

Year 5 Area and Perimeter

Key Vocabulary

length
width
area
perimeter
millimetre mm
centimetre cm
metre m
kilometre km
rectilinear
compound shape
irregular shapes
square
centimetres
square metres

Measuring Perimeter

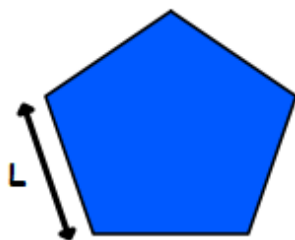


Measure the length (L) and width (W)

$$\text{Perimeter} = L + W + L + W$$

Or

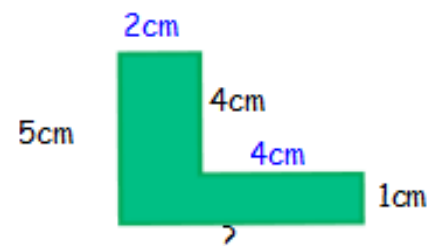
$$\text{Perimeter} = (L + W) \times 2$$



Measure the length of one side and then multiply it by the number of sides.

$$\text{Perimeter} = \text{length (L)} \times \text{number of sides (S)}$$

Perimeter of Rectilinear Shapes



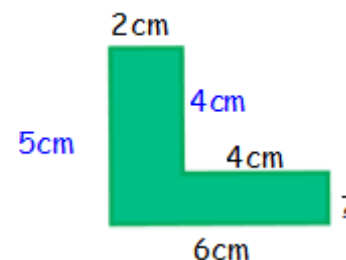
To work out the missing side, you need to add together the two opposite sides.

$$4\text{cm} + 2\text{cm} = 6\text{cm}.$$

You then add this to the sides you already have.

$$6\text{cm} + 5\text{cm} + 4\text{cm} + 4\text{cm} + 2\text{cm} + 1\text{cm} = 22\text{cm}$$

The perimeter of this shape is 22cm



To find the missing side here you need to subtract the one opposite side you have to find the other.

$$5\text{cm} - 4\text{cm} = 1\text{cm}$$

$$5\text{cm} + 2\text{cm} + 4\text{cm} + 4\text{cm} + 6\text{cm} + 1\text{cm} = 22\text{cm}$$

The perimeter of this shape is 22cm

Perimeter is the distance around the outside of a 2D shape.



Area

A rectilinear shape is a 2D shape whose sides all meet at a right angle (90°)



Area is the amount of space within a 2D shape.



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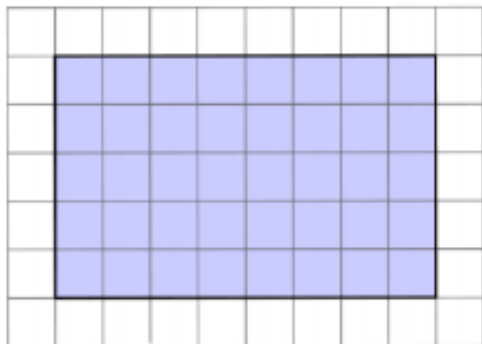
square metres

A **compound shape** is any shape made up of two or more shapes.



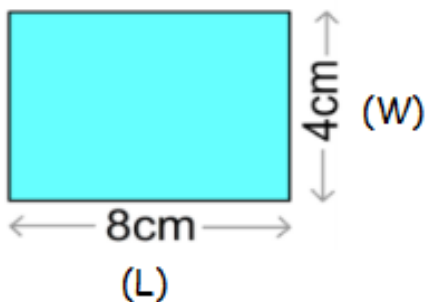
Area of Rectangles

To work out the area of rectangles on a grid, multiply the length \times width.



$$5 \times 8 = 40 \text{ squares}$$

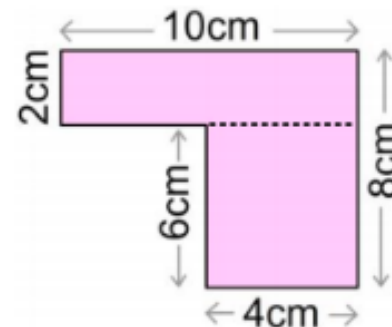
Area of a rectangle = length (L) \times width (W)



$$8 \text{ cm} \times 4 \text{ cm} = 32 \text{ cm}^2$$

Area of Compound Shapes

To find the area of compound shapes, divide them into two rectangles with known dimensions.



Work out the area of both rectangles and add them together.

$$6 \text{ cm} \times 4 \text{ cm} = 24 \text{ cm}^2$$

$$10 \text{ cm} \times 2 \text{ cm} = 20 \text{ cm}^2$$

$$24 \text{ cm}^2 + 20 \text{ cm}^2 = 44 \text{ cm}^2$$