

Maths Programme of Study Y7-11 Extension (KS3 Set 1, KS4 Set A1)

Assessment objectives covered through all units:

AO1: Use and apply standard techniques. Students should be able to accurately recall facts, terminology and definitions, use and interpret notation correctly and accurately carry out routine procedures or set tasks requiring multi-step solutions.

AO2: Reason, interpret and communicate mathematically. Students should be able to make deductions, inferences and draw conclusions from mathematical information, construct chains of reasoning to achieve a given result, interpret and communicate information accurately, present arguments and proofs, assess the validity of an argument and critically evaluate a given way of presenting information.

AO3: Solve problems within mathematics and in other contexts. Students should be able to translate problems in mathematical or non-mathematical contexts into a process or a series of mathematical processes, make and use connections between different parts of mathematics, interpret results in the context of the given problem, evaluate methods used and results obtained and evaluate solutions to identify how they may have been affected by assumptions made

	Year 7	Year 8	Year 9 (A1/B1)
Phase 1	Units: 1 Whole number arithmetic 2 Rounding Numbers 3 Decimals 4 Area 5 Negative numbers 6 Using a calculator 7 Rules of Algebra 8 Properties of number 9 Coordinates 10 Straight line graphs 11 Line and rotational symmetry 12 2D Shapes	Units: 1 Using algebra and expanding brackets 2 Probability 3 Pythagoras' theorem 4 Linear Equations 5 Averages and range 6 Prime factors	Units: 1 Algebra review 2 Data handling 3 Using fractions 4 Working with indices 5 Calculating with standard form 6 Scatter graphs 7 Sequences 8 Rounding, estimation & bounds 9 Percentage change
Phase 2	Units: 1 Proportion & ratio 2 Fractions 3 More algebra 4 Venn diagrams 5 Fractions, decimals & percentages 6 Percentages 7 Angles 8 Metric and imperial units 9 Estimating 10 Displaying and interpreting data	Units: 1 Factorising 2 Percentage change 3 Circles 4 Volume 5 Fractions 6 Sequences 7 Transformation	Units: 1 Enlargement 2 Sets and Venn diagrams 3 Solving Quadratics 4 Area 5 Arc length & sector area 6 Simultaneous equations 7 Trigonometry 8 Inequalities 9 Charts & graphs 10 Solving quadratic equations using the formula 11 Compound measures 12 Locus 13 Angle geometry 14 Transformations 15 Changing the subject
	END OF YEAR EXAM	END OF YEAR EXAM	END OF YEAR EXAM:
	16 Plans and elevations 17 Constructing triangles	8 Proportion & ratio 9 Bearings and scale drawing	16 Volume 17 Trigonometric Graphs

	Year 10 (10EVD)	Year 11 (11A1)
Phase 1	Units: 1 Probability 2 Non-right-angled trigonometry 3 Identities 4 Similar shapes 5 Straight line graphs 6 Coordinates and ratio 7 Surds	Units: 1 Solving equations graphically 2 Inequalities 3 Vectors 4 Graph transformations 5 Growth and decay 6 Algebraic proof 7 Product rule for counting 8 Expand and simplify algebraic expressions 9 Binomial expansion 10
Phase 2	Units: 1 Exact values and right-angled trigonometry 2 Rearranging formulas 3 Functions 4 Circle theorems 5 Congruency 6 Iteration	Units: 1 Factor theorem 2 Function piecewise graphs 3 Indices 4 Sequences and series
	YEAR 10 EXAMS	TRIAL EXAMS
Phase 3	Units: 1 Histograms 2 Angles of elevation, depression, and 3D trigonometry 3 Algebraic fractions 4 Direct and inverse proportion	Units: 1 Calculus 2 Matrices 3 3D and further trigonometry
	YEAR 10 EXAMS	
Phase 4	Units: 1 Kinematics 2 Completing the square 3 Non-linear simultaneous equations 4 Equation of a circle	STUDY LEAVE