



# HIGH SCHOOL MATHEMATICS CURRICULUM

## YEAR 6

### Term 3

- Number theory
- Introduction to Algebra
- Further Algebra and Equations
- Products and Factors
- Fractions and Angles
- Further Angle Theorems

### Term 4

- Geometry
- Further Geometry
- Decimals, Fractions and Percentages
- Further Algebra
- Area and Volume
- Coordinate Plane

## YEAR 7

### Term 1

- Algebra Review and Index Laws
- Angles Theorems Review
- Further Pythagoras Theorem
- Probability
- Further Algebra
- Rate and Ratios

### Term 2

- Algebra Revision
- Circle Geometry
- Surface Area and Volume
- Equations and Inequalities
- Further Probability
- Surds

### Term 3

- Coordinate Geometry Continued
- Further Coordinate Geometry
- Applications of Coordinate Geometry
- Congruency and General Revision
- Further Congruency

### Term 4

- Similar Triangles
- Surface Area and Volume
- Surface Area and Volume of Pyramids
- Revision and Statistics
- Applying Formulas
- Simple and Compound Interest

## YEAR 8

### Term 1

- Algebra Review Indices
- Congruency Revision
- Similarity Review
- Financial Mathematics
- Coordinate Geometry Review
- Further Coordinate Geometry

### Term 2

- Algebra Revision
- Further Factorisation
- Solving Quadratic Equations
- Graphing Quadratics
- Rearranging Formulas
- Probability Revision

### Term 3

- Depreciation (Trigonometry)
- Further Trigonometry
- Trigonometry Problem Solving
- Indices Inequalities Revision
- Coordinate Geometry Review

### Term 4

- Factorisation Revision
- Solving Quadratic Problems
- Completing the Square and Quadratic Formulas
- Further graphing quadratics
- Rates and Proportionality
- Surds Revision and Problem Solving



# HIGH SCHOOL MATHEMATICS CURRICULUM

## YEAR 9

### Term 1

- Quadratic Equations Review
- Trigonometry Review
- Financial Mathematics
- Probability Review
- Further Indices
- Coordinate Geometry Review

### Term 2

- Factorisation Revision
- Polynomials
- Further Polynomials
- Probability Coordinate Geometry
- Further Trigonometry

### Term 3

- Indices and Logarithms
- Further Logarithms
- Graphs - Applications of Logarithms
- Arithmetic Series
- Geometric and Sum of Series
- Application of Series

### Term 4

- Functions
- Inverse Functions & Further Graphs
- Regions
- The Discriminant
- Simultaneous Equations
- Problem Solving and the Coordinate Plane

## YEAR 10

### Term 1

- Further Trigonometry
- Trigonometric Identities
- Trigonometric Equations
- Functions Review
- Polynomials
- Graphing Polynomials

### Term 2

- Applications of Coordinate Geometry
- Limits and First Principles
- Differential Calculus
- Indices and Logarithms

### Term 3

- Graphing Absolutes
- Graphing Hyperbolas
- Factorials and Probability Solutions
- Permutations and Combinations
- Discrete Probability
- Variance and Pigeonhole

### Term 4

- Differentiations Review
- Graphing Using Derivatives
- Further Graphing
- Derivative Problems
- Definite Integrals
- Indefinite Integrals

## YEAR 11 - ADVANCED

### Term 1

- Methods in Algebra
- Numbers and Surds
- The Coordinate Plane
- Functions and Graphs
- Transformations and Symmetry

### Term 2

- Trigonometry
- Exponential and Logarithmic Function
- Differentiation

### Term 3

- Extending Calculus
- Probability
- Probability Distributions
- Sequences and Series

### Term 4

- Graphs and Equations
- Curve-sketching using the Derivative
- Intergration



# HIGH SCHOOL MATHEMATICS CURRICULUM

## YEAR 11 - EXTENSION 1

### Term 1

- Methods in Algebra
- Numbers and Surds
- The Coordinate Plane
- Functions and Graphs
- Transformations and Symmetry
- Further Graphs
- Trigonometry

### Term 2

- Trigonometry
- Polynomials
- Exponential and Logarithmic Function
- Differentiation
- Extending Calculus

### Term 3

- Probability
- Combinatorics
- Discrete Probability Distributions
- The Binomial Expansion and Pascal's Triangle
- Further Rates
- Further Trigonometry

### Term 4

- Sequences and Series
- Mathematical Induction
- Graphs and Equations
- Curve-sketching using the Derivative
- Intergration

## YEAR 12 - ADVANCED

### Term 1

- The Exponential and Logarithmic Functions
- The Trigonometric Functions
- Motion and Rates

### Term 2

- Series and Finance
- Displaying and Interpreting Data
- Continuous Probability Distributions

### Term 3

- HSC Preparation and Revision

## YEAR 12 - EXTENSION 1

### Term 1

- Exponential and Logarithmic Functions
- Trigonometric Functions
- Vectors
- Motion and Rates

### Term 2

- Projectile Motion
- Trigonometric Equations
- Further Calculus
- Differential Equations
- Calculus Review and Challenge
- Sequence and Series Revision & Series and Finance

### Term 3

- Continuous Probability Distributions
- Binomial Distributions
- HSC Preparation and Revision