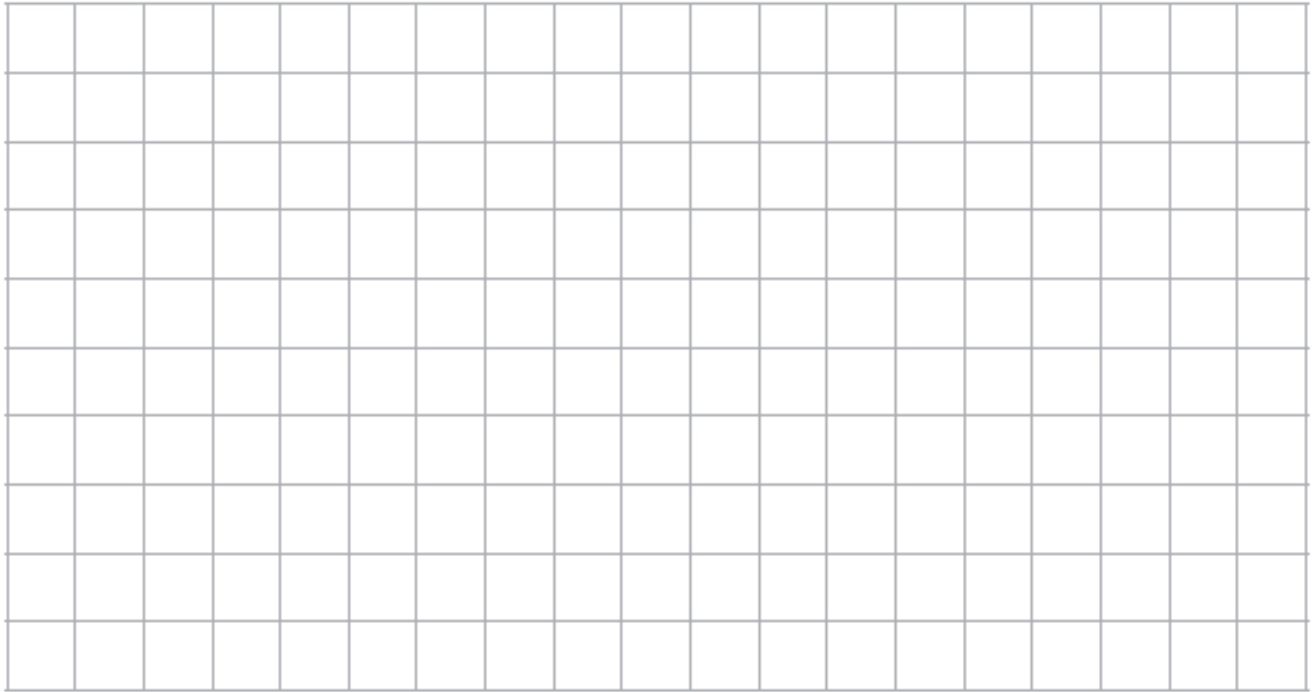


Monday



# Measure the Perimeter of Composite Rectilinear Shapes

Draw four composite rectilinear shapes with a perimeter of 20cm on this grid.

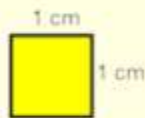


Draw four composite rectilinear shapes with a perimeter of 28cm on this grid.



Tuesday

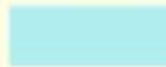
Area is the measure of how much space a shape takes up. We measure it in squares such as square centimetres, square metres etc.



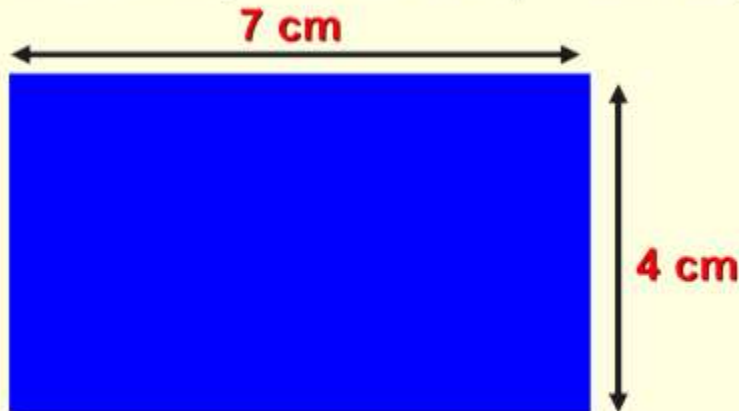
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

This rectangle takes up 28 squares.

