

HW

Q Find the radius of a sphere whose surface area is 154 cm^2

Let radius of sphere be r

Surface Area = 154 cm^2

$$4 \times \frac{22}{7} \times r^2 = 154$$

$$r^2 = \frac{154 \times 7}{4 \times 22}$$

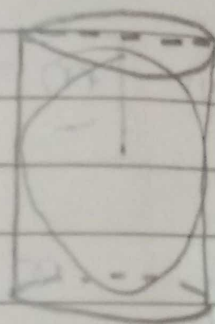
$$r^2 = \frac{49}{4}$$

$$r = \frac{7}{2}$$

$$r = 3.5 \text{ cm}$$

Q A right circular cylinder just encloses a sphere of radius r . Find

- i) Surface area of sphere
- ii) Curved surface area of cylinder
- iii) Ratio of areas obtained (i) and (ii)



i) Surface area of sphere = $4\pi r^2$

ii) Curved surface area of cylinder =

$$2\pi rh = 2\pi r \times 2r = 4\pi r^2$$

iii) $\frac{\text{Surface area of sphere}}{\text{Curved surface area of cylinder}} = \frac{4\pi r^2}{4\pi r^2} = 1$

Ratio = 1:1