Topic		Resources to support revision
• Factor theorem, cubic graphs • Transformations of graphs • Conversion between parametric and Cartesian forms, trigonometric identities • Coordinate geometry, equations of straight lines and circles • Arithmetic sequences and series, inequalities • Periodic sequences • Sum to infinity of a geometric series, exact values of trigonometric functions • Graphs of trigonometric functions, transformations of graphs • Small angle approximations of trig functions, binomial expansion • Implicit differentiation, stationary points of curves • Tangents to a curve • The gradient function of a curve • Area under a curve, integration techniques, trapezium rule • Integration by substitution, differentiation of trigonometric functions, trigonometric identities • Newton-Raphson method, areas of sectors and triangles, locating roots by considering a change of sign	**Paper 1**	Mathsgenie Exams Solution Kerboodle Dr Frost: https://www.drfrostmaths.com/
Section A • Proofs by counterexample and exhaustion • Transformations of graphs, sketch curves defined by simple equations • Coordinate geometry of the circle • Binomial expansion, integration of polynomials • Sine and cosine rules • Laws of logarithms • Convex and concave sections of curves • Differentiation from first principles • Maximum and minimum points of polynomials • Solving differential equations, exponential models, partial fractions **Section B** • Position vectors, constant acceleration formulae in two dimensions • Calculus in kinematics using vectors, calculus for exponential and trigonometric functions, calculus techniques, magnitude of a vector • Constant acceleration formulae • Projectile motion, trigonometric functions • Velocity-time graphs • Forces in equilibrium in 2D • Newton's laws of motion, friction, resolving forces, constant acceleration formulae • Weight and acceleration due to gravity • Moments	**Paper 2**	
Section A • Proof by contradiction • Inverse functions • Validity of binomial expansion • Graphs of trigonometric functions, trigonometric equations • Using logarithmic graphs to estimate parameters in non-linear relationships	**Paper 3**	

• Connected rates of change • Parametric differentiation, parametric models • Stationary points of curves, graphs of a function, domains and ranges of a function, simultaneous equations • Area between two curves • Integrating powers of x **Section B** • Critique statistical sampling • Sampling methods and terminology • Interpreting statistical diagrams, distributions • Probability using Venn diagrams, conditional probability, independent events • Binomial distribution, binomial probabilities • Normal distribution properties and probabilities, calculations with summary statistics • Parameters of a normal distribution • Hypothesis test for mean of a normal distribution • Hypothesis test for proportion using binomial distribution		