Volume of prisms

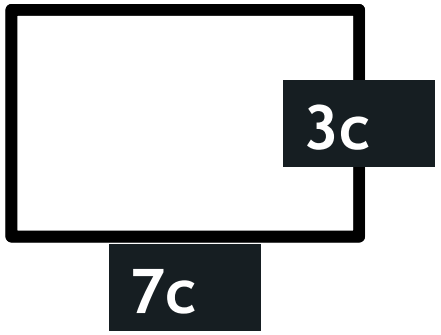
WILF :

Be able to find the volume of any prism using the correct formula

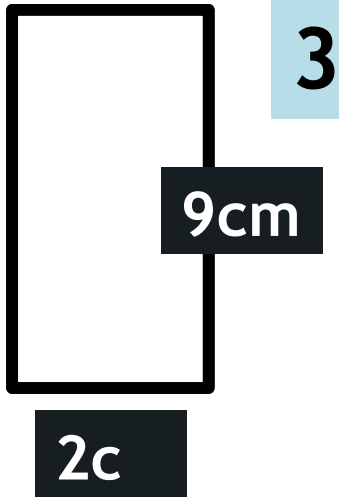
Volume of a Cuboid

STARTER: Find the Area of..

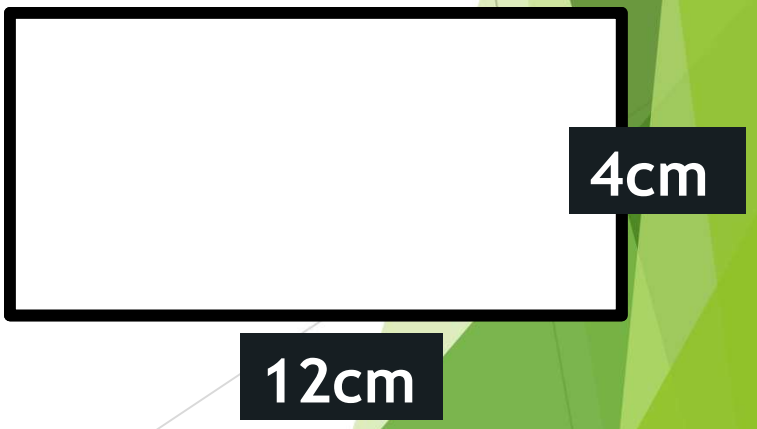
1)



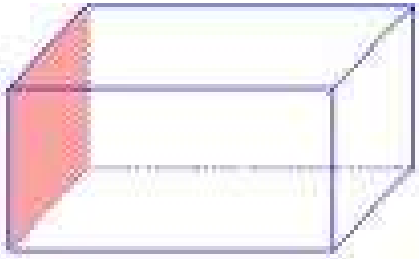
2)

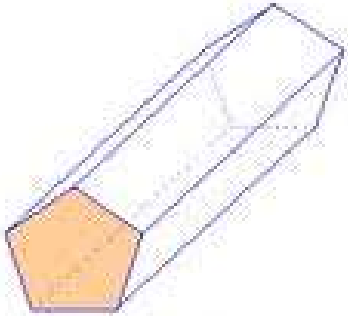


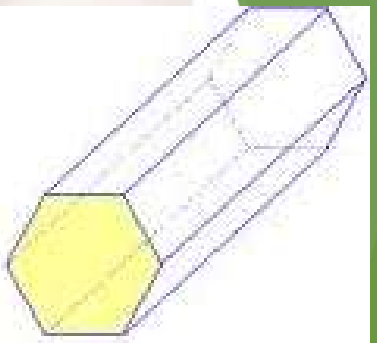
3)



