

What are the aims and intentions of this curriculum?

Term	Set 1 Higher	Set 2/3 Higher	Assessment
Autumn 1	<ul style="list-style-type: none"> To apply Pythagoras' theorem and trigonometry in 3 dimensions To be able to use the sine rule and the cosine rule To know and apply the rule $\text{area} = \frac{1}{2}ab \sin C$ To be able to simplify surd expressions involving squares To be able to solve problems involving the simplification of surd To be able to rationalise the denominator To be able to solve quadratics by completing the square and using the quadratic formula To be able to deduce turning points of quadratics by completing the square To be able to derive and use an iterative formula To be able to use the centre and scale factor to carry out an enlargement of a 2D shape with a negative scale factor To be able to find the scale factor and centre of an enlargement with negative scale factor 	<ul style="list-style-type: none"> To be able to calculate missing lengths and angles in right angled triangles To be able to use exact values to find missing lengths and angles in right angled triangles To be able to calculate missing lengths on similar triangles To be able to calculate with positive, negative and fractional indices To be able to calculate exactly with surds To be able to apply and interpret limits of accuracy, including upper and lower bounds To be able to find approximate solutions using iteration To be able to solve simultaneous equations using elimination To be able to solve simultaneous equations using substitution To be able to draw and describe enlargements To be able to draw and describe rotations To be able to draw and describe reflections To be able to draw and describe translations 	Mini topic assessments after each section of work
Autumn 2	<ul style="list-style-type: none"> To understand the meaning and notation of functions To be able to solve problems using composite functions To be able to solve problems involving inverse functions To construct and use equations describing direct and inverse proportion To solve problems involving direct and inverse proportion To recognise and use geometric progressions, ar^n, when r is a fraction > 0 or a surd To solve problems involving geometric sequences To recognise and use non-standard sequences To solve a quadratic inequality To solve simultaneous equations where one is a quadratic equation using substitution To make connections between simultaneous equations and graphs 	<ul style="list-style-type: none"> To be able to expand a product of 2 or more brackets To be able to factorise quadratics To be able to work with algebraic fractions To solve problems involving direct proportion To solve problems involving inverse proportion To recognise and interpret graphs illustrating direct and inverse proportion To generate sequences from a position to term rule To find the nth term of a quadratic sequence To recognise, describe and continue a geometric sequence To solve inequalities To represent inequalities on a number line To represent the solution set to inequalities on a graph 	Year 11 mock exam. Students will sit all 3 GCSE exam papers.
Spring 1	<ul style="list-style-type: none"> To recognise, sketch and interpret graphs of exponential functions To recognise, sketch and interpret graphs of trigonometric functions To be able to sketch translations and reflections of a given function To be able to construct and interpret histograms To be able to analyse distributions of data sets To be able to solve problems involving histograms To be able to solve problems involving histograms To apply the concept of average rate of change To solve practical problems involving rates of change To calculate gradients of chords and tangents 	<ul style="list-style-type: none"> To find the volume and surface area of spheres To find the volume and surface area of cones and pyramids To compare the length, area and volume of similar shapes To use circle theorems to find missing angles To prove geometric conjectures using the circle theorems To plot and interpret graphs To calculate or estimate gradients To calculate or estimate areas under graphs To change recurring decimals to their corresponding fractions and vice versa To set up, solve and interpret growth and decay problems To solve quadratics by factorising To solve quadratics using graphs 	Mini topic assessments after each section of work
Spring 2	<ul style="list-style-type: none"> To understand how to create and present a proof involving vectors To make deductions about situations involving vectors that are multiples of other vectors To make deductions about situations involving vectors and parallel lines 	<ul style="list-style-type: none"> To apply the product rule for counting To sort information in a Venn diagram, and use this to calculate probabilities To sort information into a two-way table, and use this to calculate probabilities To calculate and interpret measures of average and spread and central tendency To construct and interpret box plots To construct and interpret cumulative frequency graphs Identify perpendicular lines using algebraic methods Identify the equation of a circle from its graph Find the equation of a tangent to a circle at a given point To understand and be able to represent column vectors To understand and find parallel vectors To be able to calculate with vectors 	Year 11 mock exam. Students will sit all 3 GCSE exam papers.

Revision for the final exam

Revision for the final exam

Final exam