Curriculum Overview – Autumn Term 2022-2023

Subject: Mathematics

Year group: 10, International GCSE (9-1)

Term 1 – August to November 2022			
Unit number	**Unit name**	**Key learning aspects (knowledge, understanding, skills)**	**Key assessment opportunities**
1	Number 1	• Working with Fractions: • Add and subtract fractions and mixed numbers; • Multiply and divide fractions and mixed numbers; • Solve problems involving fractions	• Regular Homework • Oral responses in class • Observations of the standard of written solutions
1	Algebra 1	• Simplify algebraic expressions • Expand brackets • Solve equations in which the unknown appears on both sides	• Regular Homework • Oral responses in class • Observations of the standard of written solutions
1	Graphs 1	• Find the gradient of a line through two points • Find the gradient and y-intercept of a straight line from its equation • Compare two straight-line graphs using their equations • Draw and interpret real-life graphs • Plot graphs of straight lines with equations $ax + by = c, y = ax + b$	• Regular Homework • Oral responses in class • Observations of the standard of written solutions • End of unit assessment

Unit number	Unit name	Key learning aspects (knowledge, understanding, skills)	Key assessment opportunities
2	Number 2	• Write a number in standard form (scientific notation) • Work out a percentage increase and decrease • Calculate with numbers in standard form (scientific notation) • Solve real-life problems involving percentages	• Regular Homework • Oral responses in class • Observations of the standard of written solutions
2	Algebra 2	• Multiply and divide algebraic fractions • Add and subtract algebraic fractions • 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	• Regular Homework • Oral responses in class • Observations of the standard of written solutions
2	Graphs 2	• Find the equation of a line • Sketch graphs using the gradient and intercepts • Solve a pair of simultaneous equations using a graph	• Regular Homework • Oral responses in class • Observations of the standard of written solutions
2	Shape and Space 2	• 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 • Understand and use facts about cyclic quadrilaterals • Solve problems using circle theorems	• Regular Homework • Oral responses in class • Observations of the standard of written solutions

Unit number	Unit name	Key learning aspects (knowledge, understanding, skills)	Key assessment opportunities
2	Handling Data 1	• Use Pie Charts and frequency polygons • Construct and use two-way tables • Identify misleading graphs • Decide which average is best for a set of data	• Regular Homework • Oral responses in class • Observations of the standard of written solutions • End of unit assessment
End of Term 1 – August to November 2022			