

Solution: Yesterday 7/7/2024

$$\begin{aligned}\text{Circumference} &= \frac{\text{Length}}{\text{turns}} \\ &= \frac{4400 \text{ cm}}{50} \\ &= 88 \text{ cm}\end{aligned}$$

Diameter
Radius

$$\begin{aligned}\pi d &= C \\ \pi \times \frac{22}{7} d &= 88 \text{ cm} \times 7 \\ d &= \frac{88 \text{ cm} \times 7}{22} \\ d &= 4 \text{ cm} \times 7 \\ d &= 28 \text{ cm}\end{aligned}$$

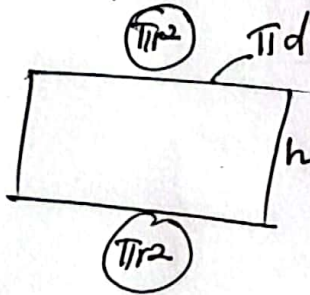
Radius

$$\begin{aligned}\frac{D}{2} \\ &= \frac{28 \text{ cm}}{2} \\ &= 14 \text{ cm}\end{aligned}$$

Volume

$$\begin{aligned}\pi r^2 \times h \\ &= \left(\frac{22}{7} \times 14^2 \times 20 \right) \\ &= (44 \times 280) \text{ cm}^3 \\ &= 12320 \text{ cm}^3\end{aligned}$$

b Total Surface Area



$$\begin{aligned}&2\pi r^2 + \pi d \times h \\ &\left(2 \times \frac{22}{7} \times 14^2 \times 14 \text{ cm} \right) + \left(\frac{22}{7} \times 28 \text{ cm} \times 20 \text{ cm} \right) \\ &= (44 \times 28 \text{ cm}^2) + (88 \text{ cm} \times 20 \text{ cm}) \\ &= 1232 \text{ cm}^2 + 1760 \text{ cm}^2 \\ &= 2992 \text{ cm}^2\end{aligned}$$

② No of spaces

$$\text{Distance} = \text{No of space} \times \text{Intervals.}$$

$$\begin{aligned}&> (23-7) \times 10 \text{ m} \\ &= 16 \times 10 \text{ m} \\ &= 160 \text{ m}\end{aligned}$$