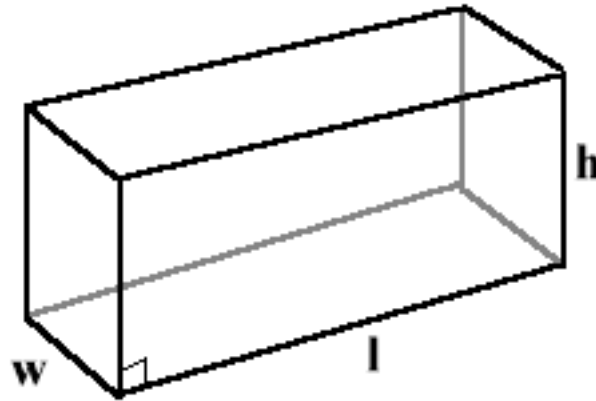


10.1 Volume of a Rectangular Prism

Objective: To find the volume of rectangular prisms



Volume



Volume = length • width • height

$$V = l \cdot w \cdot h \text{ or } V = B \cdot h$$

Note: **B** is the area of one face ($l \cdot w$)



$$V = l \cdot w \cdot h$$

$$V = 20 \text{ cm} \cdot 8 \text{ cm} \cdot 30 \text{ cm}$$

$$V = 160 \text{ cm}^2 \cdot 30 \text{ cm}$$

$$V = 4,800 \text{ cm}^3$$

Practice

1) $l = 10 \text{ in.}, w = 15 \text{ in.}, h = 4.5 \text{ in.}$

$$V = 675 \text{ in.}^3$$

2) $l = 30 \text{ ft.}, w = 14 \text{ ft.}, h = 18 \text{ ft.}$

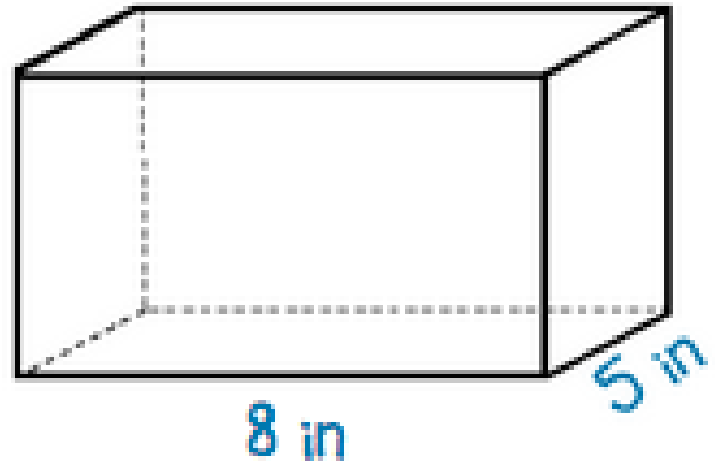
$$V = 7,560 \text{ ft.}^3$$

3) $l = 30 \text{ cm.}, w = 22.5 \text{ cm.}, h = 6.2 \text{ cm.}$

$$V = 4,185 \text{ cm.}^3$$

What is the height of this rectangular prism?

Volume =
280 cubic inches



$$V = l \cdot w \cdot h$$

$$280 \text{ in}^3 = 8 \text{ in} \cdot 5 \text{ in} \cdot h$$

$$280 = 40 \cdot h$$

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

Volume Parody Video

- https://www.youtube.com/watch?v=GEwheYZX1-s&ebc=ANyPxKoQGg_dfolksyGQ1XyqSpy5dKcSuyHnWWBRxXV128eZrJVYIGBs20XwxjV1sh4hRzmuZJB4BqGtg5CdfsBj6zPt78iRMA

