Sine Rule $$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$	**Area of a Triangle** $$\frac{\text{base x height}}{2}$$	**Volume of a Prism** *Area of cross section x length*	$\sin x = \frac{opp}{hyp}$	**Geometric Sequence** Term to term rule is multiplying or dividing by the same number
Cosine Rule (side) $$a^2 = b^2 + c^2 - 2bc\cos A$$	**Area of a Circle** $$\pi r^2$$	**Volume of a Pyramid** $$\frac{1}{3} \times \text{area of base x h}$$	$\cos x = \frac{adj}{hyp}$	**Arithmetic Sequence** Term to term rule is adding or subtracting the same number
Cosine Rule (angle) $$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$	**Circumference of a Circle** $$\pi d \text{ or } 2\pi r$$	**Percentage Change** $$\frac{\text{difference}}{\text{original}} \times 100$$	$\tan x = \frac{opp}{adj}$	**Equation of a Circle** $x^2 + y^2 = r^2$
3 rules of finding the nth term of a quadratic: $\quad a + b + c$ $\quad 3a + b$ $\quad 2a$	**Area of a Trapezium** $$\frac{(a + b) \times h}{2}$$	**Compound Interest** $$\text{Total} = I\left(1 + \frac{r}{100}\right)^n$$	**Speed, distance, time** $$\text{speed} = \frac{\text{distance}}{\text{time}}$$	**3 Rules of Bearings** • 3 digits • Clockwise direction • North line
Quadratic Formula $$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$	**Prime Number** A number which only has 2 factors, 1 and itself.	**Area of a Parallelogram** base x height	**Density, mass, volume** $$\text{density} = \frac{\text{mass}}{\text{volume}}$$	**Index Law** $$y^0 = 1$$ Anything to the power of 0 is 1
Area of a triangle without a height $$\frac{1}{2} ab\sin C$$	$\tan 60 = \frac{\sqrt{3}}{\sqrt{1}} = \sqrt{3}$	**Fibonacci Sequence** The next number is found by adding up the two numbers before it.	**Pressure, force, area** $$\text{pressure} = \frac{\text{force}}{\text{area}}$$	**Index Law** $$y^{-n} = \frac{1}{y^n}$$
First 5 prime numbers 2, 3, 5, 7, 11	**First 5 cube numbers** 1, 8, 27, 64, 125	**First 5 triangle numbers** 1, 3, 6, 10, 15	$\cos 30 = \frac{\sqrt{3}}{2}$	$\sin 45 = \frac{\sqrt{2}}{2}$
How to calculate distance travelled from a velocity –time graph Area under the curve	**How to calculate acceleration from a velocity –time graph** Find the gradient Sometimes this may involve drawing a tangent	**What shape is a quadratic on a graph?** Parabola	**What do we know if 2 lines are parallel?** Same gradient	**What do we know if 2 lines are perpendicular?** Gradient is the negative reciprocal
Invariant means… Does not change	**Pythagoras' Theorem** $$a^2 + b^2 = c^2$$	**Direct Proportion** $$y = kx$$	**Inverse Proportion** $$y = \frac{k}{x}$$	**Bisect means…** To divide an angle or shape exactly in half
Calculating the frequency from a Histogram Frequency density x class width	**How to show 2 vector lines are parallel** Show one is a MULTIPLE of the other	**All exterior angles on a polygon sum to…** 360°	**Sum of interior angles of a polygon** $(n - 2) \times 180$ Where n is the number of sides	**What is the turning point on a graph?** The maximum or minimum point