

## What are the aims and intentions of this curriculum?

Term	Set 3/4 Foundation	Set 4/5 Foundation	Assessment
<b>Autumn 1</b>	<ul style="list-style-type: none"> <li>To know the exact values of <math>\sin\theta</math>, <math>\cos\theta</math> and <math>\tan\theta</math> for <math>\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ</math> and <math>90^\circ</math></li> <li>To know the trigonometric ratios</li> <li>To be able to use trigonometry to solve problems</li> <li>To be able to calculate with positive, negative and fractional indices</li> <li>To be able to calculate exactly with surds</li> <li>To be able to solve simultaneous equations using substitution</li> <li>To be able to solve simultaneous equations using elimination</li> <li>To be able to derive and use simultaneous equations to solve problems</li> <li>To be able to perform a sequence of transformations on a 2D shape</li> <li>To be able to draw and describe enlargements, including fractional scale factors</li> <li>To be able to solve problems involving lengths in similar figures</li> </ul>	<ul style="list-style-type: none"> <li>To be able to calculate with powers and roots</li> <li>To explore the use of standard form</li> <li>To explore the effects of rounding</li> <li>To know standard mathematical constructions</li> <li>To apply standard mathematical constructions</li> <li>To explore ways of representing 3D shapes</li> <li>To understand equations and identities</li> <li>To manipulate algebraic expressions</li> <li>To construct algebraic statements</li> </ul>	Mini topic assessments after each section of work
<b>Autumn 2</b>	<ul style="list-style-type: none"> <li>To be able to factorise quadratic expressions</li> <li>To be able to factorise quadratics using the difference of two squares</li> <li>To be able to change the subject of a formula with more than 2 steps</li> <li>To recognise and interpret graphs illustrating direct and inverse proportion</li> <li>To interpret equations describing direct and inverse proportion</li> <li>To solve problems involving direct and inverse proportion</li> <li>To recognise and describe a geometric progression</li> <li>To be able to find the next three terms of a geometric progression</li> <li>To be able to find any given term of a geometric progression</li> <li>To find the volume and surface area of spheres</li> <li>To find the volume and surface area of cones and pyramids</li> <li>To find the volume and surface area of a composite solid</li> </ul>	<ul style="list-style-type: none"> <li>To solve problems involving direct and inverse proportion</li> <li>To understand and solve problems involving similarity and congruence</li> <li>To know and use compound units</li> <li>To recognise and generate Fibonacci sequences</li> <li>To generate quadratic sequences</li> <li>To calculate the next terms in quadratic sequences</li> <li>To understand and use the concepts and vocabulary of inequalities</li> <li>To solve linear inequalities in one variable</li> <li>To represent the solution set to an inequality on a number line</li> </ul>	Year 11 mock exam. Students will sit all 3 GCSE exam papers.
<b>Spring 1</b>	<ul style="list-style-type: none"> <li>To calculate repeated percentage change</li> <li>To be able to set up and solve compound interest problems</li> <li>To be able to set up and solve problems involving growth and decay</li> <li>To identify and interpret roots of quadratic functions graphically</li> <li>To identify and interpret intercepts of quadratic functions graphically</li> <li>To identify and interpret turning points of quadratic functions graphically</li> <li>To solve quadratics by factorising</li> <li>To solve quadratics using graphs</li> <li>To solve problems involving quadratic equations in context</li> </ul>	<ul style="list-style-type: none"> <li>To solve problems involving arcs and sectors</li> <li>To solve problems involving surface area of cylinders</li> <li>To calculate lengths using Pythagoras' Theorem</li> <li>To explore the congruence of triangles</li> <li>To form conjectures</li> <li>To create a mathematical proof</li> </ul>	Mini topic assessments after each section of work
<b>Spring 2</b>	<ul style="list-style-type: none"> <li>To understand the limitations of sampling</li> <li>To use a sample to infer properties of a population</li> <li>To understand and be able to represent column vectors</li> <li>To be able to calculate with vectors</li> </ul>	<ul style="list-style-type: none"> <li>To investigate features of straight line graphs</li> <li>To explore graphs of quadratic, other standard and non-standard functions</li> <li>To explore graphs of non-standard functions</li> <li>To solve kinematic problems</li> <li>To be able to solve equations with 2 unknowns simultaneously</li> <li>To be able to set up and solve equations with 2 unknowns simultaneously</li> <li>To be able to find approximate solutions using graphs</li> </ul>	Year 11 mock exam. Students will sit all 3 GCSE exam papers.
<b>Summer 1</b>	Revision for the final exam	Revision for the final exam	Final exam
<b>Summer 2</b>			