

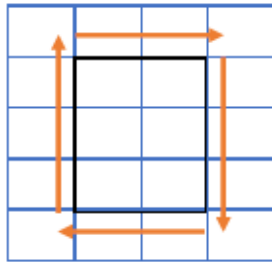
Measurement Knowledge Organiser – Year 4

Objectives

- Convert between different units of measure
- Measure and calculate perimeter
- Find the area of shapes by counting squares
- Estimate, compare and calculate different measures

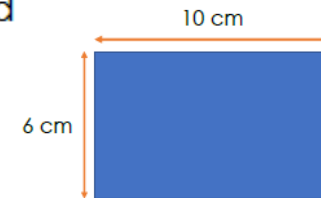
Conversions

- 1 cm = 10 mm
- 1 m = 100 cm
- 1 km = 1000 m
- 1 kg = 1000 g
- 1 l = 1000 ml



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

The perimeter of this shape =
 $2\text{cm} + 3\text{cm} + 2\text{cm} + 3\text{cm} = 10\text{cm}$



I can work out the perimeter because I know that rectangles have 2 equal long sides and 2 equal short sides. The perimeter is $10\text{cm} \times 2$ add $6\text{cm} \times 2 = 32\text{cm}$.

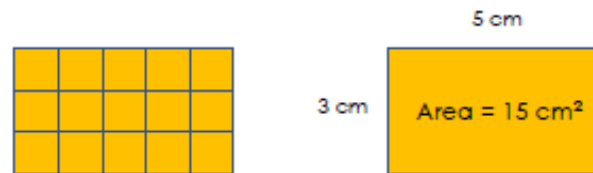
Ben is correct. We can use this formula:
 $\text{length} \times 2 + \text{width} \times 2$



Area is a measurement of the space inside a 2D shape or a surface.

A farmer puts a fence around the outside of a field = perimeter.

Using times tables (or blank arrays) is a more efficient way to find the area.

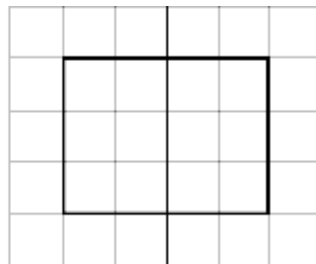


5 squares in 1 row.
 There are 3 rows altogether.
 $3 \text{ rows of } 5 \text{ squares} = 15 \text{ squares.}$

We measure area in unit squares.

This rectangle has an area of 12 cm^2 .

We can count the squares inside the shape.



Area answer are only = unit²

The unit is what your shape is measured in.

Example: cm, m, mm or km.

VOCABULARY

- length
- kilometres **km**
- metres **m**
- centimetres **cm**
- convert
- perimeter
- grid
- rectangle
- rectilinear shape

VOCABULARY

- area
- measure
- surface
- square units
- squared ²
- perpendicular
- rectilinear
- blank array