Cross Section – The shape of the slice

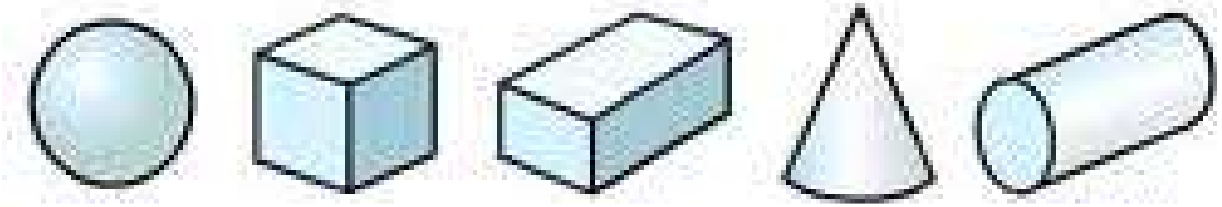


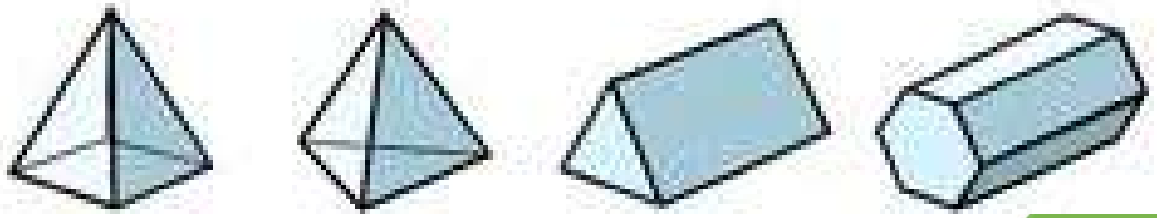




Prism – A shape that has the same cross section all the way through

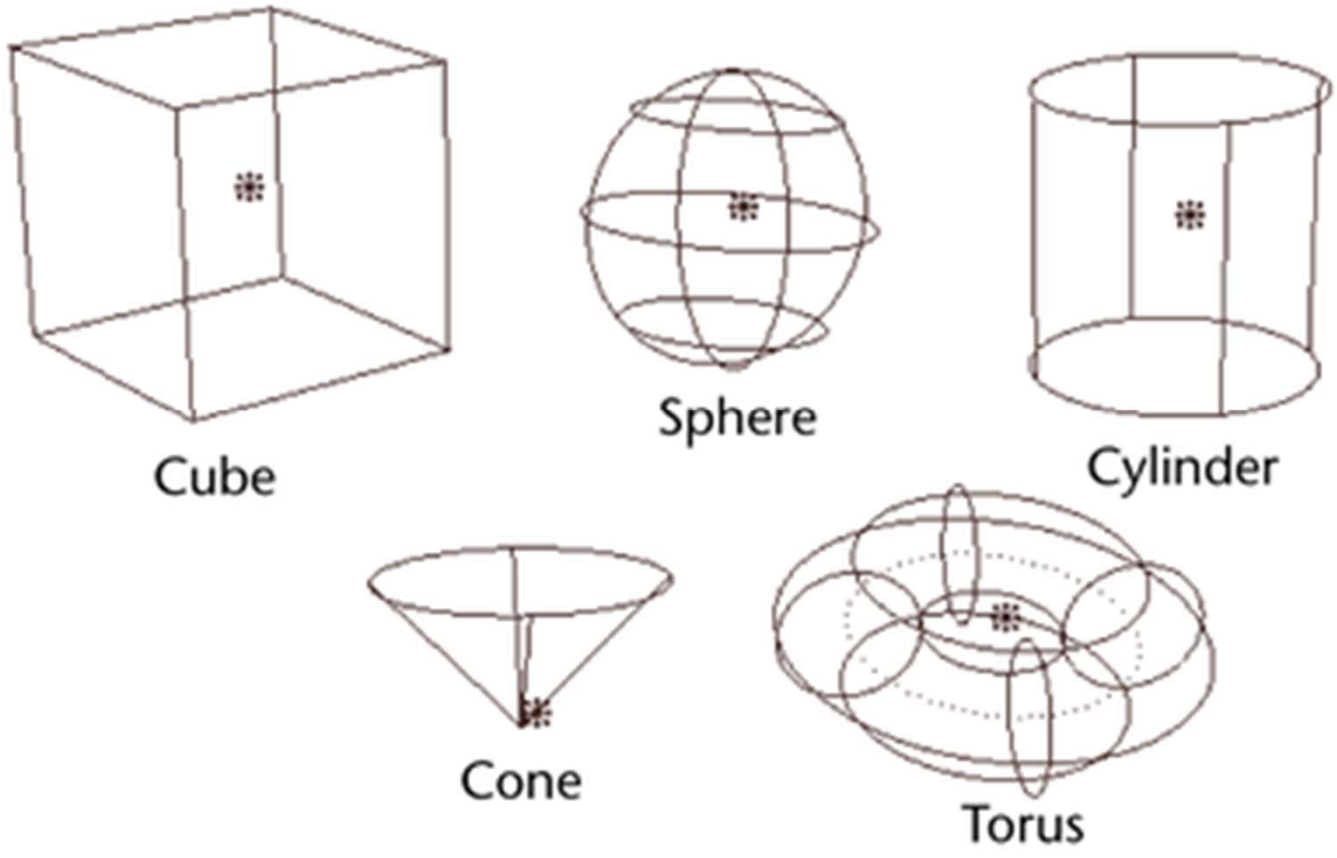
