

**Subject area: Mathematics Year 10 Higher**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Investigating Properties of Shapes  Calculating  Solving Equations and Inequalities 1	Mathematical Movement 1  Algebraic Proficiency: tinkering  Proportional Reasoning	Pattern Sniffing  Solving Equations and Inequalities 2  Calculating Space	Conjecturing  Algebraic Proficiency: visualising 1  Exploring Fractions, Decimals and Percentages	Solving Equations and Inequalities 3  Understanding Risk  Analysing Statistics	Algebraic Proficiency: visualising 2  Mathematical Movement 2  Visualising and Constructing
Assessment	Year 10 Test 1 Hegarty Homeworks Mini-Tests	Year 10 Test 2 Hegarty Homeworks Mini-Tests	Year 10 Test 3 Hegarty Homeworks Mini-Tests	Year 10 Test 4 Hegarty Homeworks Mini-Tests	Year 10 Test 5 Hegarty Homeworks Mini-Tests	Mock Exams (Calc & Non-Calc) Hegarty Homeworks Mini-Tests
H/W	Hegarty Maths Worksheets Half Exam Papers	Hegarty Maths Worksheets Half Exam Papers	Hegarty Maths Worksheets Half Exam Papers	Hegarty Maths Worksheets Half Exam Papers	Hegarty Maths Worksheets Half Exam Papers	Hegarty Maths Worksheets Half Exam Papers

<b>Response to COVID</b>	<p>QLA from previous years learning to identify gaps in knowledge</p> <p>Regular GCSE testing to identify gaps in knowledge</p> <p>Targetted starters to address gaps in knowledge</p> <p>Hegarty homework based on gaps in knowledge</p>
<b>Building on prior learning</b>	<p>Key points for the year will include:</p> <ul style="list-style-type: none"> <li>• Manipulate fractional indices</li> <li>• Solve problems involving direct and inverse proportion</li> <li>• Convert between recurring decimals and fractions</li> <li>• Solve equations using iterative methods</li> <li>• Manipulate algebraic expressions by factorising a quadratic expression of the form <math>ax^2 + bx + c</math></li> <li>• Solve quadratic equations by factorising</li> <li>• Link graphs of quadratic functions to related equations</li> <li>• Interpret a gradient as a rate of change</li> <li>• Recognise and use the equation of a circle with centre at the origin</li> <li>• Apply trigonometry in two dimensions</li> <li>• Calculate volumes of spheres, cones and pyramids</li> <li>• Understand and use vectors</li> <li>• Analyse data through measures of central tendency, including quartiles</li> </ul>
<b>Enrichment within the Curriculum</b>	National Mathematics Challenge for students who show very good problem solving skills.
<b>Extracurricular opportunities</b>	<p>Maths Masterclass – Lunchtime – Grade 8 &amp; 9 and preparing for A-Level Maths.</p> <p>Lunchtime support offered where students require extra help.</p>
<b>Positive impacting on personal development (SMSC)</b>	<p>In Maths lessons students are always encouraged to delve deeper into their understanding of Mathematics and how it relates to the world around them.</p> <p>Problem solving skills and teamwork are fundamental to Mathematics, through creative thinking, discussion, explaining and presenting ideas. Students are always encouraged to develop their Mathematical reasoning skills, communicating with others and explaining concepts to each other. Self and peer reviewing are very important to enable students to have an accurate grasp of where they are and how they need to improve.</p>
<b>Preparing for the next stage of education</b>	Development of topics in the areas of Number, Ratio and Proportion, Algebra, Geometry and Statistics.

