



## Mathematics: Curriculum Overview

### Year 13

Half Term	Topic studied	What will I learn?	How will I be assessed?
Year 13 Autumn 1	Algebra and Geometry	<ul style="list-style-type: none"> <li>-Sequences; arithmetic and geometric, as well as recurrence relations. Sum of terms.</li> <li>- Binomial Expansion; using an index which is negative or fractional, applying to partial fractions</li> <li>- Trigonometric Ratios; sec, cosec and cot.</li> <li>- Radians; length of arc, and sector area</li> </ul>	<p>Test in penultimate week before October HT.</p> <p><i>Informal assessments after each unit</i></p>
Year 13 Autumn 2	Algebra and Geometry	<ul style="list-style-type: none"> <li>-differentiation; product, quotient and chain rules</li> <li>- numerical methods; solving exponentials and using Newton Raphson.</li> <li>- trig modelling; double angle formulae, modelling trig identities.</li> <li>-parametric equations</li> <li>- 3D vectors</li> <li>-integration; multiple methods + trapezium rule</li> </ul>	<p>No formal test</p> <p><i>Informal assessments after each unit</i></p>
Year 13 Spring 1	Statistics and Mechanics	<ul style="list-style-type: none"> <li>-regression, correlation and hypothesis testing involving PMCC and line parameters.</li> <li>-probability; conditional involving set notation and Venn diagrams</li> <li>-Normal probability distribution.</li> <li>-Moments, friction and resolving forces in Mechanics</li> <li>-Projectiles at any angle</li> </ul>	<p>Mock exams; 2 hour Pure and 75 minutes Applied Paper.</p> <p><i>Informal assessments after each unit</i></p>
Year 13 Spring 2	Mechanics (and Pure)	<ul style="list-style-type: none"> <li>-application of forces, modelling, dynamics and combined particles.</li> <li>-further kinematics; vectors, projectiles, variable acceleration.</li> </ul>	<p>Test in the week before Easter break.</p> <p><i>Informal assessments after each unit</i></p>

Year 13 Summer 1	Revision	-the complete course will have been taught at some point after Easter, so revision in class before exam leave.	No formal test this half term.  <i>Informal assessments after each unit</i>
Year 13 Summer 2			Exams; 3 A Level exams; 2 Pure and 1 Applied paper.