Identify the prisms





WHAT IS VOLUME?

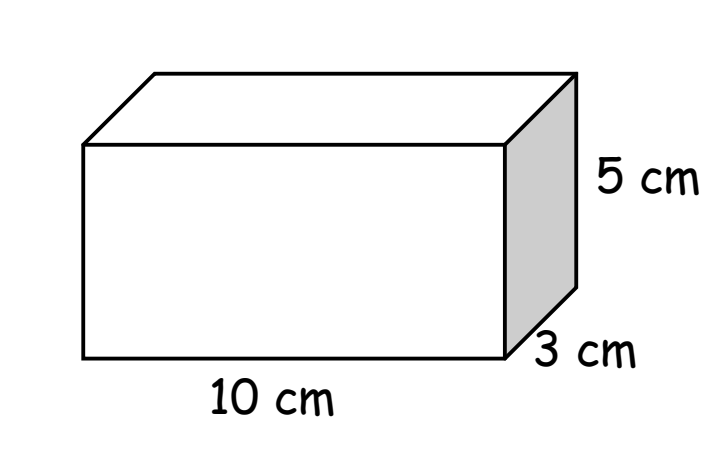
How could we find the volume of these shapes?



Finding the length of a prism

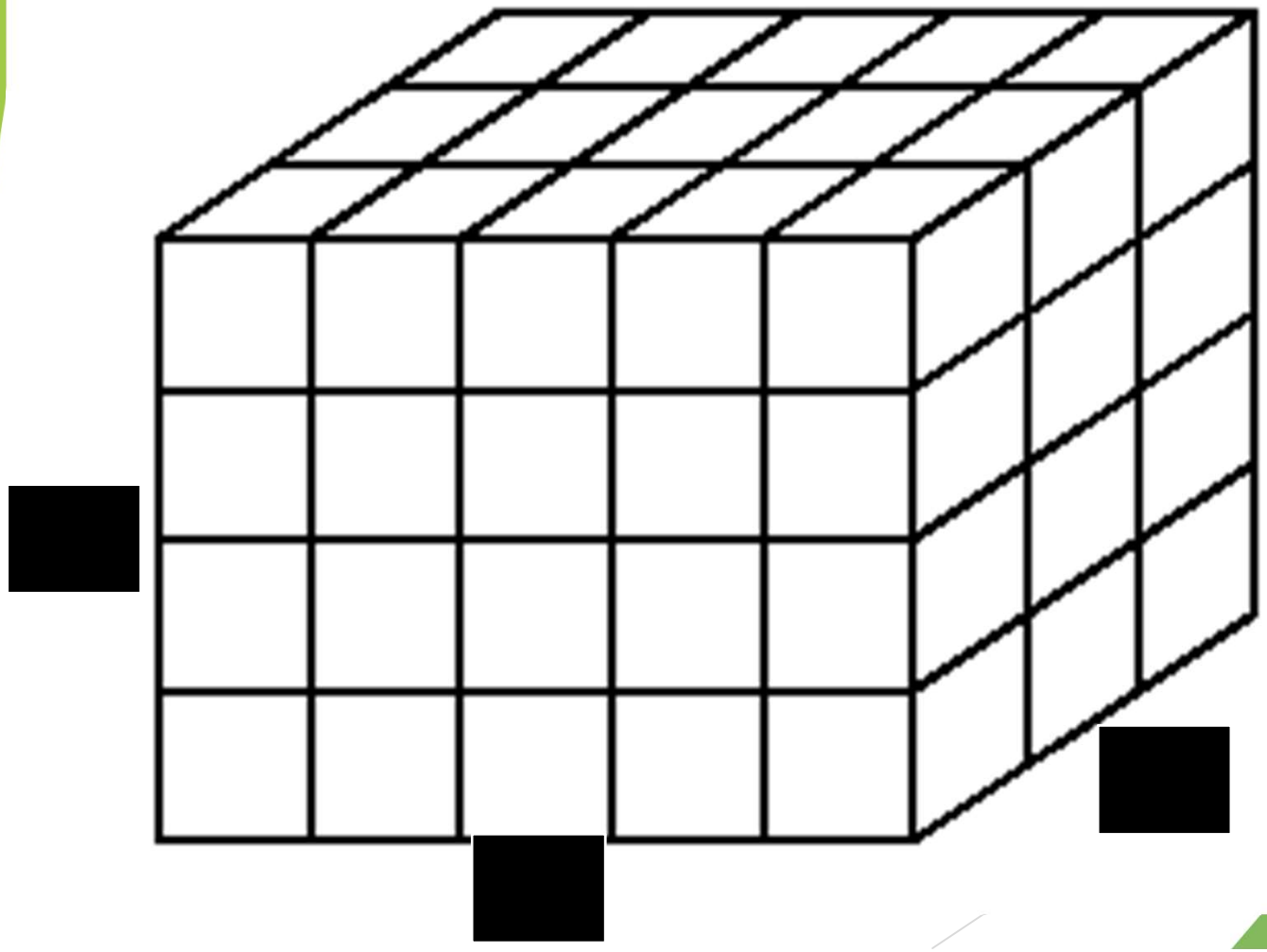
Volume of a prism = area of cross section x length

