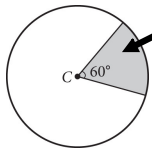


Area and Perimeter



Key Words

Area	The space inside a 2D shape.
Perimeter	The total length of the sides of a 2D shape.
Surface Area	The total area of all faces of a 3D shape.
Circumference	The perimeter of a circle.
Arc	A section of the circumference.
Sector	A section of the area of a circle (shown below).



Key Concepts

Perpendicular Height

This is used for calculating area and refers to the vertical height (at a right angle). $\frac{1}{2}ab\sin C$ is used for when a perpendicular height cannot be found.

Sectors

The angle is divided by 360 to represent the fraction of the circle taken up by the sector. Remember that a sector is formed by two radii.

Trapezium

In the formula, a and b represent the parallel sides and h is the distance between them. Remember that h doesn't always mean the height.

Key Facts

Perimeter = Add up all sides of the shape.

Area of rectangle = base x height

Area of parallelogram = base x perpendicular height

Area of triangle = $\frac{\text{base} \times \text{perpendicular height}}{2}$

Area of trapezium = $\frac{a + b}{2} \times h$

Area of circle = πr^2

Circumference of circle = πd

Area of semicircle = $\frac{\pi r^2}{2}$

Perimeter of semicircle = $\frac{\pi d}{2} + d$

Area of sector = $\frac{\theta}{360} \times \pi r^2$

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