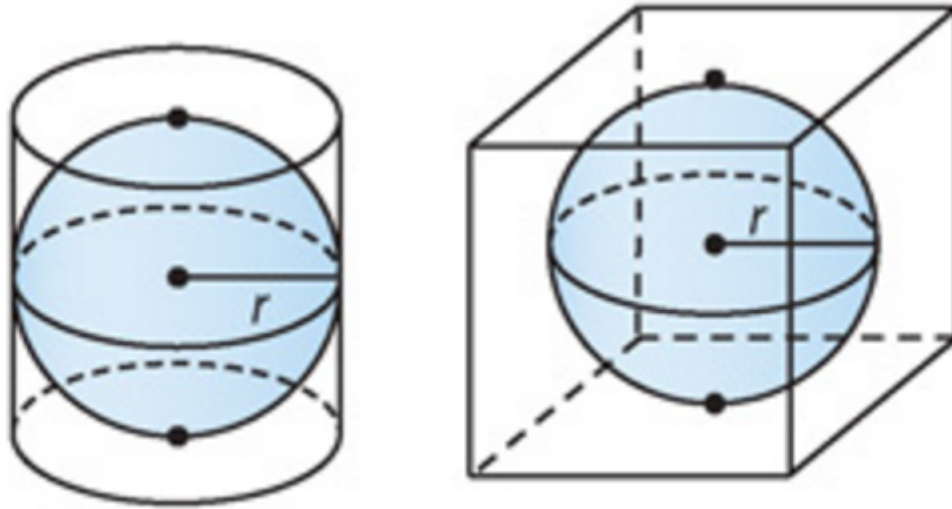
# Guided Practice #9



What we know

- In your groups, create a list of what information you know about the sphere, cylinder, and cube. Come up with AS MANY things as you can.

# Guided Practice #9



- What is the volume of the cylinder?
- What is the volume of the box?



# Brain Break

- Three point competition:

WHY? Because when you have a **point** (cone or pyramid) you divide by **3**.

# How many gumballs will it hold?



Jumbo Giant Gumball Machine

“At 79 inches tall (6’10”), our Jumbo Giant Gumball Machine is one HUGE gumball machine that will tower over children and adults alike! This gumball machine has a massive globe that can hold \_\_\_\_\_ gumballs, but comes with a smaller inner globe to allow you to stock it with \_\_\_\_\_ gumballs to save money and still make it look full (inner globe takes up space and pushes gumballs to outer globe). This is the same giant gumball machine seen in arcades, amusement parks, and shopping malls.”

# How many gumballs will it hold?

**In your group (under the brainstorm section of your worksheet) determine:**

- **What information** would be **useful/** needed to figure out how many gumballs would fit into the gumball machine?
- How many gumballs do you **think** would fit into the gumball machine?
- Is there an answer that would be **too high?**
- Is there an answer that would be **too low?**



Jumbo Giant Gumball Machine

# How many gumballs will it hold?

## Given information:

- The globe has a **diameter of sphere is 35"**
- Each gumball has a **diameter of 1"**
- Formula for volume of a sphere:



Jumbo Giant Gumball Machine

# How many gumballs will it hold?

**Actual Answer:**

**23,00 gumballs**

Why?



Jumbo Giant Gumball Machine

# How many gumballs will it hold?

- What strategies did your group use to solve the problem?
- Was your answer too high, too low?



Jumbo Giant Gumball Machine