What is area?

Area is the amount of space taken up by a two-dimensional shape or flat surface.

Units of area

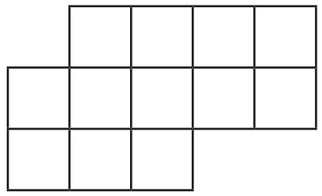
Area is measured in unit squares, for example square millimetres (mm^2), square centimetres (cm^2), square metres (m^2) or square kilometres (km^2).

Rewarding Learning

How to find area

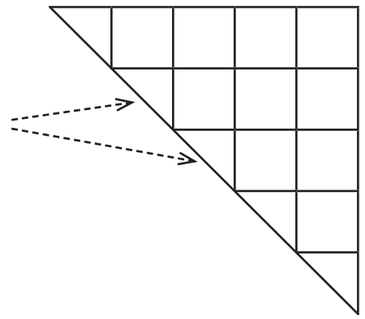
Find **area** by **counting squares**

Example
The area of this shape is **12 squares**



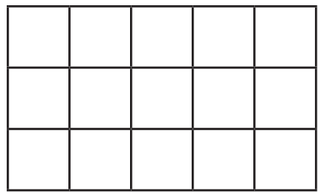
If the shape has some half squares:

- Count the whole squares
- Count two half squares as one whole
- Add them together



Example
Area = 10 + 2 + ½ = 12½ squares

This rectangle has 3 rows each with 5 squares
The area is 3 × 5 = 15 squares



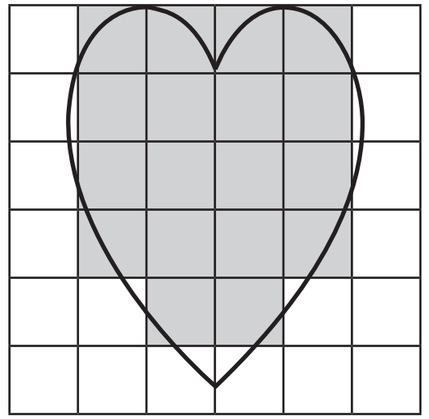
How to estimate area

The area of some shapes can be estimated.

To **estimate** area:

- Draw around the shape on squared paper or place a squared grid over it
- **Shade squares** that are **more than or equal to half a square** inside the shape **as a whole square**

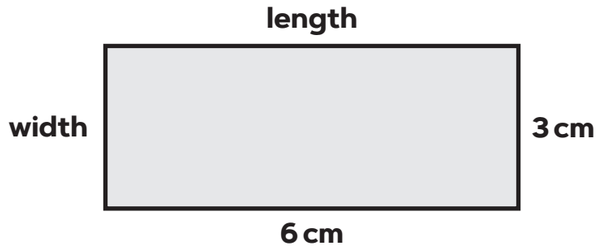
For example, counting all the shaded squares, the **area of this heart is about 18 squares**.



How to calculate area

To calculate the area of a rectangle or square:

- Find the length of the sides
- Use the rule **area = length × width**



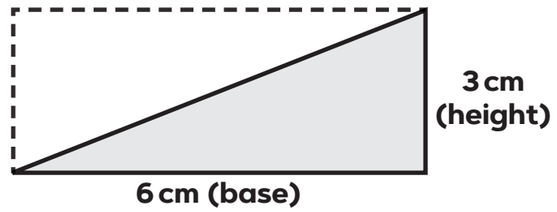
For example, **area = 6 × 3 = 18 cm²**

A rectangle can be split into two identical right-angled triangles.

To calculate the **area** of a **right-angled triangle:**

- Find the length of the base and the height
- Use the rule **area of a triangle =** $\frac{\text{base} \times \text{height}}{2}$

(Since the triangle is half of the rectangle)



For example, **area =** $\frac{6 \times 3}{2} = \frac{18}{2} = 9\,cm^2$

Level 3

Find the area by counting whole and half squares.

Level 4

Estimate area by counting more than half a square as a whole square.

Level 5

Calculate areas of squares, rectangles and right-angled triangles.