

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
Term 1 – August to November 2022			
1	Number 1	Working with Fractions: <ul style="list-style-type: none"> • Add and subtract fractions and mixed numbers; • Multiply and divide fractions and mixed numbers; • Solve problems involving fractions • Use BIDMAS – the hierarchy of the order of operations • Identify and calculate squares, square roots, cubes and cube roots 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class • Observations of the standard of written solutions
1	Algebra 1	<ul style="list-style-type: none"> • Understand and use Integers (positive, negative and zero) • Simplify algebraic expressions by collecting like terms; $a \times b = ab$ • Multiply out brackets: $3x(2x + 5)$ and $(x + 8)(x - 5)$ • Solve equations in which the unknown appears on both sides 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class • Observations of the standard of written solutions
1	Graphs 1	<ul style="list-style-type: none"> • Find the gradient of a straight line gradient = (increase in y) \div (increase in x) • Find the gradient and y-intercept of a straight line from its equation • Compare two straight-line graphs using their equations • Draw and interpret straight line conversion graphs (currency graphs) • Plot graphs of straight lines with equations $ax + by = c$ 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class • Observations of the standard of written solutions • End of Unit Assessment
1	Sets	<ul style="list-style-type: none"> • Understand the definition of a set, universal set and empty set 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class

		<ul style="list-style-type: none">• Use the notation \cup, \cap, \emptyset, \in and \notin• Understand and use the compliment of a set• Use Venn diagrams to represent sets	<ul style="list-style-type: none">• Observations of the standard of written solutions• End of Unit Assessment
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Unit number	Unit name	Key learning aspects (knowledge, understanding, skills)	Key assessment opportunities
2	Number 2	<ul style="list-style-type: none"> • Write a number in standard form (scientific notation) • Calculate with numbers in standard form (scientific notation) • Convert between fractions, decimals and percentages • Express a given number as a percentage of another number • Work out a percentage increase and decrease • Solve real-life problems involving percentages 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class • Observations of the standard of written solutions
2	Algebra 2	<ul style="list-style-type: none"> • Solve equations with roots and powers • Use the rule of indices (to simplify algebraic expressions) • Solve inequations and show the solution on a number line 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class • Observations of the standard of written solutions
2	Graphs 2	<ul style="list-style-type: none"> • Determine the coordinates of the mid-point of a line segment, given the coordinates of the two end points • Find the equation of a line • Sketch graphs using the gradient and intercepts • Solve a pair of simultaneous equations using a graph 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class • Observations of the standard of written solutions
2	Shape and Space 2	<ul style="list-style-type: none"> • Find the length of the hypotenuse in a right-angled triangle • Find the length of a shorter side in a right-angled triangle • Solve problems using Pythagoras' Theorem • Use the properties of angles in a circle • Use the properties of tangents to a circle • Understand and use facts about chords • Understand and use facts about the angle in a semi-circle being a right angle • Understand and use facts about angles subtended at the centre and the circumference of circles • Solve problems using circle theorems 	<ul style="list-style-type: none"> • Regular Homework • Oral responses in class • Observations of the standard of written solutions • End of unit assessment