



Volume of Solids

Volume of a cylinder

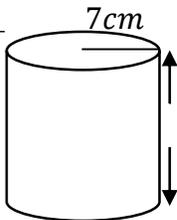
☞ Volume of a cylinder, if the base radius is r and perpendicular height is $h = \pi r^2 h$

Volume of a triangular prism

☞ Volume of the Prism = Area of the triangular cross section \times perpendicular height (length)

Examples:-

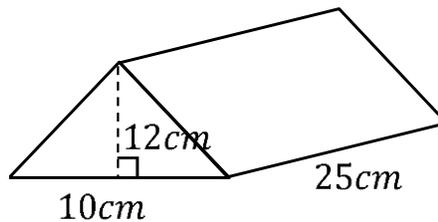
1.



Find the volume of the cylinder

$$\begin{aligned} & \pi r^2 h \\ &= \frac{22}{7} \times 7 \times 7 \times 20 \\ &= \underline{\underline{3080 \text{ cm}^3}} \end{aligned}$$

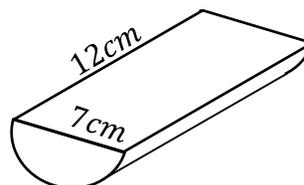
2. Find the volume of the prism



$$\begin{aligned} &= \frac{1}{2} \times 10 \times 12 \times 25 \\ &= \underline{\underline{1500 \text{ cm}^3}} \end{aligned}$$

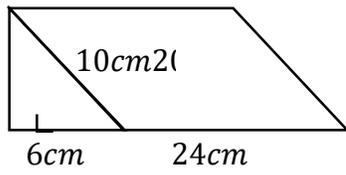
Exercises :-

1. Find the volume of the right circular cylinder of radius 14cm and height 25cm.
2. The diameter of the cylindrical shaped water tank is 105cm and height is 1m. Find the capacity of the tank in liters. ($1 \text{ cm}^3 = 1 \text{ ml}$)
3. If the mass of 1 cm^3 of this metal solid is 3g, find the mass of this solid.



4. Area of the cross section of the triangular prism is 54 cm^2 and its volume is 702 cm^3 . Find the length of the prism.

5.



Find the volume of the prism.

6. The mass of 1 cm^3 of this glass prism is 1.5 g . Find the total mass of this prism.

