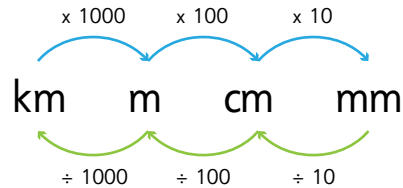


Key Vocabulary

perimeter, millimetres, centimetres, metres, kilometres, length, width, rectilinear, parallel

Measure in kilometres and metres



1 km = 1,000 metres 1 metre = 100 cm 1 cm = 10 mm

When might we use these measurements?

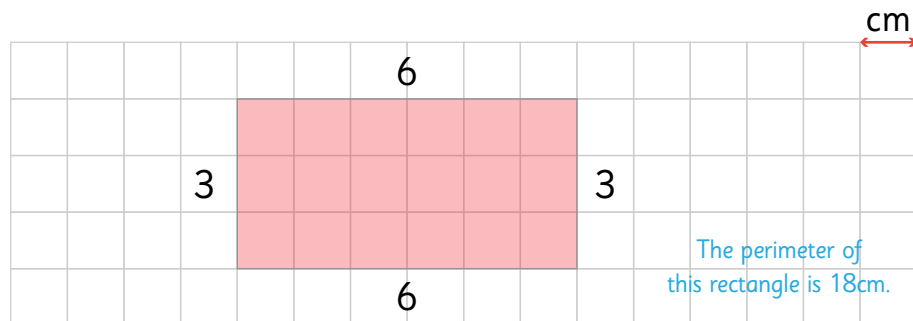
Measuring a garden- metres or cm
Distance between two cities- km
Length of a hair- mm or cm
Size of a bedroom- metres or cm
Distance to the moon- km

Equivalent measurements

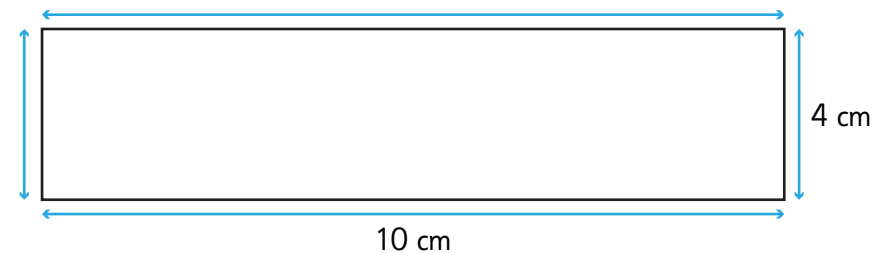
$\frac{1}{2}$ km = 500m
 $\frac{1}{4}$ km = 250m
 $\frac{3}{4}$ km = 750m
 $\frac{1}{2}$ metre = 50cm
3km and 750 metres = 3,750 metres
450cm = $4\frac{1}{2}$ metres

Perimeter on a grid

Perimeter is the total distance around the outside of a 2D shape.
We can also sometimes use squares to help us count the lengths and work out the perimeter when it is on a grid.



Perimeter of a rectangle

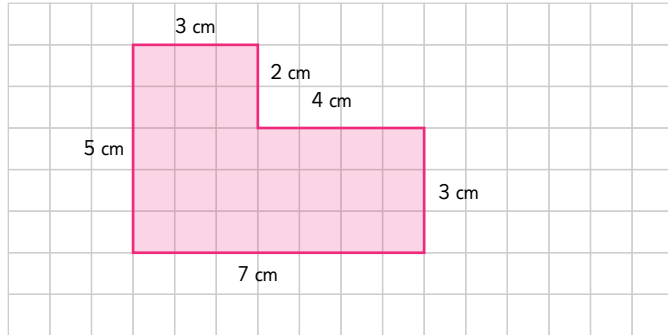


If we know the length and width of a rectangle, we can work out the perimeter.

