KINGSBURY GREEN ACADEMY

YEAR 13

- Parametric functions
- Modulus functions
- Variable acceleration
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- Arithmetic and geometric sequences and series
- Binomial distributions
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- 3D Vectors
- Differentiation: Chain rule, Product rule, Quotient rule
- Differentiation: Points of inflexion, Rates of change
- Partial Fractions
- Numerical methods:
- Forces and Newton's Laws of motion
- Variable acceleration
- Kinematics
- Binomial distributions
- Continuous distributions
- Integration: Definite; e, logs, trig functions; By substitution; By parts
- Trig: Double angle formula, Identities, Sec/cot/cosec
- Radian, Small angle approximations
- Algebraic Division
- Hypothesis testing
- Regression lines
- Standard Deviation
- Sampling techniques
- PMCC

YEAR 12

- Surds & indices
- Further quadratics
- Polynomials: Sketching, Factor theorem
- Coordinate geometry
- Trigonometric identities
- Differentiation
- Integration
- Proofs: By exhaustion, By deduction
- Vectors in 2D/3D
- Binomial Expansions
- Graphs of polynomials
- Trigonometric equations
- Exponentials and logarithms
- Different types of graphs: Trigonometric, Exponential, Cubic, Quadratic
- Parallel and perpendicular lines
- Rates of change
- Area under a curve
- Completing the square
- Vectors
- Quadratic sequences
- y = mx + c
- Graphical inequalities
- Transforming graphs
- Iteration
- Functions
- Circle theorems
- Introduction to Proofs

YEAR 11

- Quadratic simultaneous equations
- Sine and cosine rules
- 3D shapes – cones, spheres
- GCSE Statistics Unit 2: Processing, Representing & Analysing Data
- Growth and decay
- Recurring decimals
- Surds
- Area of any triangle
- GCSE Statistics Unit 3: Probability
- Forming and solving equations
- Factorising complex quadratics
- Proportionality
- GCSE Statistics Unit 1: Collection of Data

YEAR 10

- Intro to Quadratics
- Standard Form
- Further volume and surface area
- Rounding errors and limits
- Scale factors for area/volume
- Constructions and loci
- Probability
- Negative scale factor enlargements
- Box Plots
- Linear Simultaneous equations
- Trigonometry
- Pythagoras
- Angles in polygons
- Direct and indirect proportion

YEAR 9

- Volume and surface area of prisms
- Rounding and estimating
- Scatter Diagrams
- Using formulae Rearranging
- Angles in parallel lines
- Averages from frequency tables
- Fractional scale factors enlargements
- Sampling/Bias
- Factorising
- Further equations
- Inequalities: Representing, Solving
- Circles
- Nth terms of linear sequences

YEAR 8

- Area and perimeter
- 2D and 3D shapes
- Fractions: Equivalence, Adding/subtracting
- Basic algebra: Simplifying, Expanding brackets, Equations, Sequences, Substitution
- Calculator skills
- Data: Types of data, Averages, Statistical diagrams, Pie Charts
- Ratio: Sharing, Recipes, Proportion
- Transformations: Translations, Reflections, Rotations, Enlargements
- Angles: Measuring, Straight lines, Triangles
- Venn Diagrams
- Percentages: % change, % of amounts
- Indices
- Basic Number: Place Value, Negatives, Decimals
- Number: Types of number, Factors/multiples

YEAR 7

welcome

‘ Mathematics, the subject that counts.’