Find the volume of this prism



Finding the Volume of a Cuboid

Below is a cuboid. How could we find the Volume?

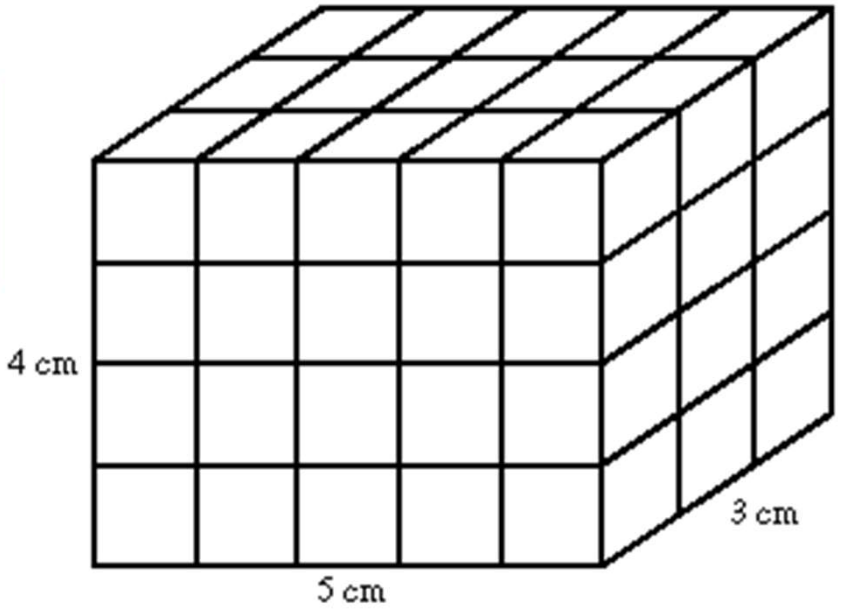


REMEMBER THE FORMULA
- You need to learn this.

Every 3-Dimensional shape has 3 dimensions.

