

KS5 – Year 13 – A Level Mathematics

Term	Topic Titles	Brief Overview
1	Trigonometric functions	Deepening understanding of trigonometric functions and their properties.
	Algebraic methods	Advanced algebraic techniques for solving complex problems, including algebraic proof.
	Trigonometry and modelling	Applying trigonometry to model and solve real-world problems.
	Conditional probability	Calculating probabilities of events given that other events have occurred.
	Friction	Analysing the effects of friction on motion.
	Sequences and series	Understanding and working with arithmetic and geometric sequences and series.
	Differentiation	Advanced techniques and applications of differentiation.
	Correlation and regression	Exploring relationships between variables and making predictions.
	Moments	Calculating and analysing the turning effect of forces.
2	Integration	Advanced techniques and applications of integration.
	Normal distribution	Properties and applications of the normal distribution in statistics.
	Projectiles	Analysing the motion of objects projected into the air.
	Vectors (3D)	Representation and manipulation of vectors in three dimensions.
	Applications of forces	Real-world applications and problem-solving involving forces.
	Parametric equations	Using parametric equations to represent and analyse curves.

3	Further kinematics	Advanced study of motion, including variable acceleration.
	Numerical methods	Techniques for approximating solutions to mathematical problems using numerical methods.