Mathematics Year 11 Learning Journey

F: Standard Form
- calculating with standard form
- using a calculator

H: Similarity
- surface area and volume of similar shapes

F: Sequences
- position to term rules for patterns and arithmetic sequences
- special sequences

H: Geometric Proof
- vector proof
- congruence & similarity
- circle theorem proof

F: Linear Graphs
- equations of parallel lines
- finding an equation given a point & gradient or 2 points

H: Graphs
- estimating gradients and area underneath curves
- equations of circles & tangents

F: Ratio & Proportion
- combining & changing ratio
- proportion worded problems inc currency

H: Algebraic Proof
- writing algebraic proofs

F: Compound Measures
- speed, density & pressure

H: Iteration
- recurrence relations
- substituting into formula
- using iterative formula to find approximate solutions

F: Percentages
- reverse percentages
- compound interest
- growth & decay

H: Transformations
- graph transformations
- translating & reflecting graphs

F: Probability
- Venn & tree diagrams
- experimental probabilities

H: Probability
- conditional probability with tables, Venn, trees and formula
- product rule for counting

F: Inequalities
- double inequalities
- solving and constructing inequalities

H: Inequalities
- graphs of linear inequalities
- solving quadratic inequalities

F: Vectors
- adding and subtracting column vectors
- scaling and identifying parallel vectors

H: Functions
- substituting into functions
- inverse & composite functions

F: Statistical Diagrams
- pie charts
- scatter graphs

H: Statistical Diagrams
- drawing & interpreting histograms
- calculating averages from histograms

F: Surface Area & Volume
- surface area of 3D solids inc cone & sphere
- volume of 3D solids

H: Circle Geometry
- circle theorems inc alternate segment theory

F: Angles & Right-angled Triangles
- angles in parallel lines & polygons
- Pythagoras & trigonometry

H: Pythagoras & Trigonometry
- trigonometric graphs
- non-right-angled trig
- application in 3D

F: Factors, Multiples & Primes
- Prime factors
- LCM & HCF.

H: Surds
- Calculating with surds
- Rationalising denominators

F: Fractions
- Ordering
- Calculating with mixed numbers

H: Algebraic Fractions
- Calculating with algebraic fractions

F: Expressions & Equations
- simplifying
- linear & quadratic equations
- simultaneous equations

H: Equations
- completing the square & quadratic formula
- quadratic simultaneous equations

Year 11

Year 11 Overview

The Year 11 curriculum is designed to fully prepare students for GCSE exams by revisiting key topics, teaching new knowledge and applying these to exam questions through low stake quizzes and mock examinations. It is split into distinct Foundation and Higher tiers to ensure appropriate challenge, comprehensively covering advanced strands like algebra, geometry, probability, and statistics. The final term is dedicated exclusively to structured revision, mock-based gap analysis and practice papers to maximise retention and exam readiness.

"Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers." **Shakuntala Devi**