To find the **Volume** of a Cuboid, we use this formula:

V = Length x Width x Height



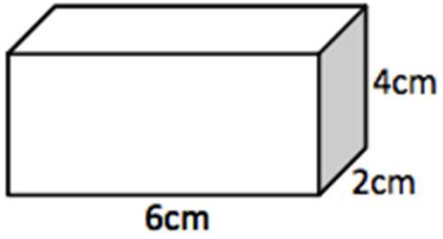
In this example:

V = 4cm x 5cm x 3cm

$V = 60cm^3$

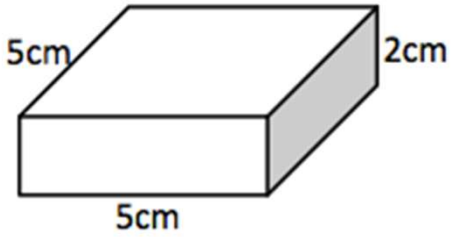
ACTIVITY - Find the Volume

a)



$V = 48cm^3$

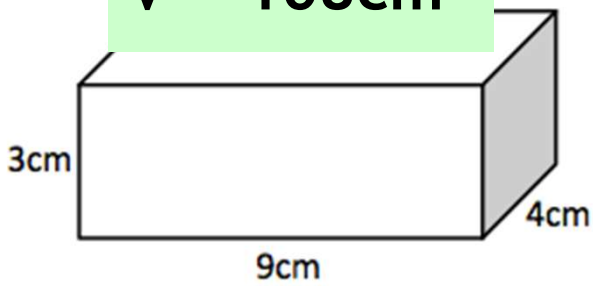
b)



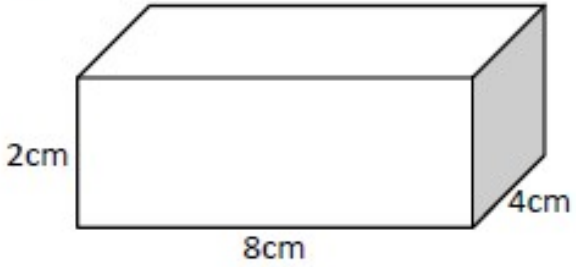
$V = 50cm^3$

c)

$V = 108cm^3$

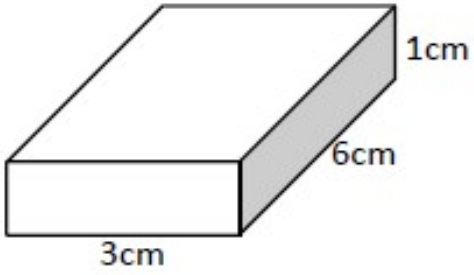


d)



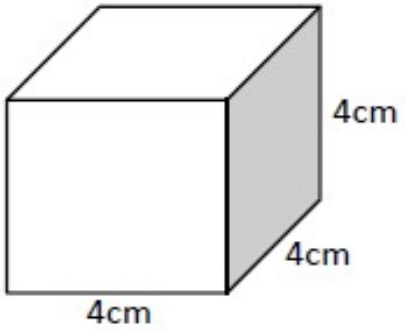
$V = 64cm^3$

e)



$V = 18cm^3$

f)

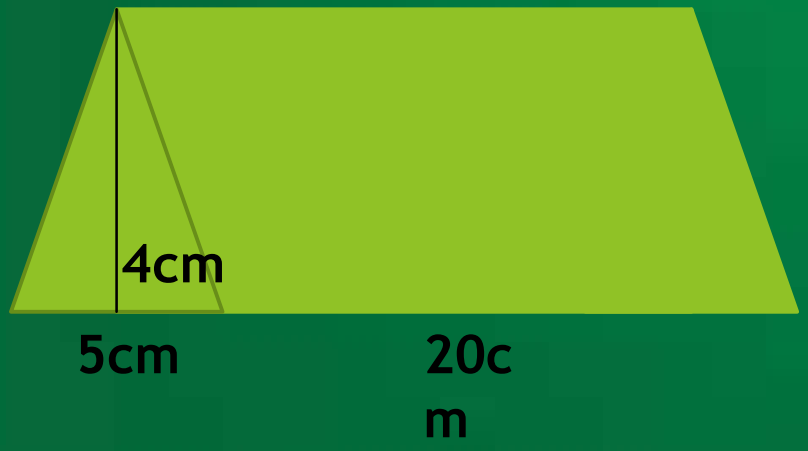


$V = 64cm^3$

Finding the volume of prisms

Find the **area of the face**

Multiply by the length or height



Area of face= (4 x 5) ÷ 2 = $10cm^2$

Volume = 10 x 20
= $200cm^3$

Finding the volume of a prism

Volume of a prism = area of cross section x length

Example 2: Find the volume of this prism