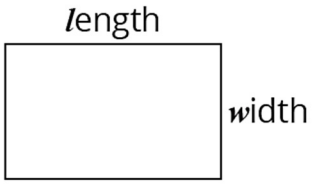
GCSE Maths **Formulae** (Foundation)

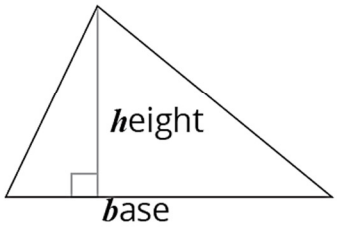
Area of a Rectangle



length × width

$= lw$

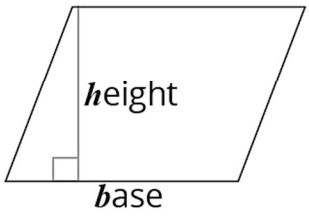
Area of a Triangle



$\frac{1}{2}$ × base × height

$= \frac{1}{2}bh$

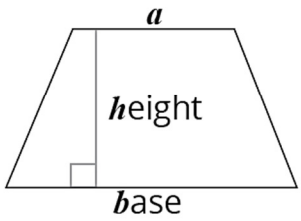
Area of a Parallelogram



base × height

$= bh$

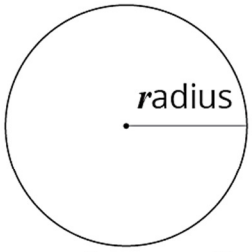
Area of a Trapezium



$\frac{1}{2} \times (a + b) \times$ height

$= \frac{1}{2}(a + b)h$

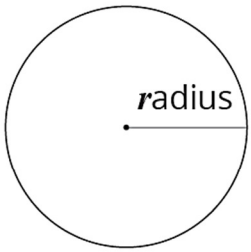
Area of a Circle



$\pi \times$ radius × radius

$= \pi r^2$

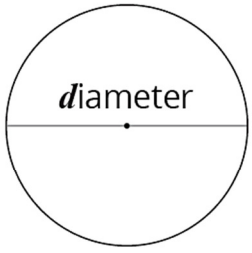
Circumference of a Circle



$2 \times \pi \times$ radius

$= 2\pi r$

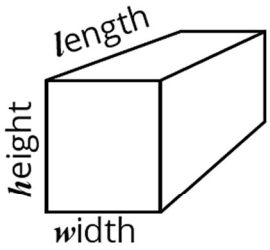
Circumference of a Circle



$\pi \times$ diameter

$= \pi d$

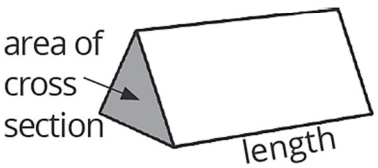
Volume of a Cuboid

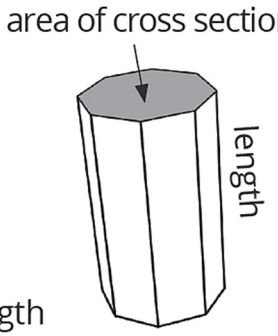


length × width × height

$= lwh$

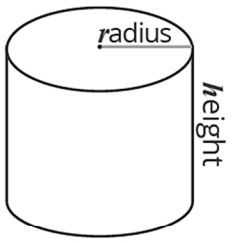
Volume of a Prism





area of cross section × length

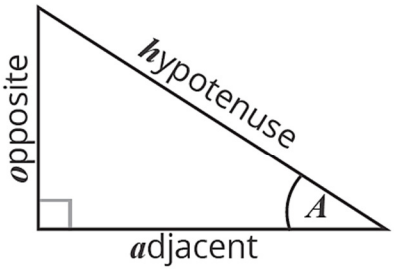
Volume of a Cylinder



$\pi \times$ radius × radius × height

$= \pi r^2 h$

Trigonometry Formulae



$\text{Sin } A = \frac{\text{opposite}}{\text{hypotenuse}}$

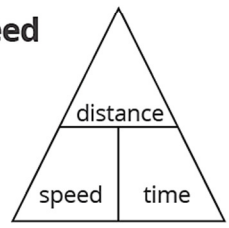
$\text{Cos } A = \frac{\text{adjacent}}{\text{hypotenuse}}$

$\text{Tan } A = \frac{\text{opposite}}{\text{adjacent}}$

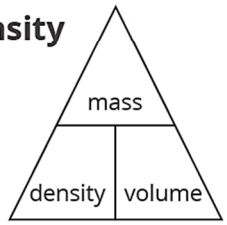
$\text{Sin } A = \frac{o}{h}$, $\text{Cos } A = \frac{a}{h}$, $\text{Tan } A = \frac{o}{a}$

Compound Measures:

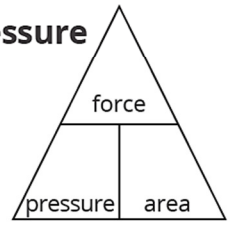
Speed



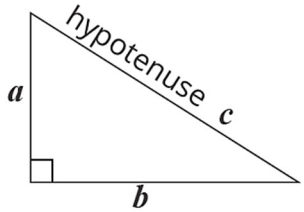
Density



Pressure



Pythagoras' Theorem



$a^2 + b^2 = c^2$

Compound Interest

Principle amount

interest **r**ate

number of times the interest is compounded

Value of Investment

$= \mathbf{P}\left(1 + \frac{\mathbf{r}}{100}\right)^{\mathbf{n}}$

Values of Trigonometric Functions

	0°	30°	45°	60°	90°
sinθ	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
cosθ	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
tanθ	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	not defined