It has an area of 28 square centimetres



It could take a long time to cover shapes in squares. Luckily there is a quicker way.

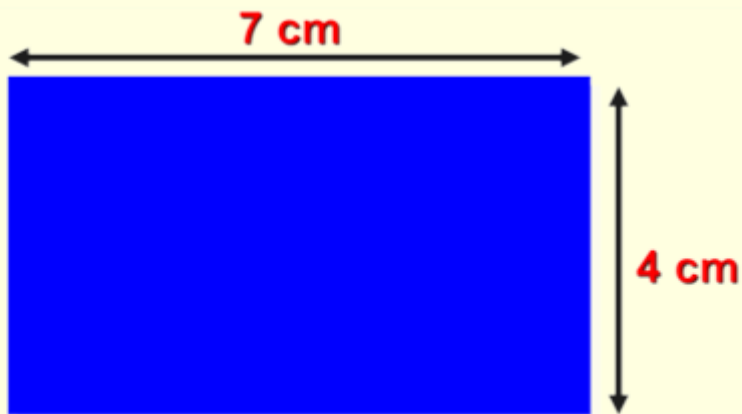


Identify adjacent sides, then multiply these together!

$$\text{Area of a rectangle} = \text{length} \times \text{width}$$

I know that applying the formulae **length x width** means multiplying 7 by 4. This gives me an answer of **28**.

I should write the units of measure as **cm<sup>2</sup>** (we call this 'centimetres squared')



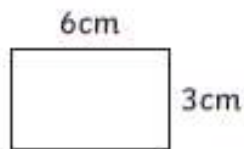
# Calculate and Compare the Area of Rectangles

Aim: I can calculate the area of rectangles.

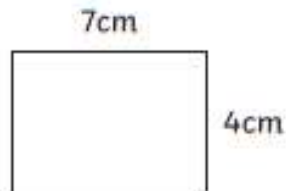
Calculate the area of the following rectangles.

The shapes are not to scale.

1.



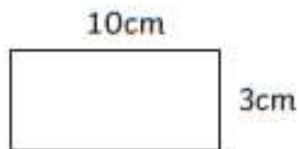
2.



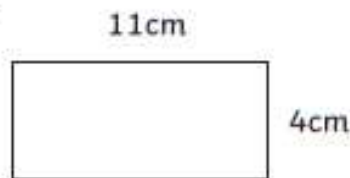
3.



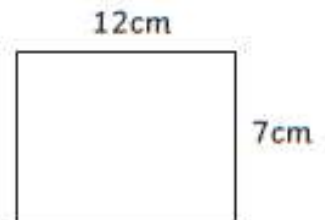
4.



5.



6.



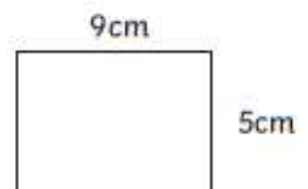
7.



8.



9.



10.



11.



12.







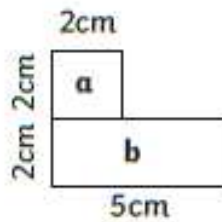
Wednesday

# Area of Compound Shapes

I can calculate the area of compound shapes.

Calculate the area of each rectangle, then calculate the area of the whole compound shape.

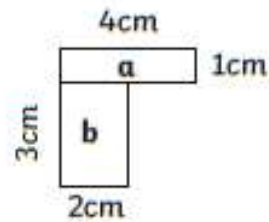
1.



Area a: \_\_\_\_\_  $\text{cm}^2$

Area b: \_\_\_\_\_  $\text{cm}^2$       Total: \_\_\_\_\_  $\text{cm}^2$

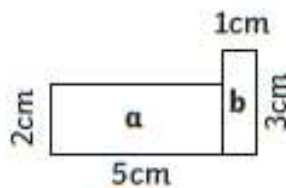
2.



