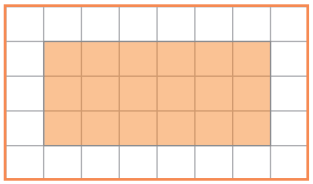
## Key Vocabulary

- perimeter
- area
- volume
- cubic units (e.g. $cm^3$)
- cuboid
- width
- length
- rectangle
- rectilinear
- parallelogram
- perpendicular height

## Area of Rectangles

**length × width = area of a rectangle**



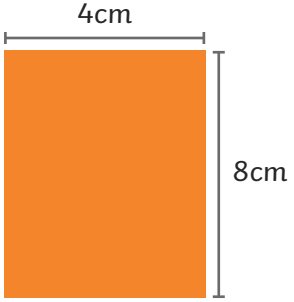
**Counting squares:**

area = $18cm^2$

**Use formula:**

6cm × 3cm

area = $18cm^2$



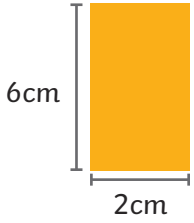

8cm × 4cm area = $32cm^2$

## Perimeter of Rectangles

**perimeter = length + width + length + width or (length + width) × 2**


5cm + 4cm + 5cm + 4cm

perimeter = $18cm^2$

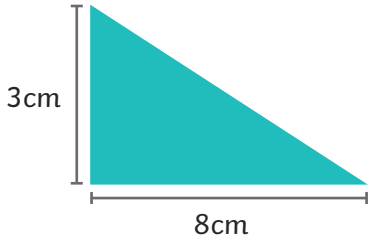



(6 + 2) × 2

perimeter = $16cm^2$

## Area of Triangles

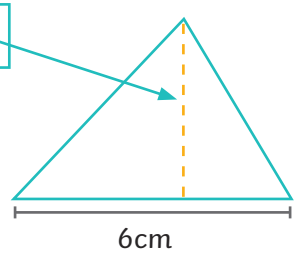
**base × perpendicular height ÷ 2 = area of a triangle**




8cm × 3cm ÷ 2

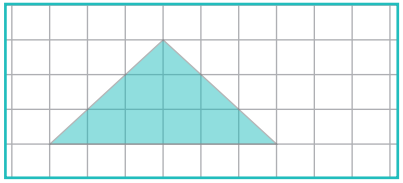
area = $12cm^2$

**perpendicular height** = 5cm




6cm × 5cm ÷ 2

area = $15cm^2$



**Counting squares:**

6 whole squares = $6cm^2$

6 half squares = $3cm^2$

$6cm^2 + 3cm^2 = 9cm^2$

area = $9cm^2$

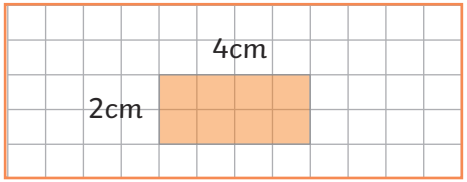
**Using formula:**

6cm × 3cm

÷ 2 = $9cm^2$

## Perimeter and Area

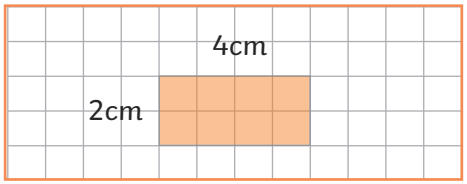
**Shapes with the same area can have different perimeters.**



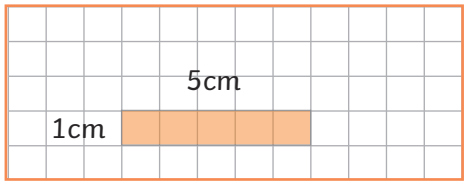

area = $8cm^2$ perimeter = 12cm


area = $8cm^2$ perimeter =18cm

**Shapes with the same perimeter can have different areas.**



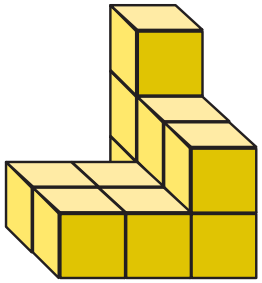

area = $8cm^2$ perimeter = 12cm



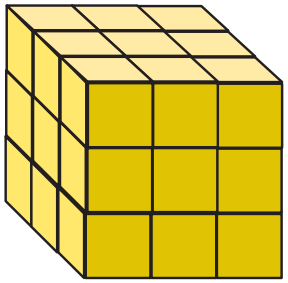

area = $5cm^2$ perimeter = 12cm

## Volume - Counting Cubes

= $1cm^3$



$11cm^3$

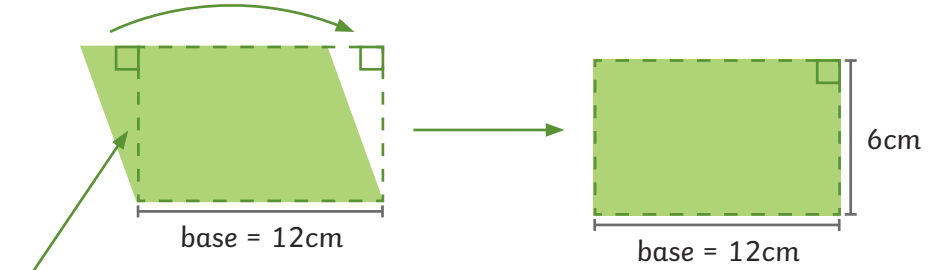


$27cm^3$

## Area of Parallelograms

**base × perpendicular height = area of a parallelogram**

A parallelogram can be transformed into a rectangle.

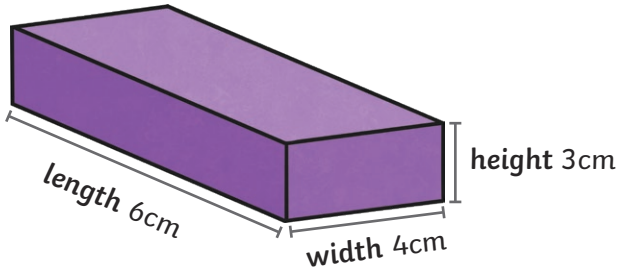



perpendicular height = 6cm

12cm × 6cm = $72cm^2$

## Volume of Cuboids

**length × width × height = volume of a cuboid**




Multiply dimensions in **any** order:
3cm × 6cm × 4cm
volume = $72cm^3$