# **GCSE Higher (9-6) Maths & Further Maths**

### **Year 9 Spring Term**

Calculations, Checking and Rounding Indices, roots, reciprocals and hierarchy of operations
Factors, multiples and primes
Standard form and surds
Basic Algebra
Setting up, rearranging and solving equations
Sequences
Fractions

## **Year 9 Spring Term**

Percentages
Ratio and proportion
Polygons, angles and parallel lines
Pythagoras' Theorem and trigonometry
Averages and range
Representing and interpreting data
Scatter Graphs
Graphs: the basics and real-life graphs
Linear graphs and coordinate geometry

#### **Year 10 Autumn Term**

Averages and range
Representing and interpreting data
Scatter Graphs
Graphs: the basics and real-life graphs
Linear graphs and coordinate geometry
Quadratic, cubic and other graphs
Perimeter, area and circles

3D forms and volume, cylinders, cones and spheres

Accuracy and bounds Year 11 Autumn Term

### **Further Maths Topics**

#### **Year 10 Spring Term**

Number and Algebra 1 **Transformations** Co-ordinate Geometry Constructions, loci and bearings Algebra II Similarity and congruence in 2D and 3D Geometry I Solving quadratics and simultaneous equations, Algebra III Inequalities Geometry II Probability Algebra IV Multiplicative reasoning Calculus Graphs of trigonometric functions Matrices Further trigonometry

#### **Year 10 Summer Term**

## **Year 11 Spring Term**

Quadratics, expanding more than two brackets, **Revision to Exam** sketching graphs, graphs of circles, cubes and quadratics
Circle theorems
Circle geometry
Collecting data
Cumulative frequency, box plots and histograms
HIGHER ALGEBRA
Vectors and geometric proof
ADVANCED GRAPHS
Direct and inverse proportion
Extension Algebra
Quadratic Sequences