Area a: \_\_\_\_\_  $\text{cm}^2$

Area b: \_\_\_\_\_  $\text{cm}^2$       Total: \_\_\_\_\_  $\text{cm}^2$

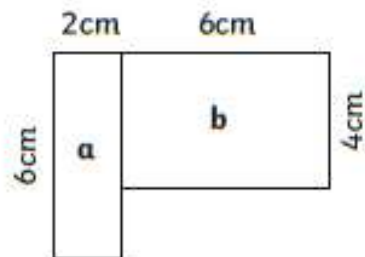
3.



Area a: \_\_\_\_\_  $\text{cm}^2$

Area b: \_\_\_\_\_  $\text{cm}^2$       Total: \_\_\_\_\_  $\text{cm}^2$

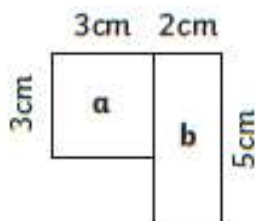
4.



Area a: \_\_\_\_\_  $\text{cm}^2$

Area b: \_\_\_\_\_  $\text{cm}^2$       Total: \_\_\_\_\_  $\text{cm}^2$

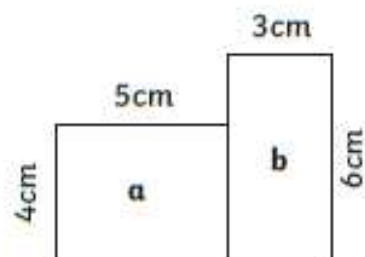
5.



Area a: \_\_\_\_\_  $\text{cm}^2$

Area b: \_\_\_\_\_  $\text{cm}^2$       Total: \_\_\_\_\_  $\text{cm}^2$

6.



Area a: \_\_\_\_\_  $\text{cm}^2$

Area b: \_\_\_\_\_  $\text{cm}^2$       Total: \_\_\_\_\_  $\text{cm}^2$

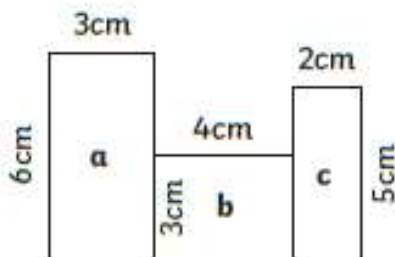
Note: Compound shapes are not to scale.

# Area of Compound Shapes

I can calculate the area of compound shapes.

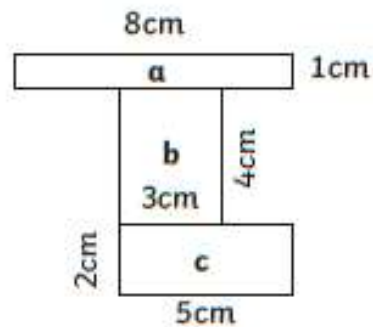
Calculate the area of each rectangle, then calculate the area of the whole compound shape.

7.



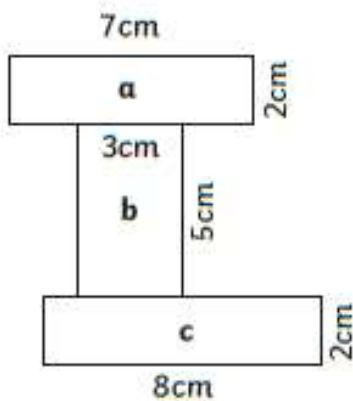
Area a: \_\_\_\_\_  $\text{cm}^2$     Area c: \_\_\_\_\_  $\text{cm}^2$   
 Area b: \_\_\_\_\_  $\text{cm}^2$     Total: \_\_\_\_\_  $\text{cm}^2$

8.



