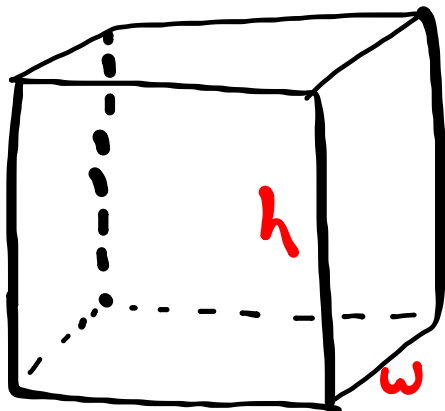


VOLUME

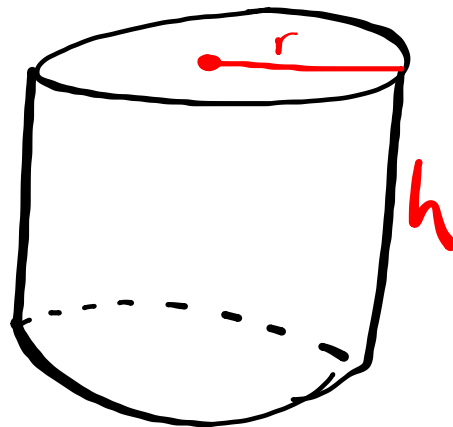
Volume is the measure of space occupied by a solid. Volume is measured in cubic units.

Rectangular
Prism



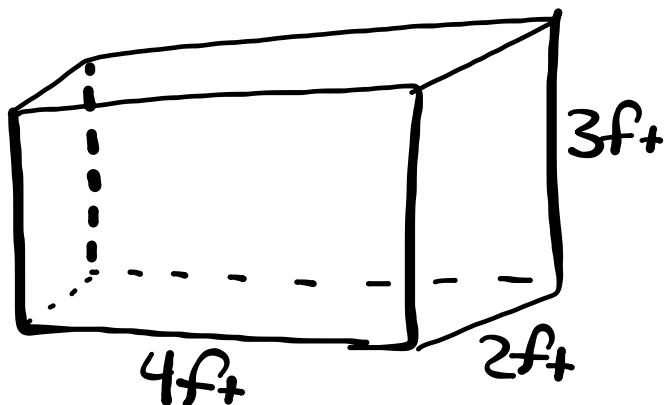
$$V = \underbrace{lwh}$$

Cylinder

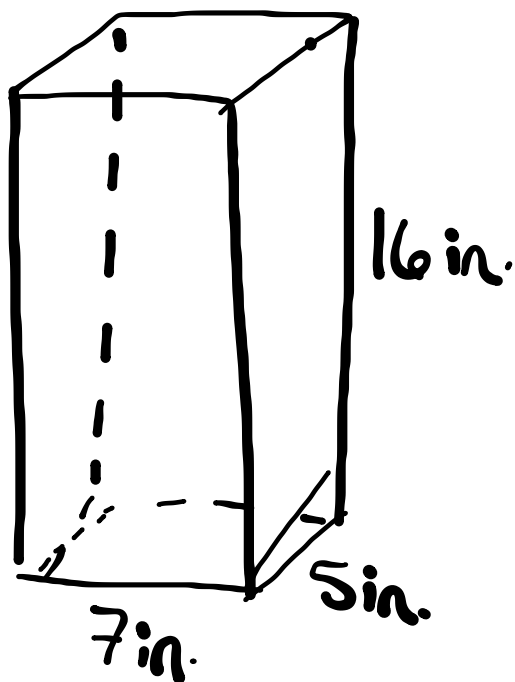


$$V = \underbrace{\pi r^2} h$$

Find the volume.



$$\begin{aligned} V &= lwh \\ &= (4)(2)(3) \\ &= 24 \text{ ft}^3 \end{aligned}$$



$$\begin{aligned} V &= (16)(5)(7) \\ &= 560 \text{ in}^3 \end{aligned}$$

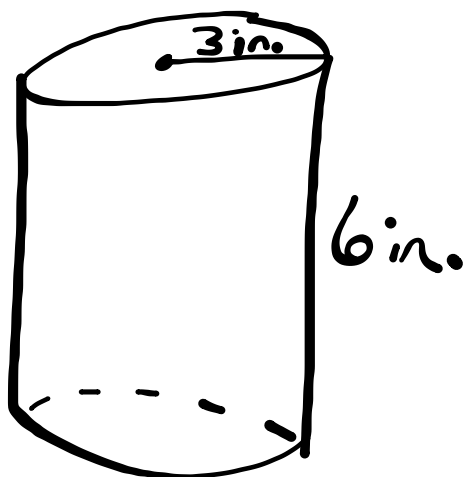
If the volume of a rectangular prism is 56 m³, the length is 2 m, and the width is 4 m, what is the height?

$$V = lwh$$

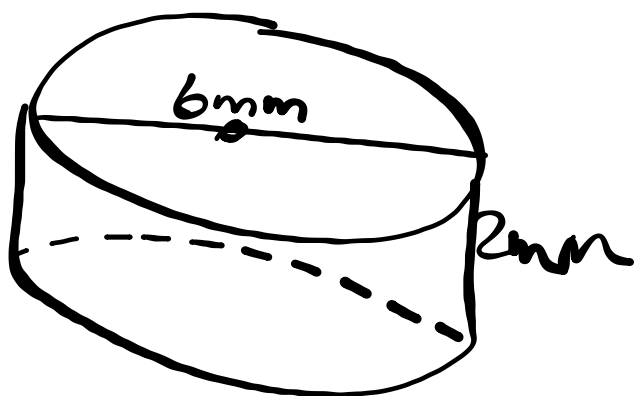
$$56 = (2)(4)h$$

$$\frac{56}{8} = \frac{8h}{8}$$

$$h = 7 \text{ m}$$



$$\begin{aligned}V &= \pi r^2 h \\ &= \pi (3)^2 (6) \\ &= 169.6 \text{ in}^3\end{aligned}$$



$$r = \frac{6}{2} = 3$$

$$V = \pi r^2 h$$

$$V = \pi (3)^2 (2)$$

$$= 56.5 \text{ mm}^3$$