

# Higher GCSE Topics (Full Coverage)

## 1 Number

- 1.1 Number problems and reasoning
- 1.2 Place value and estimating
- 1.3 HCF and LCM
- 1.4 Calculating with powers (indices)
- 1.5 Zero, negative and fractional indices
- 1.6 Powers of 10 and standard form
- 1.7 Surds

## 2 Algebra

- 2.1 Algebraic indices
- 2.2 Expanding and factorising
- 2.3 Equations
- 2.4 Formulae
- 2.5 Linear Sequences
- 2.6 Non-linear Sequences
- 2.7 More Expanding and Factorising

## 3 Interpreting and Representing Data

- 3.1 Statistical Diagrams 1
- 3.2 Time Series
- 3.3 Scatter Graphs
- 3.4 Line of best fit
- 3.5 Averages and range
- 3.6 Statistical Diagrams 2

## 4 Fractions, Ratio and Percentages

- 4.1 Fractions
- 4.2 Ratios
- 4.3 Ratio and proportion
- 4.4 Percentages
- 4.5 Fractions, decimals and percentages

## 5 Angles and Trigonometry

- 5.1 Angle properties of triangles and quadrilaterals
- 5.2 Interior angles of a polygon
- 5.3 Exterior angles of a polygon
- 5.4 Pythagoras' Theorem 1
- 5.5 Pythagoras' Theorem 2
- 5.6 Trigonometry 1
- 5.7 Trigonometry 2

## 6 Graphs

- 6.1 Linear Graphs
- 6.2 More Linear Graphs
- 6.3 Graphing rates of change
- 6.4 Real-life graphs
- 6.5 Line Segments
- 6.6 Quadratic Graphs
- 6.7 Cubic and Reciprocal Graphs
- 6.8 More Graphs

## 7 Area and Volume

- 7.1 Perimeter and Area
- 7.2 Units and Accuracy
- 7.3 Prisms
- 7.4 Circles
- 7.5 Sectors of circles
- 7.6 Cylinders and Spheres
- 7.7 Pyramids and Cones

## 8 Transformations and Constructions

- 8.1 3D solids
- 8.2 Reflection and Rotation
- 8.3 Enlargement
- 8.4 Translations and Combinations of different transformation
- 8.5 Scale drawings and bearings
- 8.6 Constructions 1
- 8.7 Constructions 2
- 8.8 Loci

## 9 Equations and Inequalities

- 9.1 Solving linear inequalities
- 9.2 Solving quadratic equations 1
- 9.3 Solving quadratic equations 2
- 9.4 Completing the square
- 9.5 Solving simple simultaneous equations
- 9.6 More simultaneous equations
- 9.7 Solving Linear and Quadratic

## 10 Probability

- 10.1 Combined events
- 10.2 Mutually Exclusive Events
- 10.3 Experimental probability
- 10.4 Independent events and tree diagrams
- 10.5 Conditional Probability
- 10.6 Venn Diagrams and Set notation

## 11 Multiplicative Reasoning

- 11.1 Growth and Decay
- 11.2 Compound measures
- 11.3 More compound measures
- 11.4 Ratio and Proportion

## 12 Similarity and Congruence

- 12.1 Congruence
- 12.2 Geometric proof and congruence
- 12.3 Similarity
- 12.4 More Similarity
- 12.5 Similarity in 3D solids

## 13 More Trigonometry

- 13.1 Accuracy
- 13.2 Graph of the sine function
- 13.3 Graph of the cosine function
- 13.4 Graph of the tangent function
- 13.5 Calculating areas and the sine rule
- 13.6 The cosine rule and 2D trigonometric problems
- 13.7 Solving problems in 3D
- 13.8 Transforming trigonometric graphs 1
- 13.9 Transforming trigonometric graphs 2

## 14 Further Statistics

- 14.1 Sampling
- 14.2 Cumulative Frequency
- 14.3 Box plots
- 14.4 Drawing Histograms
- 14.5 Interpreting Histograms
- 14.6 Comparing and describing distributions

## 15 Equations and Graphs

- 15.1 Solving Simultaneous Equations Graphically
- 15.2 Representing Inequalities graphically
- 15.3 Quadratic Equations
- 15.4 Using Quadratic Graphs
- 15.5 Cubic Equations
- 15.6 Using iteration to solve equations

## 16 Circle Theorems

- 16.1 Radii and chords
- 16.2 Tangents
- 16.3 Angles in circles 1
- 16.4 Angles in circles 2
- 16.5 Applying circle theorems

## 17 More Algebra

- 17.1 Rearranging formulae
- 17.2 Algebraic Fractions
- 17.3 Simplifying algebraic fractions
- 17.4 More algebraic fractions
- 17.5 Proof
- 17.6 Surds
- 17.7 Solving algebraic fraction equations
- 17.8 Functions

## 18 Vectors and Geometric Proof

- 18.1 Vectors and Vector notation
- 18.2 Vector arithmetic
- 18.3 More vector arithmetic
- 18.4 Parallel vectors and collinear points
- 18.5 Solving Geometric problems

## 19 Vectors and Geometric Proof

- 19.1 Direct proportion
- 19.2 More direct proportion
- 19.3 Inverse proportion
- 19.4 Exponential functions
- 19.5 Non-linear graphs
- 19.6 Translating graphs of functions
- 19.7 Reflecting graphs of functions