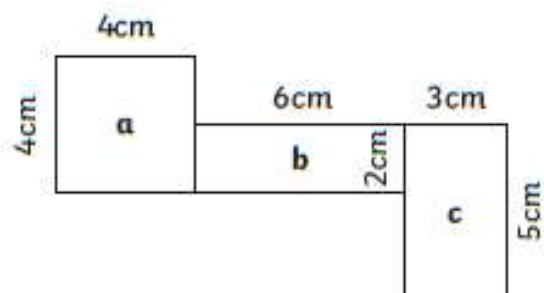
Area a: \_\_\_\_\_  $\text{cm}^2$     Area c: \_\_\_\_\_  $\text{cm}^2$   
 Area b: \_\_\_\_\_  $\text{cm}^2$     Total: \_\_\_\_\_  $\text{cm}^2$

9.



Area a: \_\_\_\_\_  $\text{cm}^2$     Area c: \_\_\_\_\_  $\text{cm}^2$   
 Area b: \_\_\_\_\_  $\text{cm}^2$     Total: \_\_\_\_\_  $\text{cm}^2$

10.

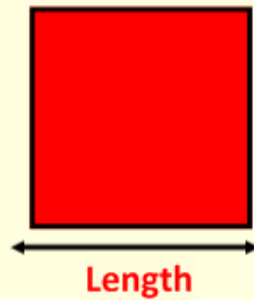


Area a: \_\_\_\_\_  $\text{cm}^2$     Area c: \_\_\_\_\_  $\text{cm}^2$   
 Area b: \_\_\_\_\_  $\text{cm}^2$     Total: \_\_\_\_\_  $\text{cm}^2$

Note: Compound shapes are not to scale.

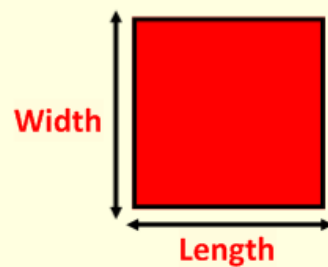
Thursday

If **Length** is a measure of the distance of a 2D shape's side...



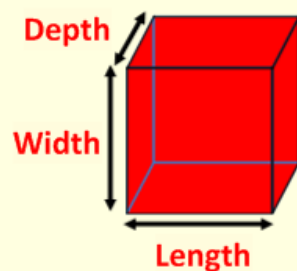
...and **Area** is the product of adjacent sides multiplied together...

Remember: Length x Width = Area



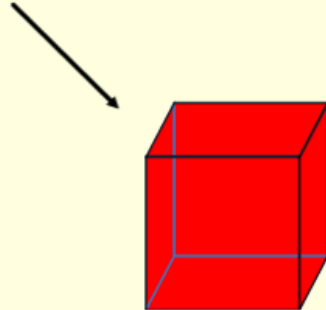
...then **Volume** is the product of the area of a 2D face, multiplied by the shape's depth.

NEW FORMULAE: Length x Width x Depth

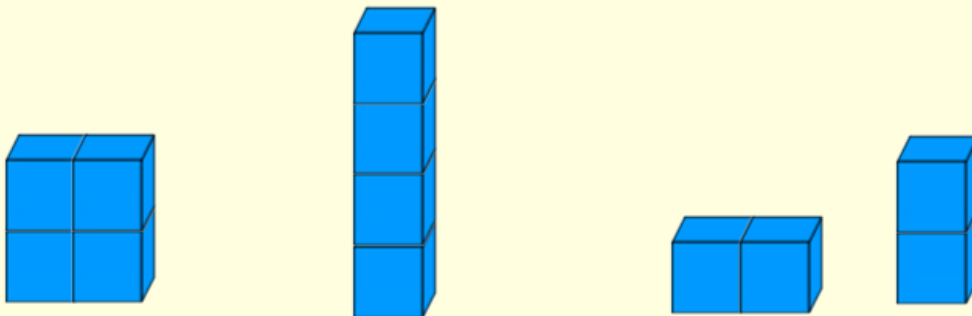


**Volume is...**

shown by saying '**cubed**' (a little <sup>3</sup>)  
e.g. this shape is  $1\text{cm}^3$  (1 centimetre cubed)

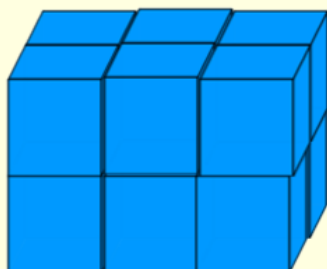


*If each cube has a volume of  $1\text{cm}^3$ , what is the total volume of these shapes?*



NEW FORMULAE: Length x Width x Depth

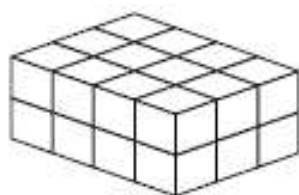
What instructions would you give to enable someone who has never worked with volume to find the volume of this shape?