The perimeter of this rectangle is 28cm.
 $10\text{cm} + 10\text{cm} + 4\text{cm} + 4\text{cm}$

Perimeter of a rectilinear shape

A rectilinear shape is a shape that has lines that all meet at right angles.

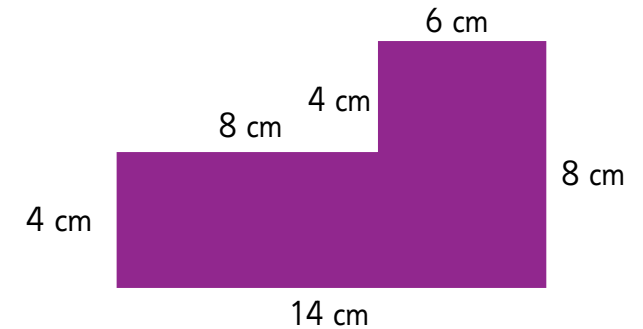


When the rectilinear shape is on a grid, we count the squares to help us find the perimeter. It is a good idea to label each side so that you don't miss any.

Once we have found the lengths of all the sides, we can add these together to find the perimeter.

$$3\text{cm} + 2\text{cm} + 4\text{cm} + 3\text{cm} + 7\text{cm} + 5\text{cm} = 24\text{cm}$$

Perimeter of a rectilinear shape

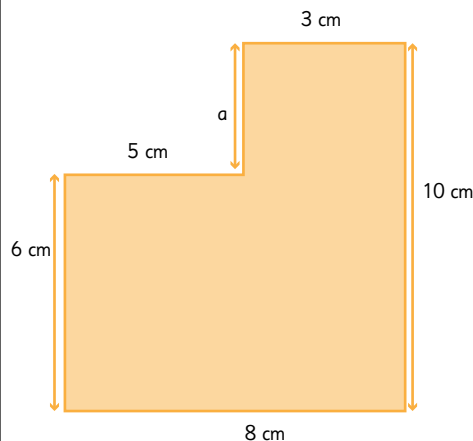


The perimeter of this rectilinear shape is 44cm.

$$14\text{cm} + 8\text{cm} + 6\text{cm} + 4\text{cm} + 8\text{cm} + 4\text{cm}$$

Finding missing lengths of a rectilinear shape

To find missing lengths, we need to find the lines that are parallel to each other. We will also need to use our knowledge of inverse operations for addition and subtraction.



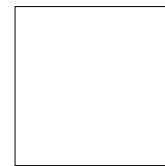
We can calculate the missing length for this rectilinear shape by finding the parallel lines.

$A + 6\text{cm}$ is the same length as 10cm .

This means that the missing length must be 4cm

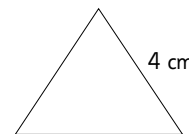
Perimeter of a regular polygon

A regular polygon is a 2-D shape where all of the sides and angles are equal in size. Some examples of these shapes are: an equilateral triangle, a square, a regular pentagon, a regular hexagon...



5 cm

The perimeter of this square is 20cm . We do not need to calculate the rest of the lengths. This is a regular polygon, which means we know all the lengths are the same size.



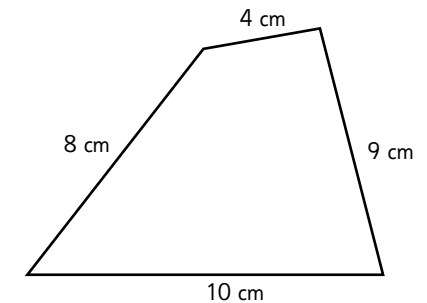
4 cm

The perimeter of this triangle is 12cm .

Perimeter of irregular polygons

An irregular polygon is a 2-D shape. Not all of the sides and angles are equal in size.

Examples of irregular polygons are: rectangles, scalene triangle, parallelogram



The perimeter of irregular polygon is 31cm

$$8\text{cm} + 4\text{cm} + 9\text{cm} + 10\text{cm}$$