Big Picture – Year 10 Higher Overview
Mathematics Department

Next Year

Factors, Powers and Roots
Factors, multiples and primes, prime factors, highest common factor, lowest common multiple, laws of indices, surds.

UNIT 7

Circles and Constructions
Circumference and area, arc lengths, area of sectors, circle theorems, ruler and compass constructions, loci.

UNIT 6

Ratio and Proportion
Describe problems using percentages and fractions, divide in a ratio, scale factors, scale diagrams, percentage increase and decrease percentage change.

Equations and Inequalities
Solve linear and quadratic equations, simultaneous equations, iteration, solve inequalities and represent solutions.

Measures and Accuracy
Approximation, error intervals, density and pressure.

UNIT 5

Working in 2D
Draw and measure accurately, bearings, scale drawings, area, transformations.

UNIT 4

Probability
Experimental and theoretical probability, expected frequency, mutually exclusive events.

Formulae and Functions
Substitution, rearranging formulae, functions, identify inequalities, expressions, equations and identities, algebraic proof, expand double brackets, factorising quadratics.

Fractions, Decimals & Percentages
Convert and order fractions, decimals and percentages, convert recurring decimals to fractions, fractions and percentages of an amount, four operations with fractions.

UNIT 3

Angles and Polygons
Angle properties on lines and in polygons, bearings, congruency and similarity.

UNIT 2

Handling Data 1
Frequency tables, two-way tables, bar charts, pie charts, averages, range and interquartile range, comparing data sets, histograms.

Expressions
Algebraic notation and vocabulary, substitution, simplifying expressions, laws of indices, expanding brackets, factorising, algebraic fractions.

Calculations 1
Ordering positive and negative numbers, rounding, four operations with positive and negative numbers, order of operations.

UNIT 1

Year 10H