Mathematics 11F
Key Stage 4 Curriculum Map

Woolwich Polytechnic School for Boys

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
UNIT	Factors, Multiples and Primes Fractions Expressio ns and Equations	Angles and Right-angled triangles Surface area and volume Statistical diagrams	Probability Inequalities and Vectors Percentage change	Compound measures, Ratio and proportion Standard form and Sequences Linear graphs	Summer Exams	
KEY CONTENT	Find the lowest common multiple. Find the highest common factor. Order fractions, mixed numbers. Add, subtract mixed numbers. Multiply and divide with mixed numbers. Simplify expressions using index laws. Simplify algebraic fractions by cancelling common factors. Construct and solve equations. Factorise to solve quadratic equations.	Angles in polygons. Apply Pythagoras' theorem in 2D. Find unknown sides and angles in right-angled triangles. Use exact values of trigonometric ratios. Find the surface area of cube, cuboids, cylinder and composite shapes. Find the volume of cube, cuboid, cylinder, and composite shapes. Draw and interpret pie charts. Plot and interpret scatter graphs. Use lines of best fit.	Solving inequalities with the unknown on both sides Solving double inequalities Constructing and solving inequalities Adding and subtracting column vectors Multiplying column vectors by a scalar Identifying parallel vectors Percentage change with a calculator Finding original values in percentage calculations Finding the percentage an amount has been changed by Compound interest calculations Growth and decay(U988)	Calculate with speed, rates, density and pressure. Combine and change ratios. Calculate with ratios and algebra. Solve direct and indirect word problems. Multiply, divide, add and subtract numbers in standard form. Position-to-term rules for arithmetic sequences, geometric sequences and sequences of patterns. Find and interpret equations of straight-line graphs. Find the equation of a straight line from two points on the line.		
PLANNED ASSESSMENT	End of topic units Exam practice questions	Fluency	January PPE's	Exam Fluency practice		

Mathematics 11H
Key Stage 4 Curriculum Map

Woolwich Polytechnic School for Boys

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
UNIT	Surds Algebraic fractions Equations	Pythagoras theorem and trigonometry Circle geometry Statistical diagrams	Probability Inequalities Functions	Transformations, Iteration and Algebraic proof Similarity and Geometric proof Graphs	EXAMS	EXAMS
KEY CONTENT	Multiply, divide, add and subtract surds. Simplify surds. Expand brackets with surds. Rationalise denominators containing a single term. Rationalise denominators containing two terms. Simplify algebraic fractions by factorising into one and two bracket. Add, subtract, multiply and divide algebraic fractions. Solve quadratic equations graphically, using the quadratic formula and by completing the square. Solve simultaneous equations involving quadratics.	Use the exact values of trigonometric ratios. Use trigonometric graphs. Apply the sine, cosine and area rule. Use pythagoras' theorem and trigonometry in 3D. Angles subtended at the centre or circumference of a circle. Circle theorems for chords and tangents. Alternate segment theorem. Angles in segments and cyclic quadrilaterals. Draw histograms with equal class widths. Draw histograms with unequal class widths. Interpret histograms. Calculate averages from histograms	Conditional probabilities from tables and Venn diagram Conditional probabilities from tree diagrams. Product rule for counting. Graphs of linear inequalities. Solving quadratic inequalities. Substitute into functions. Substitute into composite functions. Find composite functions Find inverse functions	Translate, reflect and transform graphs. Find approximate solutions to equations using iteration. Writing algebraic proofs. Find the surface area and volume of similar shapes. Geometric proofs with vectors. Geometric proofs with angle facts Estimate gradients and areas under non-linear graphs. Calculate distances from velocity-time graphs.		
PLANNED ASSESSMENT	Unit Topic Tests (Units 1–3), Retrieval Assessment, GCSE Style questions	Fluency practice	January PPE	March mocks Practicing of exam papers	Summer exams	