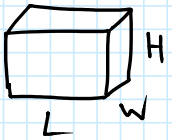
Volume of Prisms

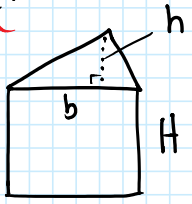
May-21-19 10:17 AM

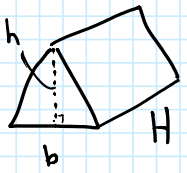
* For a rectangular prism:



$V = L \times W \times H$

* For a triangular prism:

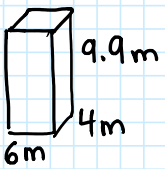




$V = \frac{b \cdot h}{2} \times H$

Ex. Find the volume:

a)

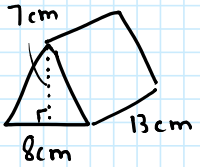


$V = L \times W \times H$

$V = 6 \times 4 \times 9.9$

$V = 237.6\ m^3$

b)



$V = \frac{b \cdot h}{2} \times H$

$V = \left(\frac{8 \times 7}{2}\right) \times 13$

$V = 28 \times 13$

$V = 364\ cm^3$

Ex. A rectangular prism has a volume of $135\ m^3$. The length = 9m, height = 5m. What is the width?

$V = L \times W \times H$

$135 = 9 \times W \times 5$ combine, then divide

$135 = 45 \times W$

$\div 45 \quad \div 45$

$3m = W$

Ex. A triangular prism has a volume of $135.3\ cm^3$. If the prism height is 8.2cm, and the triangle height is 5.5cm, find the triangle's base.

$V = \frac{b \cdot h}{2} \times H$

$135.3 = \frac{b \cdot 5.5}{2} \times 8.2$ combine

$135.3 = b \cdot 22.55$

$\div 22.55 \quad \div 22.55$

$6\ cm = b$