Module Title: Number Operations, Algebraic Manipulation, Sequences, Averages and Representing Data	Module Title: Fractions, Percentages and Ratio, Angles, Trigonometry, Co-ordinate Geometry, Linear and Other Graphs	Module Title: Perimeter, Area Volume and Circles, Bounds, Constructions, Quadratics and Simultaneous Equations and Inequalities
Learning Intent for this module: Students will revisit numerical operations they are already familiar with. They will gain confidence in the use of these and extend to laws of indices, standard form and surds. Students will revise their algebraic manipulation skills and will extend this to factorising a range of quadratic functions as well as re-arranging more difficult formulae. Students will build on their sequences knowledge and work with quadratic sequences. Students will calculate and interpret measures of location and spread. Students will display and interpret data from a range of graphs and charts.	Learning Intent for this module: Students will recap and extend their work on fractions percentages and ratio and proportion. This will be also include direct and inverse proportion. Students will learn the angle rules and when to apply them. Students will use Pythagoras' Theorem and right-angled Trigonometry to find missing side lengths and angles as well as solve problems. Students will use a range of Co-ordinate Geometry Formulae in order to understand the graphs and equations of straight lines. This will then lead to looking at quadratic and other graphs.	Learning Intent for this Module: Students will find perimeter, area and volume for a range of 2D and 3D shapes including Cylinders, Cones and Spheres. They will become familiar with the associated formulae. Students will extend their work on rounding by studying bounds. They will solve associated problem questions on this. Students will carry out and describe the four transformations including negative enlargements. Students will use constructions to solve problems on loci. Students will build upon their algebraic skills by solving simultaneous equations and inequalities.
Key Content to be learned: • Calculations, Checking and Rounding • Indices, Roots and Reciprocals • Multiples, Factors, Primes • Standard Form • Surds and Indices	Key content to be learned: • Fractions and Percentages • Ratio and Proportion • Direct and Inverse Proportion • Polygons, Angles and Parallel Lines • Pythagoras' Theorem and Trigonometry	Key Content to be learned: • Perimeter, Area and Circles • Volume, Cylinders, Cones and Spheres • Accuracy and Bounds • Transformations • Similarity and Congruence in 2D and 3D

• Algebraic Expressions, Substitution, Factorising, Re-arranging and solving Equations and Inequalities • Sequences • Averages and Range • Collecting Data • Representing Data • Cumulative Frequency, Box Plots and Histograms	• Graphs: Basics and Real-Life • Linear Graphs and Co-ordinate Geometry • Quadratic, Cubic and other Graphs, Reciprocal and Exponential Graphs	• Constructions, Loci and Bearings • Solving Quadratic and Simultaneous Equations
Key tasks for this module: • Key Task 1 – Number Operations • Key Task 2 – Indices and Standard Form • Key Task 3 – Expressions and Factorising • Key Task 4 - Averages and Representing Data • Key Task 5 – Summative Assessment	Key tasks for this module: • Key Task 1 – Fractions and Percentages • Key Task 2 – Ratio and Proportion • Key Task 3 – Pythagoras' Theorem and Trigonometry • Key Task 4 – Linear Graphs and Co-ordinate Geometry • Key Task 5 – Summative Assessment	Key tasks for this module: • Key Task 1 – Area, Volume and Cicrcles • Key Task 2 – Transformations, Similarity and Congruence, Constructions and Loci • Key Task 3 – Simultaneous Equations • Key Task 4 - End of Year Exam Paper 1 • Key Task 5 - End of Year Exam Paper 2

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Year 11 Maths Higher Tier

Module Title: Probability, Similarity, Further Trigonometry and Circles	Module Title: More Complex Algebra and Equations, Functions, Proof, Vectors and Complex Graphs	Module Title: Revision and Exam Preparation
Learning Intent for this module: Students will extend their probability knowledge. They will learn the laws of probability as well as learning how to use Venn Diagrams Students will explore similarity and congruence in 2D and 3D. The students will build on their Trigonometric knowledge and will learn how to use and apply the Sine and Cosine Rules. Students will extend their knowledge on circles to include the circle theorems and proofs as well as graphs of circles.	Learning Intent for this module: Students will extend their algebraic skills by re-arranging more complex formulae and applying their knowledge and skills on solving quadratic equations to other contexts. Students will be introduced to functions and the associated notation. Students will use vector geometry to solve problems. Students will study a range of proofs including geometrical and algebraic. Students will build upon their knowledge of graphs and will carry out and describe simple transformations of graphs.	Learning Intent for this Module: Students will now consolidate their learning cross the course. Particular revision will focus on areas for improvement identified in mock 2.
Key Content to be learned: • Inequalities • Probability • Multiplicative Reasoning • Graphs of Trigonometric Functions • Further Trigonometry • Quadratics, Graphs of CirclesCircle Theorems	Key content to be learned: • Re-arranging Formulae (More Complex), Solving Equations arising from Algebraic Fractions, Simultaneous Equations involving Quadratics • Functions • Proof • Vectors and Geometric Proof	Key Content to be learned: • Revision and Consolidation of topics based on Mock Data • Exam Preparation

• Circle Geometry	• Gradient and Area under Graphs • Transforming Graphs	
Key tasks for this module: • Key Task 1 – Probability • Key Task 2 – Further Trigonometry • Key Task 3 – Circle Theorems • Key Task 4 – Mock 1 Paper 1 • Key Task 5 – Mock 1 Paper 2/3	Key tasks for this module: • Key Task 1 – Equations Involving Quadratics • Key Task 2 – Vectors • Key Task 3 – Graphs of Complex Functions • Key Task 4 – Mock 2 Paper 1 • Key Task 5 – Mock 2 Paper 2/3	Key tasks for this module: