FORMULAE you need to know...

Area

Rectangle – Length x Width

Triangle – ½ x Base x Height

Parallelogram – Base x Height

Trapezium – ½ (a + b) x h

Volume

Volume of a prism =
Area of cross section x Length

Angles

Sum of interior angles in a polygon
(n – 2) x 180

Probability

P (A or B) = P(A) + P(B) – P (A and B)

P (A and B) = P(A given B)P(B)

Compound Interest

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

Where P is the Principle amount, r is the interest rate and n is the number of times that the interest is compounded.

Index Laws

$x^a \times x^b = x^{a+b}$

$x^a \div x^b = x^{a-b}$

$(x^a)^b = x^{ab}$

$x^0 = 1 \qquad x^{-a} = \frac{1}{x^a}$

$x^{\frac{a}{b}} = (\sqrt[b]{x})^a$

Trigonometry

$\sin\theta = \frac{Opposite}{Hypotenuse}$

$\cos\theta = \frac{Adjacent}{Hypotenuse}$

$\tan\theta = \frac{Opposite}{Adjacent}$

Trigonometry

Higher Only

Sine rule : $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine rule (lengths)

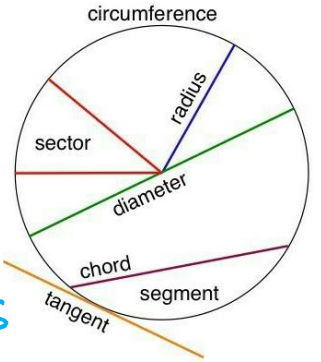
$a^2 = b^2 + c^2 - 2bc\cos A$

Cosine rule (angles)

$cos\ A = \frac{b^2 + c^2 - a^2}{2bc}$

Area of non-right angled triangles

$= \frac{1}{2}ab\sin C$



Circles

Area - πr^2

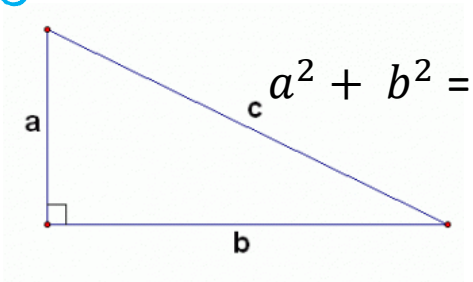
Circumference - πd or $2\pi r$

Higher Only

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

Arc length = $\frac{\theta}{360} \times \pi$d or $\frac{\theta}{360} \times 2\pi r$

Pythagoras' Theorem



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

The quadratic formula

Higher Only

The solutions of $ax^2 + bx + c = 0$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$