

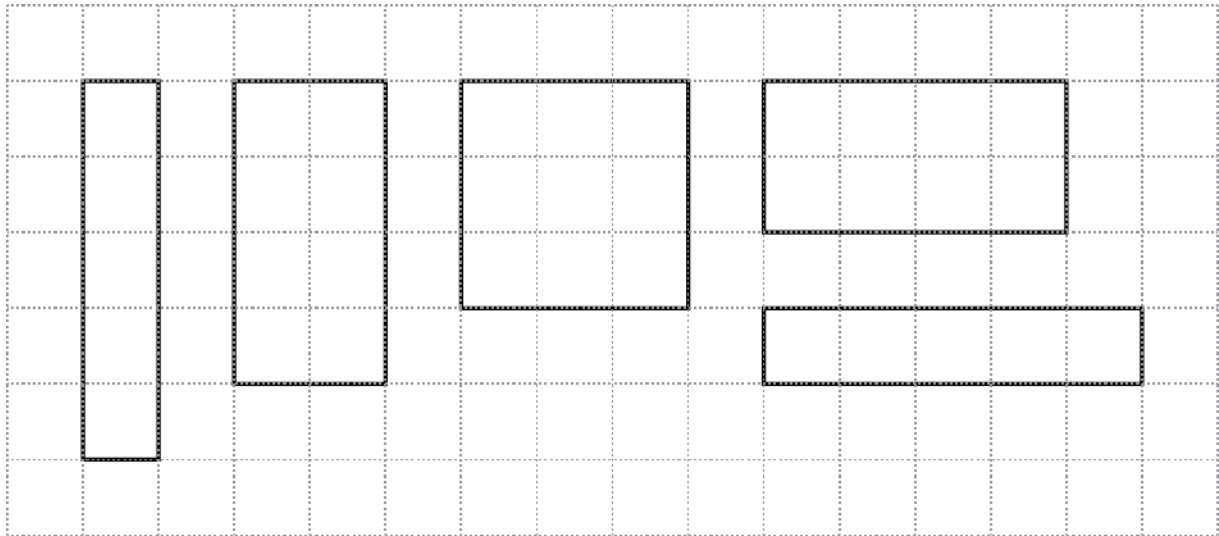
Perimeter and Area

Numeracy Guide, Greystanes High School

Perimeter

The distance around the outside of a two-dimensional shape is called the **perimeter**. The perimeter is calculated by adding the lengths of all sides.

The perimeter of each shape below is 12 cm.



Area

Area is measured in square units. Area is the amount of space contained inside a flat (i.e. plane) shape.



1 cm

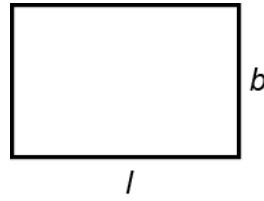
1 square centimetre (1 cm²)

Common units of area

Unit of area	Square side length	Used to measure
1 square millimetre (mm ²)	1 mm	
1 square centimetre (cm ²)	1 cm	the area of a desk
1 square metre (m ²)	1 m	floor areas, suburban land areas
1 hectare (ha)	100 m	paddocks, farms, cities
1 square kilometre (km ²)	1 km	huge areas such as states and countries

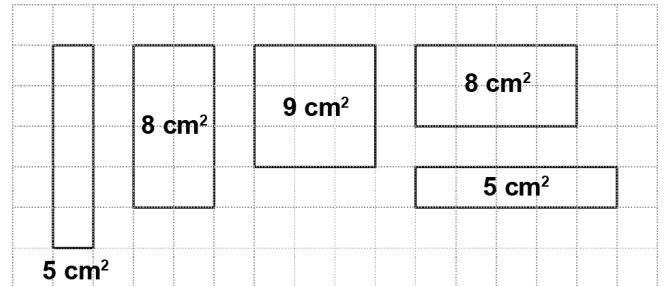
Rectangles

The area of a rectangle is given by the number of rows multiplied by the number of columns. Written as a formula, this looks like $A = l \times b$, where l is the length and b is the breadth (or width).



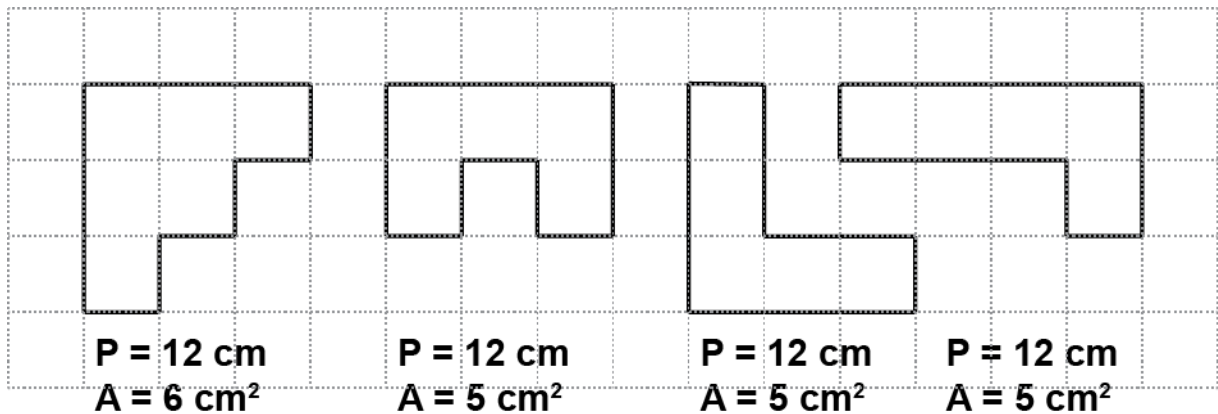
$$A = l \times b$$

The area for the shapes above are:



