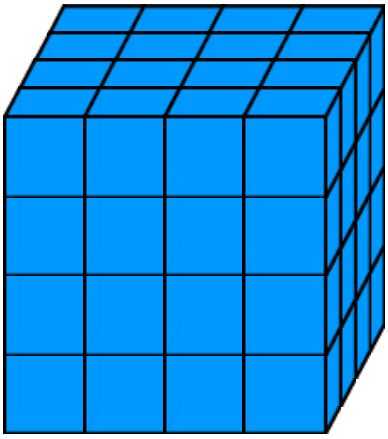
Volume

Volume is the amount of space an object occupies. It is measured in cubic units, such as, mm^3, cm^3, m^3, ...



How do you find volume?

http://illuminations.nctm.org/ActivityDetail.aspx?ID=6

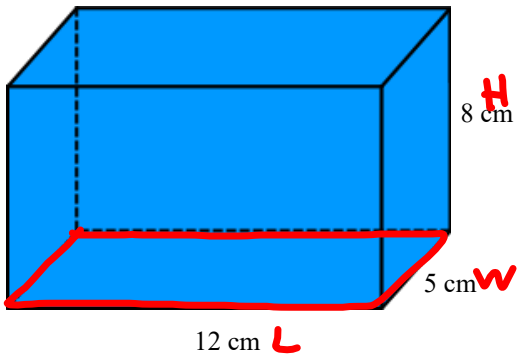
How do we find the volume of this rectangular prism?

Sometimes students say V = *l* x *w* x *h*,

Instead of using this, we will use

Volume = Area of a base x height

First determine the base of the prism, then find its area, finally multiply this area by the height of the prism.



$V = A_{base} \times H$ (Rectangle)

$= L \times W \times H$

$= 12\text{cm} \times 5\text{cm} \times 8\text{cm}$

$= 60\text{cm}^2 \times 8\text{cm}$

$= 480\text{cm}^3$

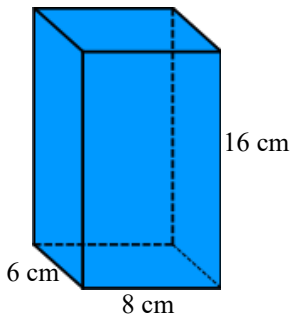
Volume =
=
=

Area of Base =
=
=

Find the area and show all work.

Your Turn

a)



$V = A_{base\square} \times H$

$= 6cm \times 8cm \times 16cm$

$= 48cm^2 \times 16cm$

$= 768cm^3$

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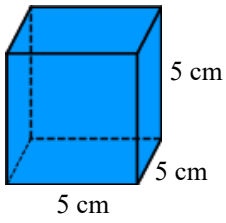
b)



$V = A_{base\square} \times H$

$= 5cm \times 5cm \times 5cm$

$= 25cm^2 \times 5cm$

$= 125cm^3$

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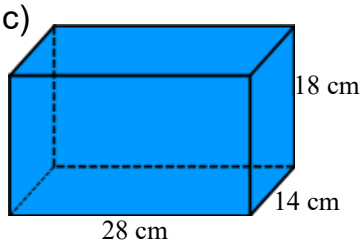
c)



$V = A_{base\square} \times H$

$= 28cm \times 14cm \times 18cm$

$= 7056cm^3$