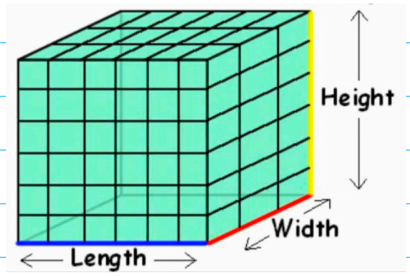
Volume

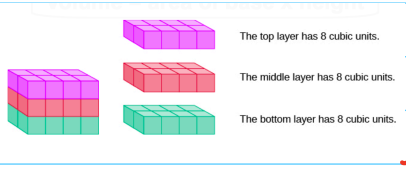


- Amount of space a 3D object occupies
- Amount of water needed to fill a 3D object
- # of cubic units contained inside a 3-dimensional region

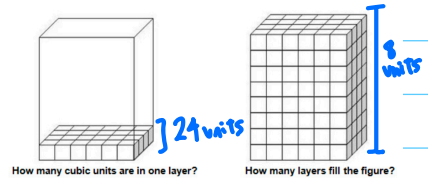
M^3 CM^3

3 dimensions
- Length
- Width
- Height

To Find Volume...



$8 + 8 + 8 = 24 \text{ units}^3$



$24 \text{ units} \times 8 = 192 \text{ units}^3$

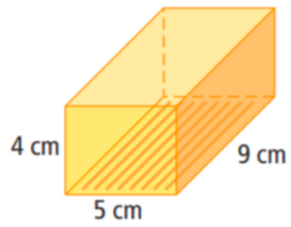
A Formula...

$V = L \times W \times H$

OR...

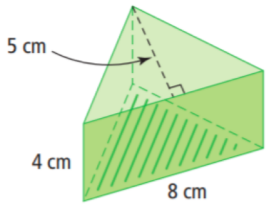
$V = \text{Area} \times \text{Height}$

Rectangular Prism

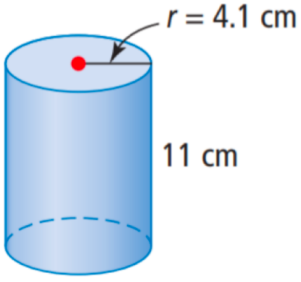


$V = 4\text{cm} \times 5\text{cm} \times 9\text{cm}$
$= 20\text{cm}^2 \times 9\text{cm}$
$= \boxed{180\text{cm}^3}$

Triangular Prism



$V = \text{Area} \times \text{Height}$
$= \left(\frac{BH}{2}\right) \times 4\text{cm}$
$= \left(\frac{8 \times 5}{2}\right) \times 4\text{cm}$
$= 20\text{cm}^2 \times 4\text{cm}$
$= \boxed{80\text{cm}^3}$



Cylinder

$V = \pi R^2 \times H$
$= \pi (4.1)^2 \times 11$
$= \pi (16.81) \times 11$

Area of the Bottom/Top

$= 52.8101\text{cm}^2 \times 11\text{cm} = \boxed{580.9\text{cm}^3}$