



# Perimeter and Area - Year 5

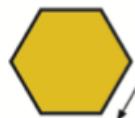
## Measuring Perimeter

### Perimeter of a rectangle



Measure the length (l) and width (w).  
Perimeter =  $l + w + l + w$  or  $(l + w) \times 2$

### Perimeter of regular shapes



Measure the length (l) and count the number of sides (s) on the shape.  
Perimeter =  $l \times s$

### Perimeter of irregular shapes



Measure the length of each side and add them together.

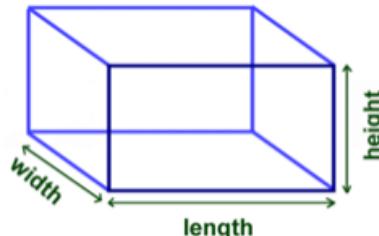
## Measuring Volume

Volume is the amount of space a 3D shape takes up.

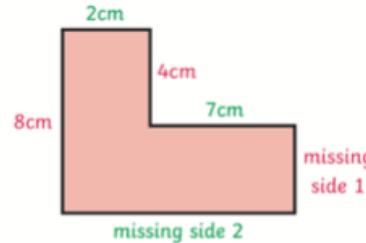
A cubic cm block takes up 1 cubic cm. This is written as  $1 \text{ cm}^3$ .

You can work out the volume of a shape by multiplying height  $\times$  width  $\times$  depth.

If the shape is made of cubic cm blocks, you can count the cubes to find the shape's volume.



## Missing Sides of a rectilinear shape



\* This shape is not drawn to the dimensions specified.

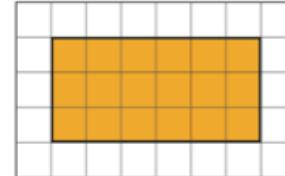
$$\text{Missing side 1} + 4\text{cm} = 8\text{cm}, \\ \text{so missing side 1} = 4\text{cm}.$$

$$\text{Missing side 2} = 2\text{cm} + 7\text{cm} = 9\text{cm}$$

$$\text{Perimeter} = \text{sum of all sides} = \\ 2\text{cm} + 4\text{cm} + 7\text{cm} + 4\text{cm} + 9\text{cm} + 8\text{cm} = 34\text{cm}$$

## Area of a Rectangle

The area of a rectangle on a grid:



Multiply the length  $\times$  width  
 $= 6 \times 3 = 18$  squares.

The area of a rectangle = length (l)  $\times$  width (w).

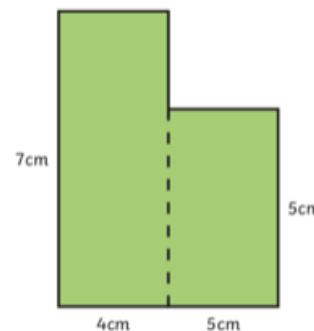


Area's unit of measure is always squared

For example:  $\text{cm}^2$ ,  $\text{m}^2$  or  $\text{km}^2$

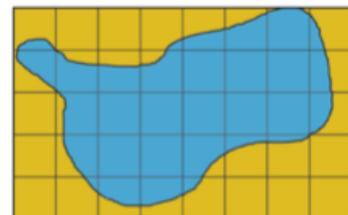
## Area of a compound shape

To find the area of a compound shape, divide the shape into rectangles with known dimensions:



## Area of an irregular shape

To find the area of an irregular shape, find the number of whole squares and part squares.



Whole squares = 10  
Part squares = 22

$$\text{Estimate of area} = \text{whole squares} + \\ \text{half part squares} \\ = 10\text{cm}^2 + 11\text{cm}^2 = 21\text{cm}^2$$