

## Curriculum Overview – Autumn Term 2022-2023

**Subject:** Mathematics

**Year group:** 11, International GCSE (9-1) Foundation Level

Unit number	Unit name	Key learning aspects (knowledge, understanding, skills)	Key assessment opportunities
1	Number 1	Working with Fractions: <ul style="list-style-type: none"> <li>• Add and subtract fractions and mixed numbers;</li> <li>• Multiply and divide fractions and mixed numbers;</li> <li>• Solve problems involving fractions</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
1	Algebra 1	<ul style="list-style-type: none"> <li>• Simplify algebraic expressions</li> <li>• Expand brackets</li> <li>• Solve equations in which the unknown appears on both sides</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
1	Graphs 1	<ul style="list-style-type: none"> <li>• Find the gradient of a line through two points</li> <li>• Find the gradient and <math>y</math>-intercept of a straight line from its equation</li> <li>• Compare two straight-line graphs using their equations</li> <li>• Draw and interpret real-life graphs</li> <li>• Plot graphs of straight lines with equations <math>ax + by = c</math>, <math>y = ax + b</math></li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>

Unit number	Unit name	Key learning aspects (knowledge, understanding, skills)	Key assessment opportunities
2	Number 2	<ul style="list-style-type: none"> <li>• Write a number in standard form (scientific notation)</li> <li>• Work out a percentage increase and decrease</li> <li>• Calculate with numbers in standard form (scientific notation)</li> <li>• Solve real-life problems involving percentages</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
2	Algebra 2	<ul style="list-style-type: none"> <li>• Multiply and divide algebraic fractions</li> <li>• Add and subtract algebraic fractions</li> <li>• Solve equations with roots and powers</li> <li>• Use the rule of indices (to simplify algebraic expressions)</li> <li>• Solve inequations and show the solution on a number line</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
2	Graphs 2	<ul style="list-style-type: none"> <li>• Find the equation of a line</li> <li>• Sketch graphs using the gradient and intercepts</li> <li>• Solve a pair of simultaneous equations using a graph</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
2	Shape and Space 2	<ul style="list-style-type: none"> <li>• Find the length of the hypotenuse in a right-angled triangle</li> <li>• Find the length of a shorter side in a right-angled triangle</li> <li>• Solve problems using Pythagoras' Theorem</li> <li>• Use the properties of angles in a circle</li> <li>• Use the properties of tangents to a circle</li> <li>• Understand and use facts about chords</li> <li>• Understand and use facts about the angle in a semi-circle being a right angle</li> <li>• Understand and use facts about angles subtended at the centre and the circumference of circles</li> <li>• Understand and use facts about cyclic quadrilaterals</li> <li>• Solve problems using circle theorems</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> <li>• End of unit assessment</li> </ul>

Unit number	Unit name	Key learning aspects (knowledge, understanding, skills)	Key assessment opportunities
3	Number 3	<ul style="list-style-type: none"> <li>• Write a number as a product of prime factors</li> <li>• Find the Highest Common Factor and Lowest Common Multiple of two (or more) numbers</li> <li>• Solve problems involving HCF and LCM</li> <li>• Compare Ratios</li> <li>• Find quantities using ratio</li> <li>• Solve problems involving ratio</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
3	Algebra 3	<ul style="list-style-type: none"> <li>• Factorise algebraic expressions</li> <li>• Simplify algebraic expressions</li> <li>• Solve equations involving fractions</li> <li>• Solve simultaneous equations for real-life applications</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
3	Graphs 3	<ul style="list-style-type: none"> <li>• Draw and interpret distance-time graphs</li> <li>• Draw and interpret speed-time graphs</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> </ul>
3	Shape and Space 3	<ul style="list-style-type: none"> <li>• Use the tangent ratio to find a length and an angle in a right-angled triangle</li> <li>• Use angles of elevation and depression</li> <li>• Use the tangent ratio to solve problems</li> </ul>	<ul style="list-style-type: none"> <li>• Regular Homework</li> <li>• Oral responses in class</li> <li>• Observations of the standard of written solutions</li> <li>• End of unit assessment</li> <li>• Mock Exam</li> </ul>