



Year 11 Curriculum Grid

Mathematics



Year/Term	Unit	Intent			
		Foundation	Foundation Plus	Higher	Higher Plus
Overall					
Autumn	Number			Calculate with fractional indices and negative fractional indices.	
	Algebra		Factorise quadratic expressions, including using the difference of two squares.	Simplify algebraic fractions. Add and subtract algebraic fractions. Use algebraic techniques to show expressions are equivalent. Formulate proofs using algebraic techniques.	Add and subtract algebraic fractions. Use algebraic techniques to show expressions are equivalent. Formulate proofs using algebraic techniques.
	Measures and Estimation	Find the perimeter of a sector. Find angle of sectors given arc length.			
	Functions and Equations	Solve linear equations where the unknown is on both sides. Find roots of quadratic equations by factorising and using the quadratic formula. Derive and solve two linear simultaneous equations from a situation.	Solve linear equations where the unknown is on both sides. Find roots of quadratic equations by factorising and using the quadratic formula. Derive and solve two linear simultaneous equations from a situation.	Find composite functions algebraically. Solve linear equations by adding or subtracting algebraic fractions. Find roots of quadratic equations by completing the square. Derive and solve quadratic equations from a situation. Solve two simultaneous equations, one linear, and one circular. Derive and use iterative formula.	Find composite functions algebraically. Solve linear equations by adding or subtracting algebraic fractions. Find roots of quadratic equations by completing the square. Derive and solve quadratic equations from a situation. Solve two simultaneous equations, one linear, and one circular. Derive and use iterative formula.



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	Translation and Vectors	Add and subtract two vectors numerically. Find the resultant of two vectors. Understand relationship between parallel vectors, midpoints of vectors.	Understand relationship between parallel vectors, midpoints of vectors.	Understand relationship between perpendicular vectors. Show vectors are parallel and perpendicular. Show when points are collinear. Vector proofs.	Understand relationship between perpendicular vectors. Show vectors are parallel and perpendicular. Show when points are collinear. Vector proofs.
	Angles	Solve problems using all angle and parallel line rules, giving reasons. Use accurate drawings to solve bearing problems.	Use accurate drawings to solve bearing problems.	Prove the circle theorems concerning angles, radii, tangents and chords and use them to prove related results.	Prove the circle theorems concerning angles, radii, tangents and chords and use them to prove related results.
	Graphs and Tables	Identify gradient and y-intercept of a linear graph and find equation. Plot linear graphs using gradient and y-intercept. Solve two linear simultaneous equations graphically. Understand two parallel lines have same gradient. Find equation of linear graph given a point and the gradient or given two points. Solve two simultaneous equations graphically where one is linear and one quadratic. Plot cubic and reciprocal graphs. Interpret, create and/or complete velocity-time graphs.	Find equation of linear graph given a point and the gradient or given two points. Solve two simultaneous equations graphically where one is linear and one quadratic. Plot cubic and reciprocal graphs. Interpret, create and/or complete velocity-time graphs.	Coordinate geometry problem solving and proofs. Sketch graphs of quadratic functions, including finding the turning points by completing the square. Recognise and use the equation of a circle with centre at the origin. Find the equation of a tangent to a circle at a given point.	Coordinate geometry problem solving and proofs. Sketch graphs of quadratic functions, including finding the turning points by completing the square. Recognise and use the equation of a circle with centre at the origin. Find the equation of a tangent to a circle at a given point.
Spring	Year 11 PPEs – first two weeks in January – revision during lessons if applicable.				
Spring	From mid-January students revise work from throughout the course. The content of these lessons is determined by the outcome of PPE exams from January and assessments that were completed in December.				



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