

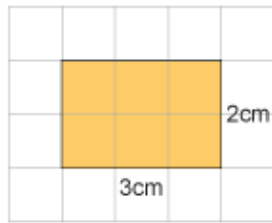


8 - Area, Perimeter and Circles

Area – the 2D space a shape covers

Units – mm², cm², m²...

Counting Squares

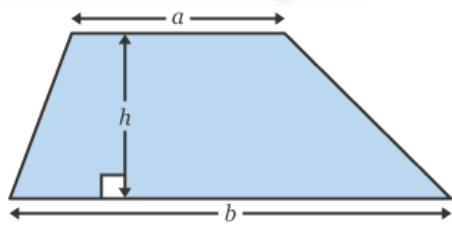


$$= 6\text{cm}^2$$

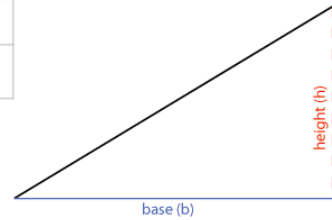
Formula



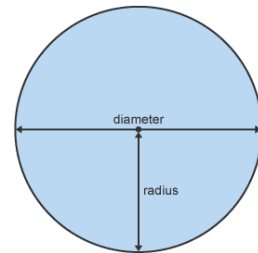
area = base x height



$$\text{area of a trapezium} = \frac{1}{2}(a + b) \times h$$

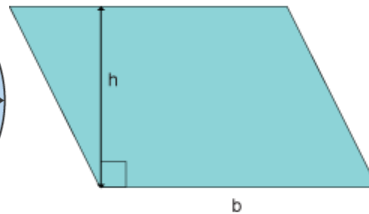


$$A = \frac{b \times h}{2}$$

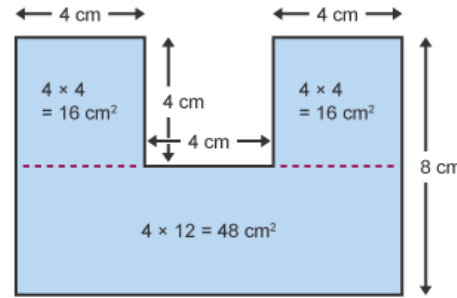


$$\text{area of a circle} = \pi r^2$$

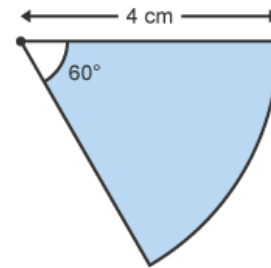
r = radius



$$\text{area} = \text{base (b)} \times \text{height (h)}$$



$$\text{Area} = 16 + 16 + 48 = 80 \text{ cm}^2$$



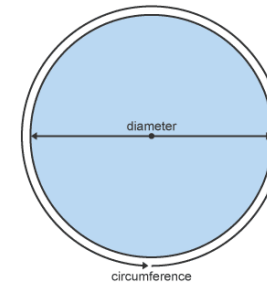
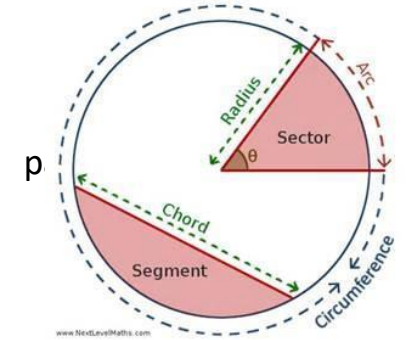
$$\text{Sector area} = \pi \times r^2 \times \frac{\text{angle}}{360}$$

$$\frac{1}{6} \times \pi \times 4^2 = 8.4 \text{ cm}^2$$

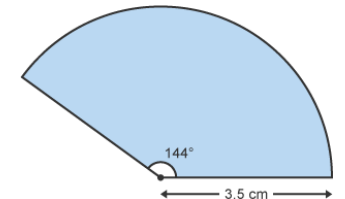
Perimeter – the total distance around the edge of a 2D shape.

Units – mm, cm, m...

Perimeter of a circle is known as **circumference**



$$\text{circumference} = \pi \times \text{diameter}$$



$$\text{Arc length} = \pi \times d \times \frac{\text{angle}}{360}$$

$$\pi \times 7 \times \frac{144}{360} = 8.8 \text{ cm}$$

Linked Prior Topics

Naming 2D shapes
Units
Addition/Multiplication

Vocabulary

Area	Trapezium	Arc
Perimeter	Circumference	Sector
Quadrilateral	Circle	Segment
Triangle	Dimension	Chord
Parallelogram	$(\pi)pi = 3.142 (3dp)$	

Linked Future Topics

Surface Area
Volume
Circle Theorems