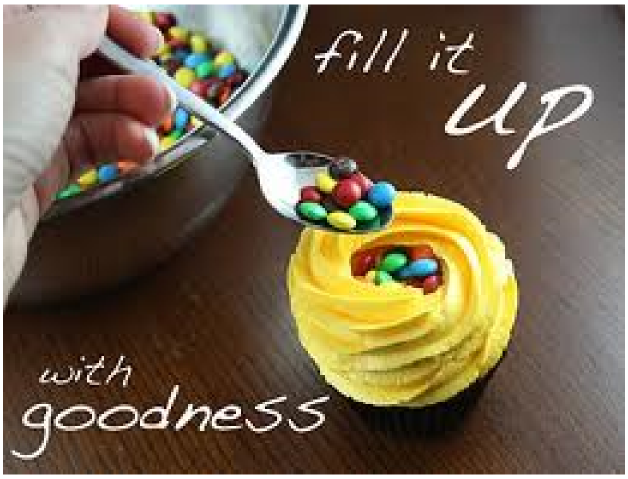

Volume

Capacity - the maximum amount a container can hold



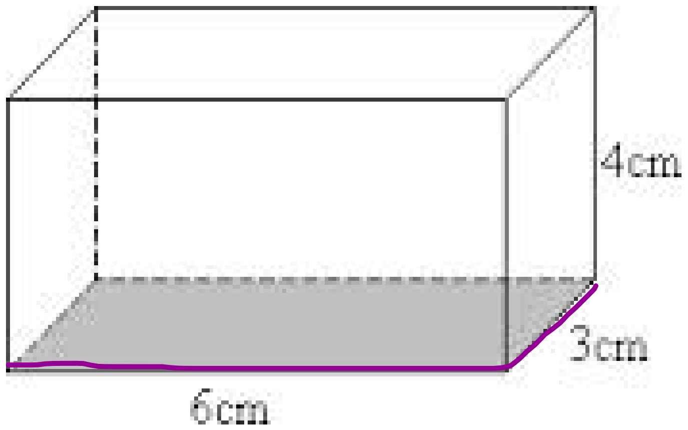
Volume - the amount of space a solid occupies

High School

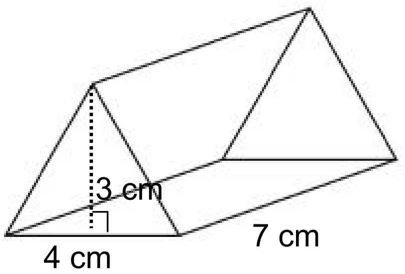
Volume of Prism: $V = A_{base} \times \text{Height}$

$= (6cm \times 3cm) \times 4cm$

$= 72 cm^3$



Volume of Prism: $V = A_{base} \times \text{Height}$



$V = (A_{\triangle}) \times h$

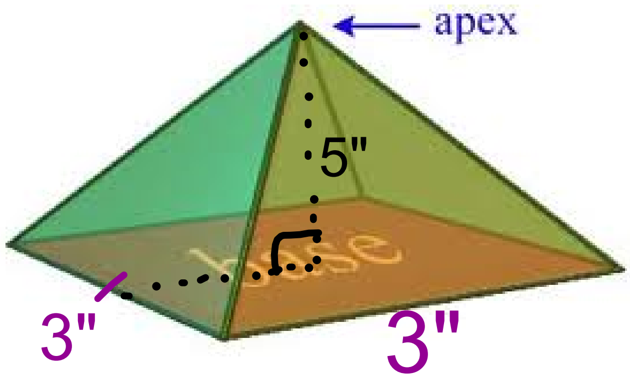
$= \left[\frac{b_{\triangle} \times h_{\triangle}}{2}\right] \times h$

$= \left[\frac{4cm \times 3cm}{2}\right] \times 7cm$

$= 6cm^2 \times 7cm$

$= 42cm^3$

Volume of Pyramid: $V = \dfrac{A_{base} \times \text{Height}}{3}$



$= \dfrac{(3in \times 3in) \times 5in}{3}$

$= \dfrac{45\ in^3}{3}$

$= 15\ in^3$

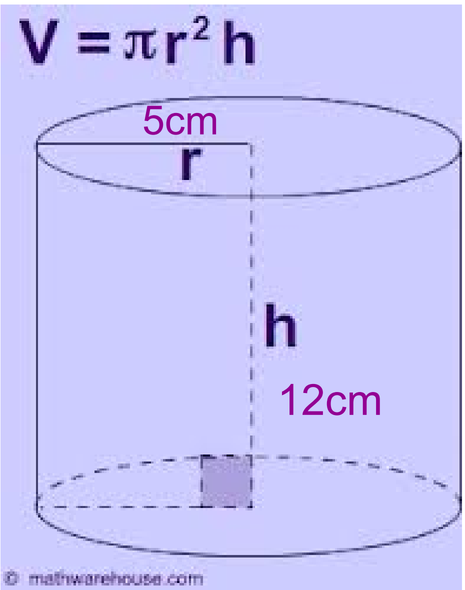
Volume of Cylinder: $V = A_{base} \times \text{Height}$

