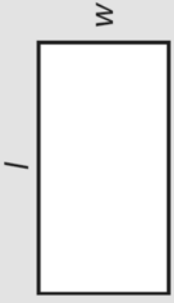
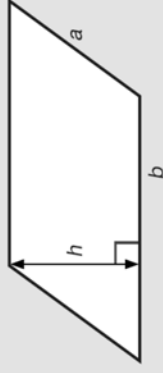


Areas

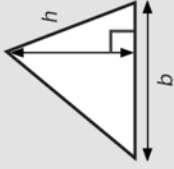
Rectangle = $l \times w$



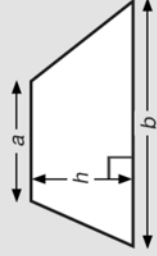
Parallelogram = $b \times h$



Triangle = $\frac{1}{2} b \times h$

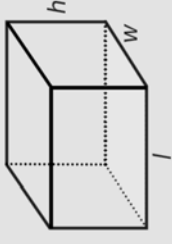


Trapezium = $\frac{1}{2} (a + b)h$

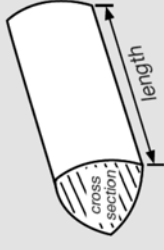


Volumes

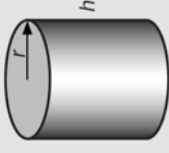
Cuboid = $l \times w \times h$



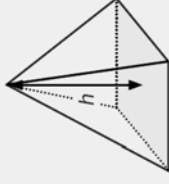
Prism = area of cross section \times length



Cylinder = $\pi r^2 h$



Volume of pyramid = $\frac{1}{3} \times$ area of base $\times h$

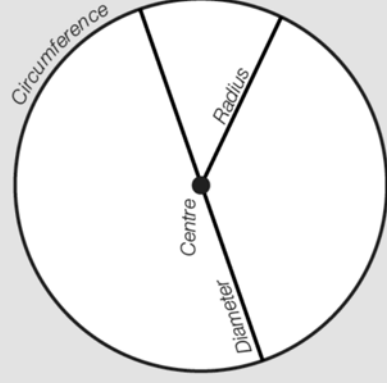


Circles

Circumference = $\pi \times$ diameter, $C = \pi d$

Circumference = $2 \times \pi \times$ radius, $C = 2\pi r$

Area of a circle = $\pi \times$ radius squared $A = \pi r^2$



Quadratic equations

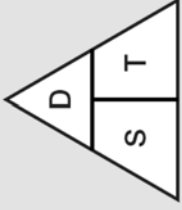
The Quadratic Equation

The solutions of $ax^2 + bx + c = 0$, where $a \neq 0$, are given by $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Compound measures

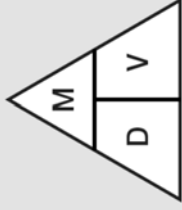
Speed

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$



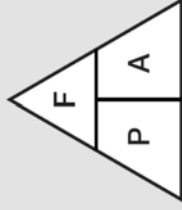
Density

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$



Pressure

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

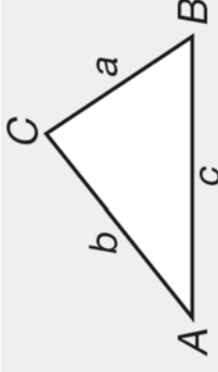


Trigonometric formulae

$$\text{Sine Rule } \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\text{Cosine Rule } a^2 = b^2 + c^2 - 2bc \cos A$$

$$\text{Area of triangle} = \frac{1}{2} ab \sin C$$



Pythagoras

Pythagoras' Theorem

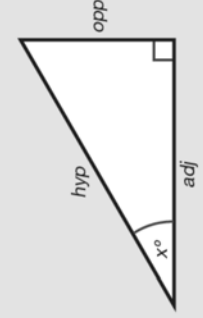
For a right-angled triangle,

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



Trigonometric ratios (new to F)

$$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}, \cos x^\circ = \frac{\text{adj}}{\text{hyp}}, \tan x^\circ = \frac{\text{opp}}{\text{adj}}$$



FORMULAE TO LEARN

These are key formulae that you will need to know for your GCSE. They will not be given to you in the exams.