

Mathematics Department 2023-2024

	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
TERM 1	Place Value Adding and Subtracting Multiplying	Probability Proportion Ratio and scale Percentages	Solving Sequences Graphs	Number Groundwork Algebra Groundwork Linear sequences Straight line graphs	<u>Foundation</u> Equations & Substitution Congruence and similarity Quadratics Indices Standard Form <u>Higher</u> Similarity Transformations Further Quadratics Indices Surd	<u>A-Level</u> Algebraic Expressions Quadratics Equations & Inequalities Graphs & Transformations Binomial Expansion Modelling in Mechanics <u>A-Level Further</u> Matrices Linear Transformations Algorithms Graphs & Networks Constant acceleration	<u>A-Level</u> Sequences Differentiation Regression Binomial Expansion <u>A-Level Further</u> Complex Numbers The Simplex Algorithm Collisions Oblique impacts

TERM 2	Dividing Calculating with negative numbers Order of operations Expressions Substitution	Index laws Solving equations Sequences Rounding	Percentages Ratio & Proportion Angles Perimeter	Fractions, decimals & Percentages Ratio & Proportion Quadratics	<u>Foundation</u> Inequalities Rearranging formula & Function machines Tables, charts & graphs Simultaneous Equations Pythagoras & Trigonometry Plans & Elevations Loci and construction <u>Higher</u> Algebraic fractions Functions Iterations Compound Measures Real life graphs Further Representing data Algebraic Proof	<u>A-Level</u> Statistical Sampling Measures of Location & Spread Representations of data Constant Acceleration Straight line Graphs Circles Algebraic Methods Vectors <u>A-Level Further</u> Complex Numbers Argand Diagrams Algorithms on Graphs Forces	<u>A-Level</u> Trig & Modelling Parametric Equations Differentiation Integration Conditional Probability Numerical Methods Forces & Friction <u>A-Level Further</u> Series Methods in Calculus Critical path analysis Oblique impacts/collisions

Brooke Weston Faculty Curriculum Summary



TERM 3	Solving Perimeter Area Factors and Multiples Primes	Area and circumference of circles Standard form Venn Diagrams Nets, surface area and volume	Area Pythagoras Averages Transformations	Equations Angles and Polygons Pythagoras Trigonometry	<u>Foundation</u> Straight line graphs Cubic/Reciprocal graphs Vectors Pythagoras & Trigonometry Simultaneous Equations <u>Higher</u> Vectors Quadratic, cubic and other graphs Further Trigonometry Graph Transformations	<u>A-Level</u> Forces & Motion Trigonometric Ratios Trig Identities & Equations Differentiation Exponentials & logarithms Probability Statistical Distributions <u>A-Level Further</u> Series Roots of polynomials Proof by Induction Route Inspection The travelling salesman Impulse & momentum	<u>A-Level</u> Normal Distribution Vectors Projectiles Forces <u>A-Level Further</u> Methods in calculus Polar coordinates Volumes of revolution Differential equations
TERM 4	Fractions Single Brackets Angles	Nets, surface area and volume Coordinates	Pythagoras & Trigonometry Indices Place Value Presenting Data	Simultaneous equations PAV Circles Accuracy Estimation	<u>Foundation</u> Consolidation <u>Higher</u>	<u>A-Level</u> Hypothesis Testing Variable acceleration Differentiation	<u>A-Level</u> Integration Kinematics <u>A-Level Further</u> Hyperbolic

		Linear graphs Transformations Angles		Bounds	Congruency Circle Geometry Loci & constructions	Exponentials & logarithms Integration <u>A-Level Further</u> Proof by Induction Vectors The travelling salesman Linear programming Work, energy & power Elastic springs & strings	functions Modelling with differential equations
TERM 5	Handling data and statistical diagrams Fraction, decimals and percentages	Statistical diagrams Inequalities Brackets Algebraic fractions	Probability Consolidation	Basic Averages Representing data Probability Linear inequalities <u>Foundation</u> Transformations <u>Higher</u> Circle Theorems	Consolidation	<u>A-Level Maths</u> Algebraic methods Functions & Graphs Moments Radians Trigonometry <u>A-Level Further</u> Vectors Volumes of revolution Integration Elastic strings & springs	Consolidation