FORMULAE you need to know...

WHICKHAM
SCHOOL & SPORTS COLLEGE

Angles

Sum of interior angles in a polygon

$(n-2) \times 180$

Probability

$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
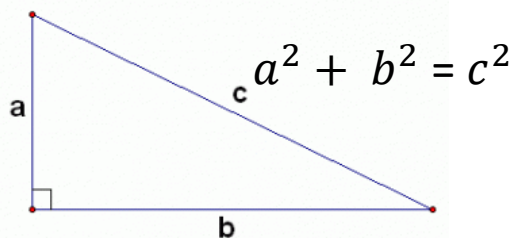
$P(A \text{ and } B) = P(A \text{ given } B)P(B)$

Compound Interest

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

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

Pythagoras' Theorem

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

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

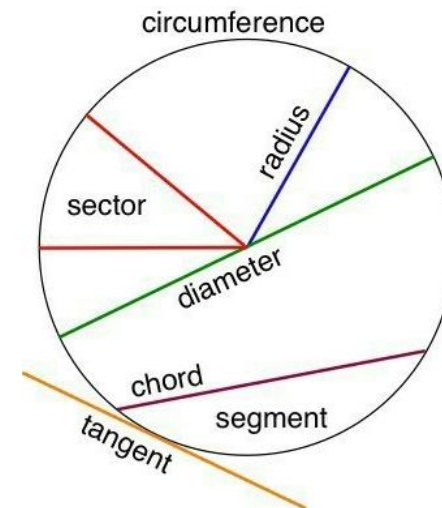## Trigonometry

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

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

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

Circles

Area - πr^2

Circumference - πd or $2\pi r$

circumference
radius
sector
diameter
chord
segment
tangent

Index Laws

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

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

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

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

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