

Curriculum Overview – MATHEMATICS

Key Stage 3

Year 7	Year 8	Year 9
<p>Two-way tables, bar charts. Mean, median, mode, range. Grouped data. Line graphs & pie charts. Scatter graphs & correlation. Primes, factors, & multiples. Integer arithmetic. Squaring, cubing, & rooting. Operation priority (BIDMAS). Estimation. Algebraic expressions. Formulae. Factorising. Fraction arithmetic. Relating fractions, decimals, & %. Angles between lines. Angle properties of polygons. Decimal arithmetic. Ordering / rounding decimals. Changing by a percentage. Writing / solving linear equations. Solving equations numerically. Triangles & parallelograms. Trapezium area. Properties of 3D solids. Volume & surface area. Measurement units. Using / writing ratios. Proportional reasoning. Arithmetic & geometric sequences. Term-to-term formulae. Position-to-term formulae. Coordinates & line segments. Linear graphs. Tessellations. Number bases.</p>	<p>Unique Factorisation Theorem. Basic index laws. Powers of 10. Significant figures (rounding). Simplify algebraic expressions. Substitution. Solving equations. Plans & elevations. Volume & surface area of prisms. Calculate circumference. Calculate circle area. Gougu Theorem. Direct proportion. Misleading & financial graphs. Distance-time graphs. Rates of change. Enlargement & reflection. Rotation & translation. Combining the 4 transformations. Scale factor and area / volume. Recurring decimals. Reverse percentages. Repeating percentage changes. Accurate drawings. Ruler & compass constructions. Loci. Mutually exclusive events. Estimating probability. Experimental probability. Probability diagrams. Maps and bearings. Similarity. Equation of a linear graphs. Parallel & perpendicular lines. Inverse functions. Non-linear graphs.</p>	<p>Reciprocals & indices laws. Standard form calculations. Surd. Quadratic sequences. Factorising quadratic expressions. Quadratic equations. 1D linear inequalities. Solving equations. Using & writing formulae. Collecting data. Presenting & comparing data. Box plots. Cumulative frequency graphs. Histograms. Direct & inverse proportion. Arcs & sectors. Non-linear graphs. Density & pressure. Upper & lower bounds. Solving simultaneous equations. 2D linear inequalities. Basic trigonometry. Trigonometric graphs. Al-Kashi's Theorem. Investigation & proof.</p>



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Textbooks Used: New National Framework Mathematics

ISBN: 978-0-7487-6752-6 (**Year 7**), 0-7487-6754-1 (**Year 8**), 0-7487-6756-8 (**Year 9**)



Key Stage 4

GCSE Exam Board: EDEXCEL Mathematics (8300)

Year 10	Year 11
Number (HCF, LCM, Index Laws, Standard Form, Surds)	All Sets:
Algebra (Expanding and Factorising, Sequences)	Circle Theorems
Interpreting and Representing Data	Further Algebra
Fractions Ratio and Percentages	Vectors
Angles and Trigonometry	Proportionality and Graph Transformations
Graphs	Additional Qualifications
Area and Volume	Set 1: Level 3 OCR FSMQ
Transformation and Constructions	Set 2-3: Level 2 AQA Further Maths
Equations and Inequalities	Set 4: GCSE Statistics EDEXCEL
Probability	
Multiplicative Reasoning	
Similarity and Congruence	
Further Trigonometry	
Further Statistics	
Equations and Graphs	

Textbook Used: CGP Maths for GCSE - Higher (for the Grade 9-1 Course) ISBN: 9781782944379



Key Stage 5

A Level Exam Board: EDEXCEL

Y 12	Year 13
Algebraic Expressions	Algebraic Fractions
Quadratics	Sequences and Series
Simultaneous Equations and Inequalities	Binomial Expansion – Year 2
Graphs and Transformations	Trigonometric Identities
Straight Lines	Radians
Circles	Differentiation – Year 2
Algebraic Methods	Integration – Year 2
Binomial Expansion	Numerical Methods
Trigonometry	Vectors
Differentiation	
Integration	
Vectors	
Exponentials and Logarithms	
Data Collection	
Measures of Location and Spread	
Representations of Data	
Correlation	
Probability	
Statistical Distributions	
Constant Acceleration	
Forces and Motion	
Variable Acceleration	
Conditional Probability	
Normal Distributions	



Projectiles	
Friction	

Textbook Used: CGP Mathematics for A-level 978178294723 3