

Chapter 10

Geometry and Measurement

10.7 Volume of a Prism

Pages- 550-558

NOTES (10.7) Volume of a Prism

The **volume** of a solid is the amount of space the solid occupies.

Memorize!!!

$$V = lwh$$

Volume = length x width x height

Volume is
always in
cubic units

Units³

Guided Practice p. 553

Do # 4,8,10 like this

$$\begin{aligned} 7) V &= lwh \\ V &= 31 \times 17 \times 13 \end{aligned}$$

$$V = 6851 \text{ in}^3$$

Do # 12 like this

$$\begin{aligned} 11) V &= lwh \\ 75 &= 10 \cdot 3h \end{aligned}$$

$$\frac{75}{30} = \frac{30h}{30}$$

$$\begin{aligned} 75 \div 30 &= h \\ 2.5 &= h \end{aligned}$$

$$h = 2.5 \text{ ft}$$

$$13) V = lwh$$
$$V = 2500 = 1 \cdot 25 \cdot 5$$

$$\frac{2500}{125} = \frac{1 \cdot \cancel{125}}{\cancel{125}}$$

$$2500 \div 125 = 1$$

$$l = 20 \text{ m}$$

Do #20 like this

$$19) S = x^2 + x^2 + x^2 + x^2 + x^2 + x^2$$

(all cube sides are equal and there are 6 faces)

$$S = 6x^2$$

$$24 = 6x^2$$
$$6 \quad 6$$

$$4 = x^2$$

$$\sqrt{4} = x$$

$$x = 2\text{m}$$

$$V = lwh$$

$$V = 2 \cdot 2 \cdot 2$$

$$V = 8\text{m}^3$$

#22 = 1 pt

24 = 1 pt