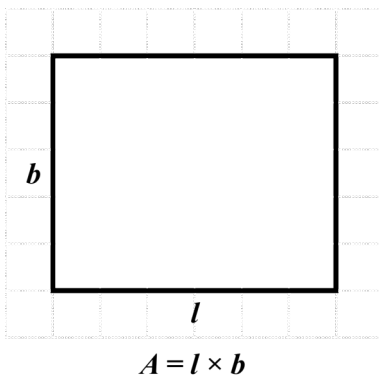
Composite Shapes

A composite shape is a figure reducible to simpler plane shapes.

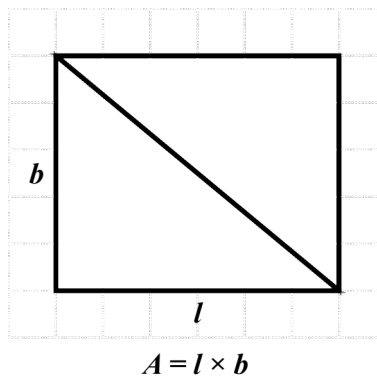


Triangles

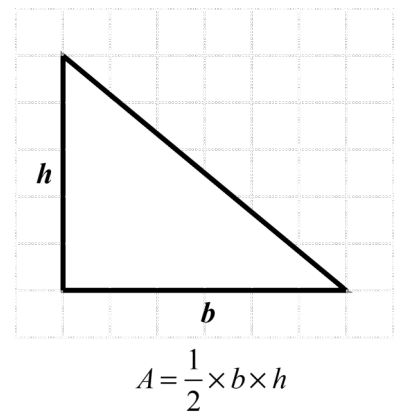
The area of a triangle is half the area of the rectangle that *fits around it*.



$$A = l \times b$$



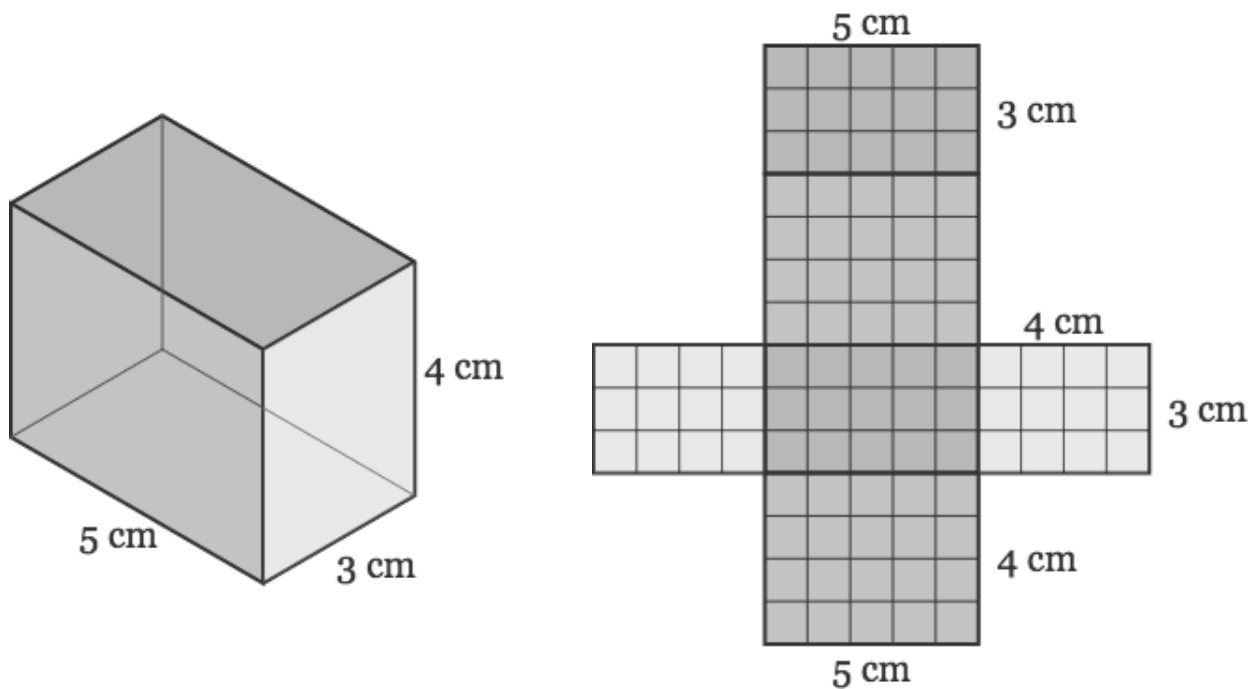
$$A = l \times b$$



$$A = \frac{1}{2} \times b \times h$$

Surface Area

The surface area of a solid is the sum of the areas of its faces.



The surface area of a rectangular prism consists of 3 pairs of rectangles.

To calculate the surface area, sum the areas of the faces of the rectangular prism.

Teaching Strategies

- Use formal language, “perimeter” and “area”, instead of informal terms.
- Make a point of choosing appropriate units for measurement perimeter or area.
- Use the real-life examples in your KLA to discuss applications of perimeter and area.
- Find perimeter and area in the context of projects and creative works.