# Volume of Shapes

Find the volume of these shapes.

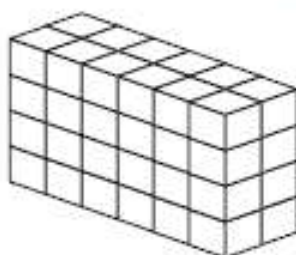
1.



Volume:

---

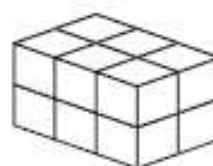
2.



Volume:

---

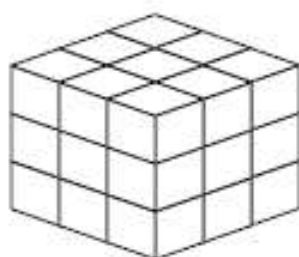
3.



Volume:

---

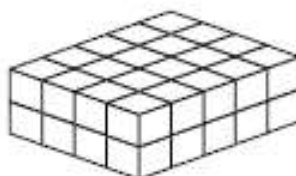
4.



Volume:

---

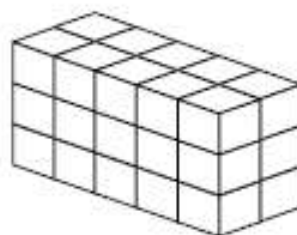
5.



Volume:

---

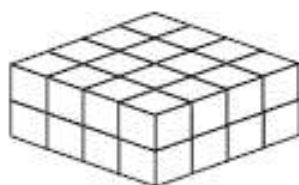
6.



Volume:

---

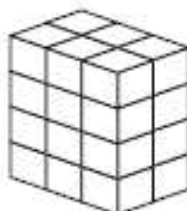
7.



Volume:

---

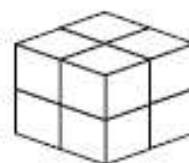
8.



Volume:

---

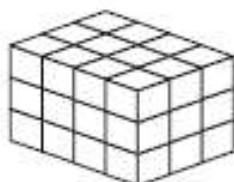
9.



Volume:

---

10.



Volume:

---

Friday

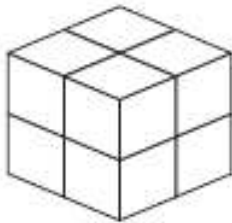


# Estimating Volume

I can estimate the volume of shapes.

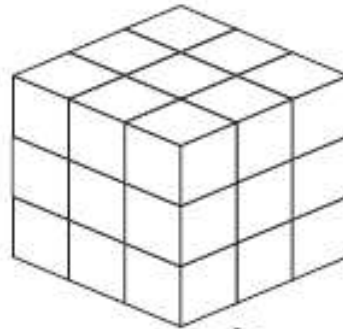


1. Each of these shapes has been built with centimetre cubes. Choose the correct volume for each shape. Tick the correct answer.



