THIRD SPACE LEARNING

HELLO!

Today we are going to revise measurement:
Volume

THIRD SPACE LEARNING

Arithmetic Warm Up

Complete:

1) $44 \times 9 =$ ☐

2) $5 \times 7 \times 9 =$ ☐

THIRD SPACE LEARNING

Revision on measurement

Today we are going to revise how to

measure and calculate

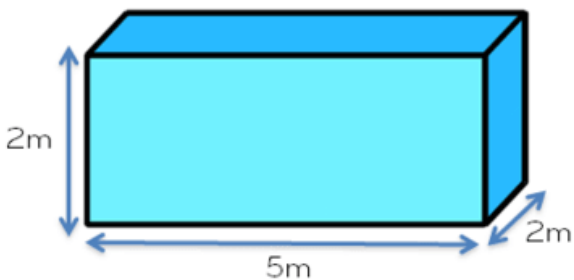
- Volume

Revision: Volume

Volume is the amount of space inside a 3D shape

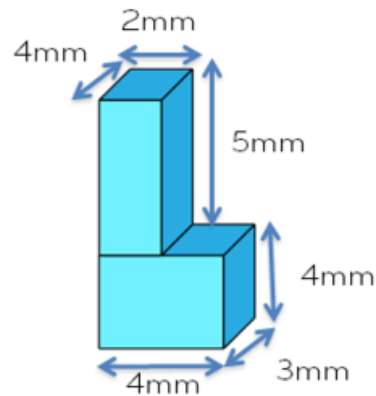
Volume of cuboid = length x width x height

a) What is the volume of this shape?



Volume= m^3

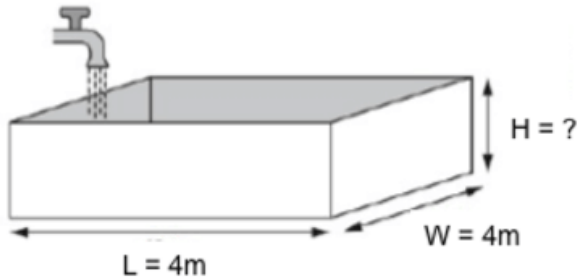
b) This is a compound shape. What is the volume of this shape?



Volume= mm^3

Question 1

Complete



A tank is being filled with water which has a base of 4m by 4m.

If the volume is $32m^3$, what is the height (H) of the tank?

m

What do you notice?
What do you know?
Can you show your working out?
How could you extend the question?

Question 2

Daniel uses eight cubes to build a tower.

He stacks the cubes on top of each other.

The height of the tower is 32cm.

What is the volume of **one cube?**

What do you notice?
What do you know?
Can you show your working out?
How could you extend the question?

cm^3

THIRD SPACE LEARNING

Question 3

What do you notice?
What do you know?
Can you show your working out?
How could you extend the question?

George makes a cube that has a volume of $8cm^3$. He decides he wants to make a cube that has sides that are three times as long.

What will the volume of George's new cube be?

cm^3

THIRD SPACE LEARNING

Let's review:

I can measure and calculate volume

Draw a circle around the smiley face to show how you feel about what we've just been doing.

THIRD SPACE LEARNING

CHALLENGE

What do you notice?
What do you know?
Can you show your working out?
How could you extend the question?

Anuj has 400 cubes. Each one is 1 cm^3.

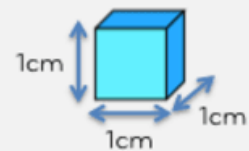
He wants to use all the cubes to build a cuboid.

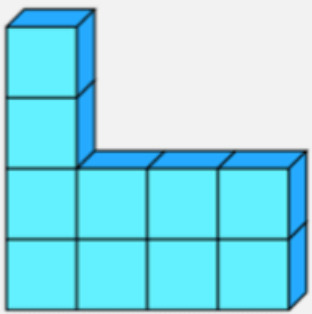
List some possibilities for the length, width and height of Anuj's cuboid.

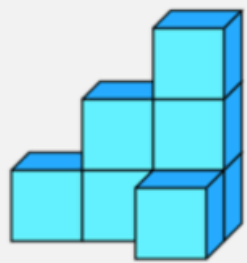
Length =	Width =	Height =
Length =	Width =	Height =

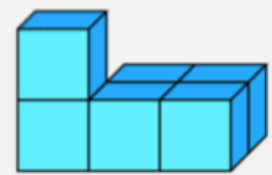
Begin to estimate volume by counting cubes

What is the **volume** of each of these **shapes**.





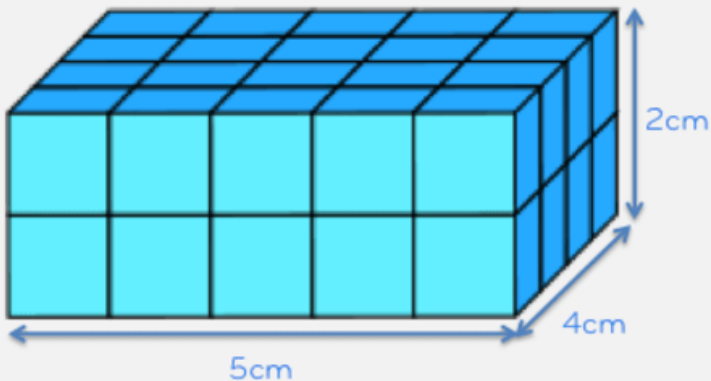




Find volumes of cubes and cuboids using cubic cm and cubic m

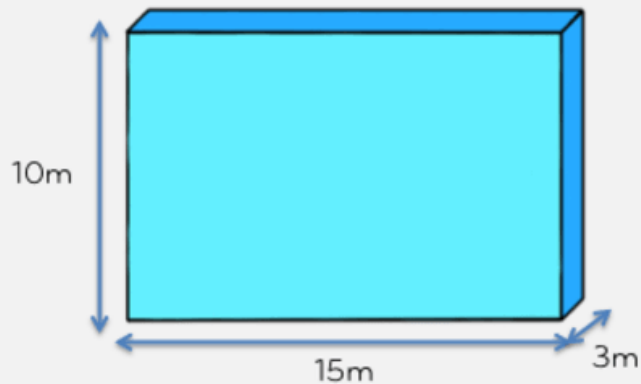
When giving the volume of a 3-D shape, remember the units are cubed (e.g. cm^3 or m^3)

Find the **volume** of this cuboid.



Use formulas for volumes of cuboids

Find the **volume** of each cuboid.



Use formulas for volumes of cuboids

Volume of a cuboid = length × width × height

1. Is this formula **always** true?

2. Does the **order** in which length, height and width are **multiplied** together matter?

3. Does this **formula** work for finding the volume of **cubes**?

4. How might you **shorten** the formula?