Y6 Area, Perimeter and Volume

Key vocabulary

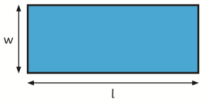
Perimeter	The distance around a two-dimensional shape.
Area	The size of a surface.
Rectilinear	A shape of whose sides meet at right angles
Compound Shape	A shape made up of 2 or more shapes
Irregular shape	Has at least one side different to the other sides, or angle different to the other angles.
Dimensions	How many values we need to locate points on a shape.
Length	Distance. How far from end to end. Or from one point to another.
Width	The distance from side to side.
Volume	The amount of space a 3D shape takes up.

Perimeter …

Of rectangles

Perimeter = l + w + l + w

or (l + w) × 2

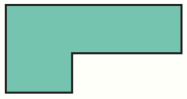


Of regular shapes

Perimeter = l × s

Measure the length (l) and count the number of sides (s) on the shape.

Of irregular shapes

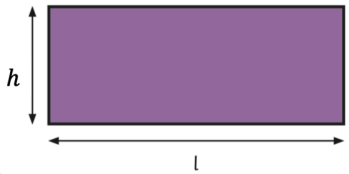


Measure the length of each side and add them together.

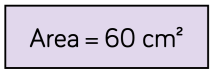
Area of Rectilinear Shapes

The unit of measure for area is always squared.

Area of a rectangle = $l \times h$

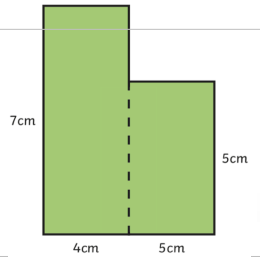


Finding missing sides using the area by dividing the area by the dimension that you know.



Area of Compound Shapes

Divide into rectangles and label known dimensions.



Area = 7cm × 4cm + 5cm × 5cm

= 28cm² + 25cm²

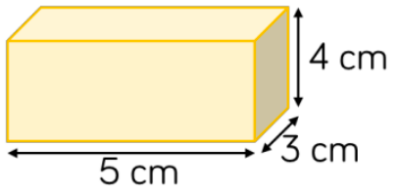
= 53cm²

Volume

A cubic cm block takes up 1 cubic cm. This is written as 1 cm³.

You can work out the volume of a shape by multiplying
Length x Width x Height

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



The length is: 5cm

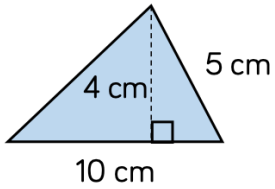
The width is: 3cm

The height is: 4cm

Volume = 5 x 3 x 4 = 60cm³

Area of Triangle

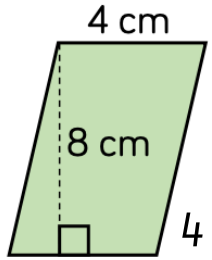
base × height ÷ 2



10 × 4 ÷ 2 = 20 cm²

Area of Parallelogram

base × perpendicular height



4 x 8 = 32 cm²