

Key Vocabulary

perimeter

area

volume

cubic units (e.g. cm³)

cuboid

width

length

rectangle

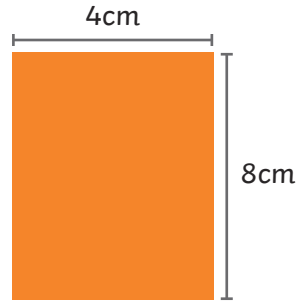
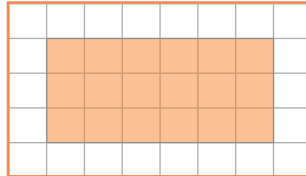
rectilinear

parallelogram

perpendicular height

Area of Rectangles

$\text{length} \times \text{width} = \text{area of a rectangle}$



Counting squares:

area = 18cm²

Use formula:

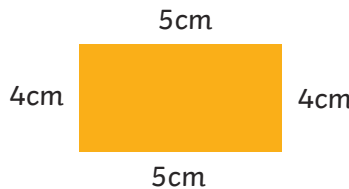
6cm × 3cm

area = 18cm²

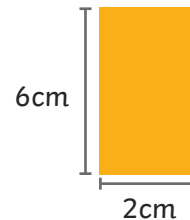
8cm × 4cm area = 32cm²

Perimeter of Rectangles

$\text{perimeter} = \text{length} + \text{width} + \text{length} + \text{width}$ or $(\text{length} + \text{width}) \times 2$



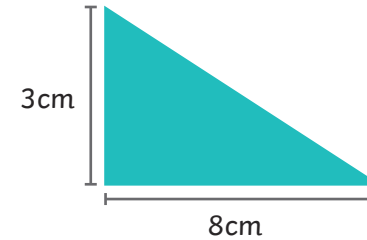
5cm + 4cm + 5cm + 4cm
area = 18cm²



(6 + 2) × 2
area = 16cm²

Area of Triangles

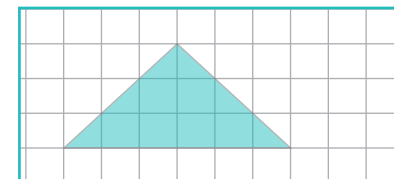
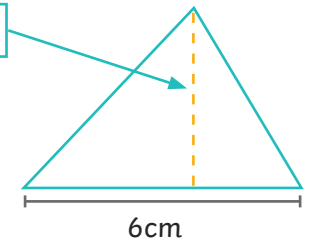
$\text{base} \times \text{perpendicular height} \div 2 = \text{area of a triangle}$



8cm × 3cm ÷ 2
area = 12cm²

perpendicular height = 5cm

6cm × 5cm ÷ 2
area = 15cm²



Counting squares:

6 whole squares = 6cm²

6 half squares = 3cm²

6cm² + 3cm² = 9cm²

area = 9cm²

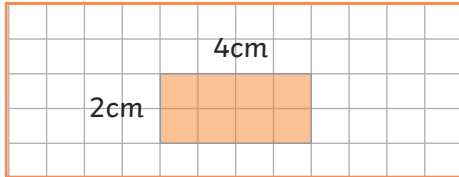
Using formula:

6cm × 3cm

÷ 2 = 9cm²

Perimeter and Area

Shapes with the same area can have different perimeters.

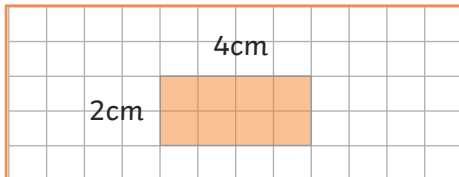


area = 8cm^2 perimeter = 12cm

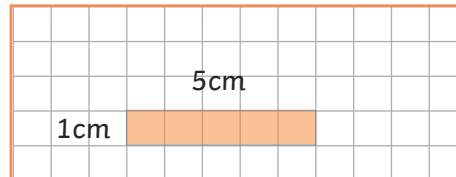


area = 8cm^2 perimeter = 18cm

Shapes with the same perimeter can have different areas.



area = 8cm^2 perimeter = 12cm

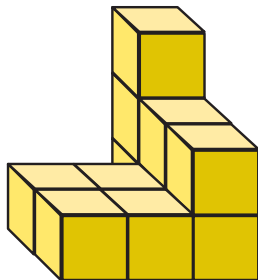


area = 5cm^2 perimeter = 12cm

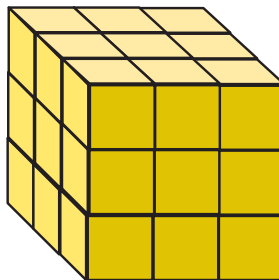
Volume - Counting Cubes



= 1cm^3



11cm^3

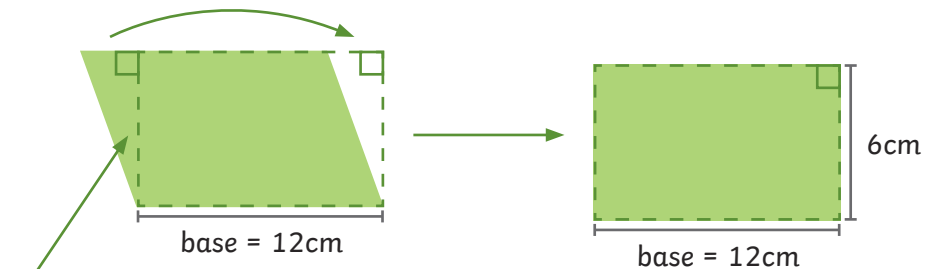


27cm^3

Area of Parallelograms

base \times perpendicular height = area of a parallelogram

A parallelogram can be transformed into a rectangle.

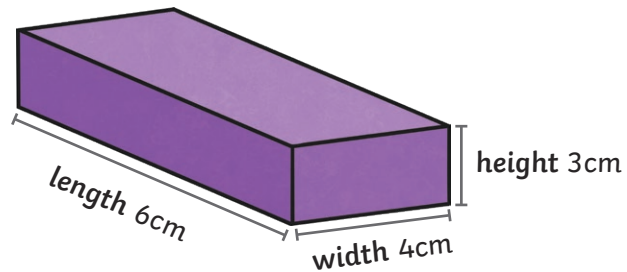


perpendicular height = 6cm

$12\text{cm} \times 6\text{cm} = 72\text{cm}^2$

Volume of Cuboids

length \times width \times height = volume of a cuboid



Multiply dimensions in **any** order:

$3\text{cm} \times 6\text{cm} \times 4\text{cm}$

volume = 72cm^3