

GCSE Maths (higher)

Investigating Properties of Shapes I

- Trigonometry.
- Exact values.

Calculating I

- Fractional/negative indices.
- Bounds.

Solving Equations & Inequalities I

- Simultaneous equations.
- Rearranging formulae.
- Iteration.
- Inequalities and regions.
- Formulae, factorising and completing the square for quadratics.

Mathematical Movement I

- Transformations.
- Vectors.

Algebraic Proficiency – Tinkering I

- Factorise quadratics.
- Algebraic fractions.
- Expanding cubics.

Proportional Reasoning

- Direct/inverse proportion (algebraically and graphically).

Pattern Sniffing I

- Generate quadratic sequences and Nth terms.

Calculating Space

- Volume/surface area of complex shapes and similar solids.

Conjecturing

- Circle theorems.

Algebraic Proficiency – Visualising I

- Plotting graphs.
- Area under curves.
- Key points on a quadratic graph.
- Perpendicular lines and circle graphs.

Exploring Fractions, Decimals and Fractions

- Recurring decimals.
- Compound interest/depreciation.

<p>Understanding Risk</p> <ul style="list-style-type: none"> • Venn diagrams
<p>Analysing Statistics I</p> <ul style="list-style-type: none"> • Sampling. • Cumulative frequency graphs. • Boxplots.
<p>Investigating properties of shapes II</p> <ul style="list-style-type: none"> • 3D Pythagoras. • 3D Trigonometry. • Sine Rule, Cosine Rule and $0.5ab\sin C$.
<p>Calculating II</p> <ul style="list-style-type: none"> • Surds and Algebraic Fractions
<p>Solving Equations & Inequalities II</p> <ul style="list-style-type: none"> • Completing the square • Quadratic formulae. • Turning points. • Iteration. • Quadratic inequalities. • Linear and non-linear simultaneous equations •
<p>Mathematical movement II</p> <ul style="list-style-type: none"> • Negative enlargement. • Combinations of transformations. • Vectors.
<p>Algebraic Proficiency: Tinkering II</p> <ul style="list-style-type: none"> • Function notation. • Composite functions. • Inverse functions.
<p>Proof</p> <ul style="list-style-type: none"> • Algebraic proof and geometric proof.
<p>Pattern Sniffing II</p> <ul style="list-style-type: none"> • Geometric sequences. • Non-standard sequences
<p>Algebraic Proficiency: Visualising II</p> <ul style="list-style-type: none"> • Trig graphs. • Transformation of graphs. • Roots of quadratics. • Discriminant. • Gradient of a curve.

Analysing Statistics II

- Histograms.

**Advice to students
for independent
study**

- Log on to online resources such as Maths Watch to access video tutorials and complete additional questions on the topics being studied.
- Use revision guides and further resources to continuously revisit previous work – revise, research and complete questions.