



# Sadiq Public School

Do the right, fear no man

**Subject: Mathematics**

**Class: C3**

**Day: Saturday(16/11/24)**

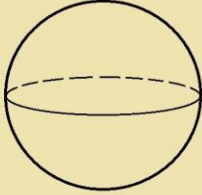
## Lesson: Mensuration

A) **Inquiry:** Mensuration is a division of mathematics that studies geometric figure calculation and its parameters such as area, length, volume, lateral surface area, surface area, etc. Can you find volume of sphere? How will you find total surface area of sphere and hemisphere? How to draw a net of sphere?

B) **Information:**

**Finding volume and total surface area of Sphere and hemisphere:**

### Volume and Surface Area of Sphere



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

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

Given that the volume of a sphere is  $562.5\pi \text{ cm}^3$ , find its surface area in terms of  $\pi$ .



$$\text{Volume of the sphere} = \frac{4}{3} \pi r^3$$

$$562.5\pi = \frac{4}{3} \pi r^3$$

$$\text{(\div } \pi) \quad 562.5 = \frac{4}{3} r^3$$

$$\text{(\times } \frac{3}{4}) \quad \frac{3}{4} \times 562.5 = r^3$$

$$421.875 = r^3$$

$$\text{(\sqrt[3]{})} \quad \sqrt[3]{421.875} = r$$

$$7.5 = r \Rightarrow r = 7.5 \text{ cm}$$

$$\text{Volume of a sphere} = \frac{4}{3} \pi r^3$$

$$\text{Surface area of a sphere} = 4\pi r^2$$

$$\text{Surface area of sphere} = 4\pi r^2$$

$$= 4 \times \pi \times (7.5^2)$$

$$= 4 \times \pi \times 56.25$$

$$= \boxed{225\pi \text{ cm}^2}$$

## Surface Area and Volume Hemisphere



$$\text{Surface area of hemisphere} = 3\pi r^2$$

$$\text{Volume of Hemisphere} = \frac{2}{3} \pi r^3$$

**How to draw net of sphere:**

Net of sphere can not be drawn because it does not have any flat surface.

**C) Synthesizing:**

1. Search from different sources about the above topic and record ideas.
2. Edit notes and combine concepts that are similar.
3. Synthesize by combining notes with what you already know about the topic.
4. Think about your new ideas and connect them to what you already know.

**D) Practicing:** Try to clear your basic concepts before moving ahead with the formulas. This will help you understand the sense of the formula. List down all formulas of this topic from past papers on your notebook and whenever you are free, glance at them once. Solve Q 9 of 4024\_22\_qp\_22 but there is no need to send it to your subject teacher.