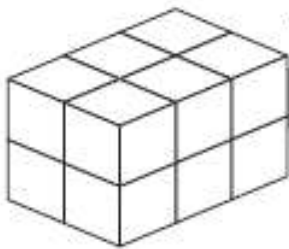
a) Volume =

- $4\text{cm}^3$   
  $8\text{cm}^3$



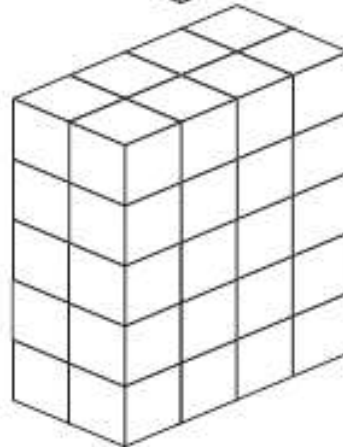
b) Volume =

- $25\text{cm}^3$   
  $27\text{cm}^3$



c) Volume =

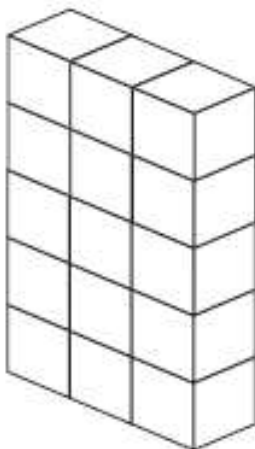
- $16\text{cm}^3$   
  $12\text{cm}^3$



d) Volume =

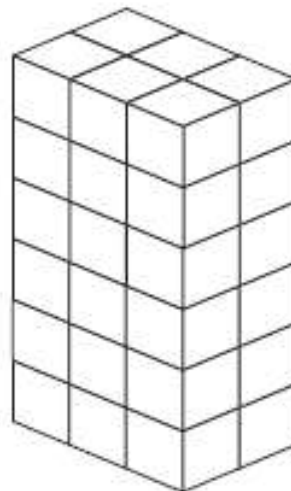
- $40\text{cm}^3$   
  $42\text{cm}^3$

2. Estimate the volume of these shapes. Write your answer using  $\text{cm}^3$ .



a) Volume =

\_\_\_\_\_



b) Volume =

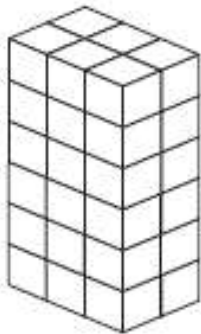
\_\_\_\_\_

# Estimating Volume

I can estimate the volume of shapes.

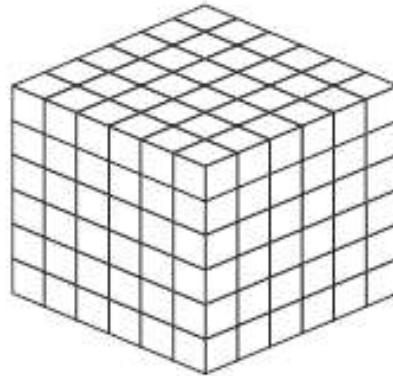


1. Each of these shapes has been built with centimetre cubes. Estimate the volume of each shape and write your answer using  $\text{cm}^3$ .



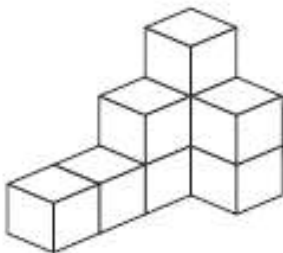
a) Volume =

\_\_\_\_\_



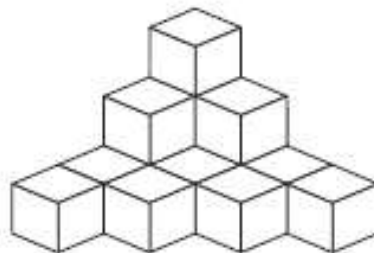
b) Volume =

\_\_\_\_\_



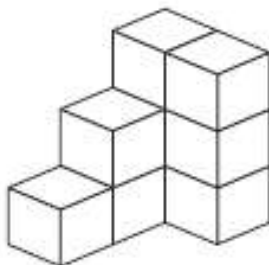
c) Volume =

\_\_\_\_\_



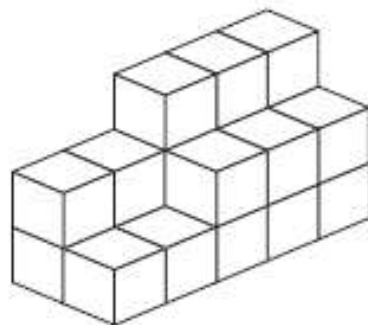
d) Volume =

\_\_\_\_\_



e) Volume =

\_\_\_\_\_



f) Volume =

\_\_\_\_\_