$= \pi r^2 \times h$

$= \pi (5cm)^2 \times (12cm)$

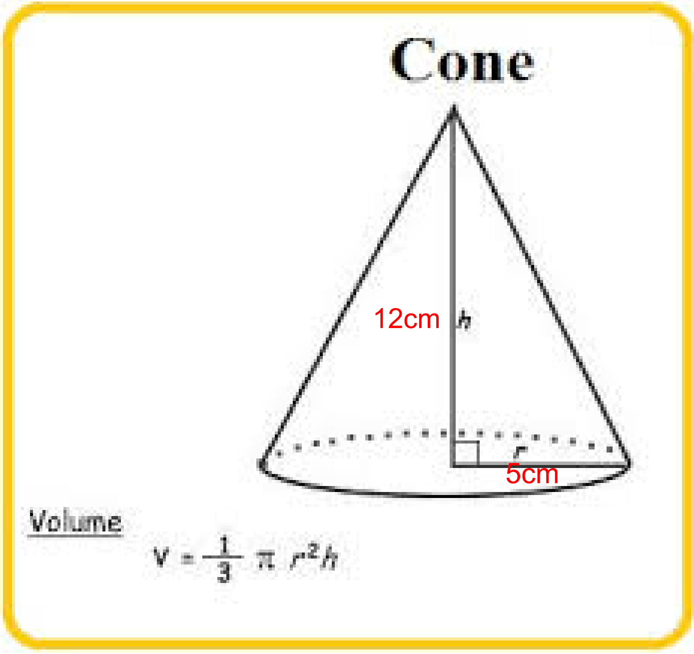
$= \pi (25 cm^2) \times 12cm$

$= 942 cm^3$



Volume of Cone: $V = \frac{A_{base} \times \text{Height}}{3}$

$= \frac{\pi r^2 \times h}{3}$



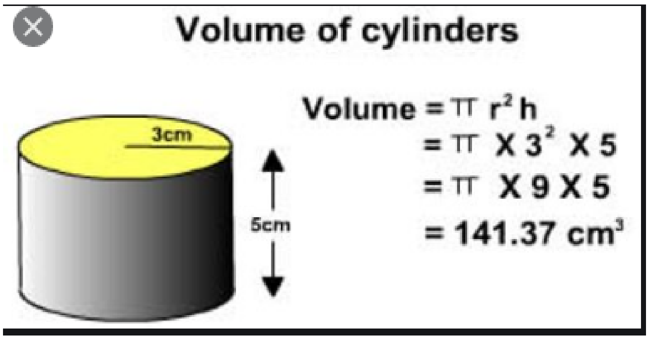
$= \frac{\pi (5cm)^2 \times (12cm)}{3}$

$= \frac{942\ cm^3}{3}$

$= 314\ cm^3$

Capacity - how much the container will hold.

Remember: $1cm^3 = 1$ mL



So the capacity is 141.37 mL.

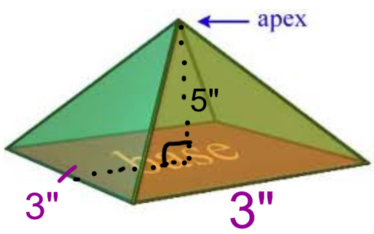
Volume of Pyramid: $V = \frac{A_{base} \times \text{Height}}{3}$

$= \frac{(3in \times 3in) \times 5in}{3}$

$= \frac{45\ in^3}{3}$

$= 15\ in^3$

To get the capacity of this, you would convert to cubic cm first.



$15\ in^3 \times \left(\frac{2.54\ cm}{1\ in}\right)^3$

$= 245.8\ cm^3 \rightarrow 245.8\ ml$

If I want answer in litres:

$245.8\ ml \times \frac{1L}{1000\ mL} = 0.245L$

Attachments

GMF_10_-_Chp._4_Tables_and_Formulas.docx

Worksheet - Converting Capacity in Imp.docx

Worksheet - Converting Volumes Imp_Metric.docx