Maths
Year 11 higher curriculum map

Year 11	T1	T2	T3	T4	T5	T6
Content / Topic for Term	Trigonometry Algebraic fractions Circle theorems Vectors	Sine and cosine rules Equations of a circle Any recap needed	Further quadratics Functions Sketching and transforming graphs Velocity-time graphs Rates of change and proportionality	Growth and decay Algebraic proof Data and probability recap Transformation and invariant points Exam prep Lessons planned following PPEs	Exam prep Lessons planned following PPEs	Exam prep Lessons planned following PPEs
Key knowledge for acquisition, recall and application in assessment or exam	• Know the exact trig values • Angles of elevation and depression • Knowledge of four operations with numerical fractions • Factorising quadratics • Know the seven circle theorems • Recognise parallel vectors and vectors in opposite directions	• Relevant trigonometry formulae • Equation of a circle • Know that the radius and tangent always meet at a right angle • Equation of a line and gradients of perpendicular lines	• Understand function notation • Know the rules of transforming graphs • Know the graphs of y = sin x and y = cos x • Understand that the gradient of a velocity-time graph is the acceleration and that the area	• Define exponential growth and decay • Set notation • Know when to use two-way tables vs tree diagrams vs venn diagrams • Represent odd and even numbers in the context of algebraic proof		

			under the curve is the distance	• Describe the changes achieved by combinations of rotations, reflections and translations		
Key skills to apply in assessment or exam	• Apply rules of bearings to trigonometry problems • Simplify, add, subtract, multiply, divide and solve algebraic fractions • Apply and prove the standard circle theorems • Add and subtract column vectors • Apply vectors to geometry problems • Prove that vectors are parallel and colinear	• Use and apply the equation of a circle with centre at the origin • Work out the equation of a tangent to a line • Apply Pythagoras' Theorem to right-angled triangles in circles • Rearranging equations	• Solve quadratic equations by factorising, using the formula, or completing the square and make connections to graphs of quadratics • Rearrange to work out inverse functions • Evaluate composite functions • Transform graphs of any function (including trig graphs) • Calculate or estimate gradients of	• Set up, solve and interpret growth and decay problems, including compound interest • Complete probability problems by applying the rules of tree diagrams and venn diagrams • Calculate and interpret conditional probabilities • Apply rules of algebra to complete		

			velocity-time graphs and areas under graphs • Estimate instantaneous acceleration from a velocity-time graph by drawing a tangent • Interpret the gradient of a straight line graph as a rate of change • Interpret the gradient at a point on a curve as the instantaneous rate of change	algebraic proof questions • Use the four transformations to work out invariant points		
Title of Knowledge Organiser	Algebraic fractions Vectors Circle theorems	Trigonometry Equation of a circle and tangent	Further quadratics Graphs and graph transformations	Growth and decay Proof		