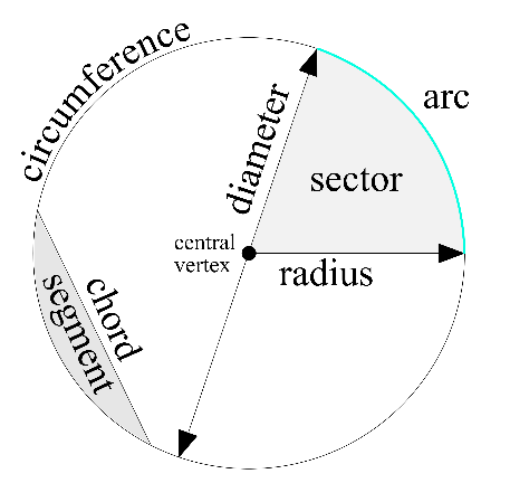
STAGE 9: UNIT 7 CALCULATING SPACE

KEYWORDS AND DEFINITIONS

1 CIRCLE



2 PI

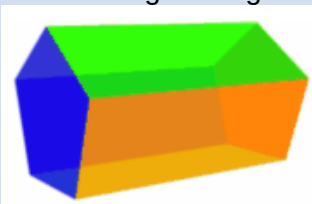
The ratio of a circle's circumference to its diameter

$$\frac{\text{Circumference}}{\text{Diameter}} = \pi = 3.14159\ldots$$

3 PRISM

A prism is a solid object with:

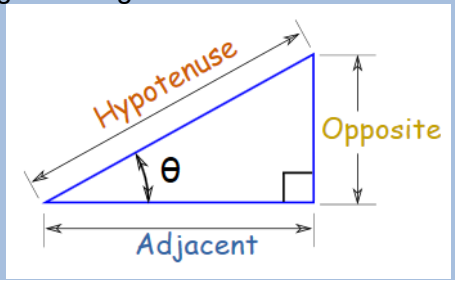
- identical ends
- flat faces
- and the same **cross section** all along its length !



4 HYPOTENUSE

The side opposite the right angle in a right-angled triangle

It is also the longest side of the right-angled triangle



NOTATION

5 PI = π

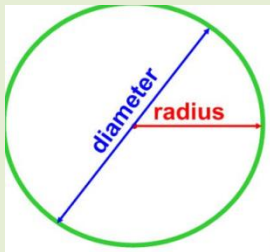
6 Abbreviations of units in the metric system: km, m, cm, mm, mm^2, cm^2, m^2, km^2, mm^3, cm^3, km^3

∠ABC

PRIOR KNOWLEDGE

7 Know and use the number π

8 Know and use the formula for area and circumference of a circle



Area of a circle = π x **radius²**

Circumference of a circle = π x **diameter**

remember that the **diameter = 2 x radius**

9	Know how to use formulae to find the area of rectangles, parallelograms, triangles and trapezia.
10	Know how to find the area of compound shapes

CORE SUCCESS CRITERIA

15	**Know the vocabulary of circles**
16	Know how to find arc length
17	Calculate the arc length of a sector when radius is given
18	Know how to find the area of a sector
19	Calculate the area of a sector when radius is given.
20	Calculate the angle of a sector when the arc length and radius are known.
21	Know how to find the surface area of a right prism (cylinder)
22	Calculate the surface area of a right prism (cylinder).
23	Calculate exactly with multiples of π
24	Know Pythagoras' theorem
25	Identify the hypotenuse in a right-angled triangle.
26	Know when to apply Pythagoras' theorem.
27	Calculate the hypotenuse of a right-angled triangle using Pythagoras' theorem.
28	Calculate one of the shorter sides in a right-angled triangle using Pythagoras' theorem