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| **Subject** | Higher Mathematics | **Exam Board** | AQA | **Course Code** | 8300 |

**Overview**

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| **Mock Assessments** |
| One Non-Calculator Paper (Paper 1) 90 minutes. Two Calculator Papers (Papers 2 and 3) 90 minutes for each paper.  Full mathematics equipment required. |

**Thread : Topic : Additional Detail (if needed)**

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| Algebra : Algebraic Fractions : Addition |  |
| Algebra : Algebraic Fractions : Solving Equations |  |
| Algebra : Constructing Arguments : Reasoning |  |
| Algebra : Distance Time Graphs : Estimating Speed |  |
| Algebra : Equations : Forming and Solving Equations |  |
| Algebra : Equations : Solving Linear |  |
| Algebra : Equations of Lines : Understanding y = mx + c |  |
| Algebra : Formulae : Changing the subject |  |
| Algebra : Functions : Composite Functions |  |
| Algebra : Functions : Substituting values |  |
| Algebra : Gradients : Perpendicular gradients |  |
| Algebra : Graphs : Equation of a circle |  |
| Algebra : Graphs : Exponential Graphs |  |
| Algebra : Graphs : Inequalities and Regions |  |
| Algebra : Graphs : Transformations of Graphs |  |
| Algebra : Identities : Equating Coefficients |  |
| Algebra : Indices : Laws of Indices |  |
| Algebra : Inequalities : Quadratic |  |
| Algebra : Iteration : Finding values |  |
| Algebra : Linear Graphs : y-Intercept |  |
| Algebra : Manipulation : Factorising one Bracket |  |
| Algebra : Manipulation : Expanding Three Brackets |  |
| Algebra : Proof : Algebraic Proof |  |
| Algebra : Proof : Geometrical Proof |  |
| Algebra : Proportionality : Direct |  |
| Algebra : Quadratics : Completing the Square |  |
| Algebra : Quadratics : Difference of Two Squares |  |
| Algebra : Real-life Graphs : Interpreting graphs |  |
| Algebra : Sequences : Nth Term from pictures |  |
| Algebra : Sequences : Quadratic Sequences |  |
| Algebra : Simultaneous Equations : Solving |  |
| Algebra : Solving Equations : Fractional |  |
| Algebra : Inequalities : Representing Inequalities |  |
| Algebra : Inequalities : Solving Inequalities |  |
| Algebra : Proportionality : Graphs of proportional functions |  |

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| Geometry and Measure : 3D Solids : Identifying Solids |  |
| Geometry and Measure : Angle Properties : Angles around a point |  |
| Geometry and Measure : Angle Properties : Circle Theorems |  |
| Geometry and Measure : Angle Properties : Parallel Lines |  |
| Geometry and Measure : Angle Properties : Vertically opposite angles |  |
| Geometry and Measure : Area : Area of a segment |  |
| Geometry and Measure : Area : Rectangles |  |
| Geometry and Measure : Area : Sector Area |  |
| Geometry and Measure : Area : Triangle - Sine Formula |  |
| Geometry and Measure : Bearings |  |
| Geometry and Measure : Circles : Parts of a circle |  |
| Geometry and Measure : Compound Measures : Converting |  |
| Geometry and Measure : Compound Units : Density |  |
| Geometry and Measure : Compound Units : Speed, Distance, Time |  |
| Geometry and Measure : Congruency |  |
| Geometry and Measure : Geometrical Reasoning : Dimensions of Triangles |  |
| Geometry and Measure : Plans and Elevations |  |
| Geometry and Measure : Pythagoras : 3D Pythagoras |  |
| Geometry and Measure : Regular Polygons : Exterior and Interior Angles |  |
| Geometry and Measure : Scale Factors : Area |  |
| Geometry and Measure : Transformation : Enlargements |  |
| Geometry and Measure : Transformations : Describing transformations |  |
| Geometry and Measure : Transformations : Invariant Points |  |
| Geometry and Measure : Transformations : Reflection |  |
| Geometry and Measure : Transformations : Vector Translation |  |
| Geometry and Measure : Trigonometry : Cosine Rule |  |
| Geometry and Measure : Trigonometry : Exact trigonometric values |  |
| Geometry and Measure : Trigonometry : Finding sides |  |
| Geometry and Measure : Trigonometry : Sine Rule for Angles and Lengths |  |
| Geometry and Measure : Units : Converting between units of area |  |
| Geometry and Measure : Vectors : Vector Geometry |  |
| Geometry and Measure : Volume : Cones |  |
| Geometry and Measure : Volume : Prisms |  |
| Geometry and Measure : Volume : Spheres |  |
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| Number : Approximations : Rounding to Estimate Answers |  |
| Number : Bounds : Calculating Upper and Lower Bounds |  |
| Number : Decimals : Ordering Decimals |  |
| Number : Decimals : Recurring decimals |  |
| Number : Fractions : Fractions of Quantities |  |
| Number : Fractions : Simplifying |  |
| Number : Fractions and Decimals : Converting between fractions and decimals |  |
| Number : Indices : Fractional |  |
| Number : Indices : Negative |  |
| Number : Listing Strategies : Product Rule for Counting |  |
| Number : Percentages : Percentage Increase and Decrease |  |
| Number : Percentages : Percentages of Quantities |  |
| Number : Percentages : Repeated Percentage Increase |  |
| Number : Percentages : Reverse Percentages |  |
| Number : Sequences : Geometric Progressions |  |
| Number : Standard Form : Calculations |  |
| Number : Standard Form : Converting between standard form and ordinary numbers |  |
| Number : Structure and Calculation : Using the symbols =, ≠, <, >, ⩽, ⩾ |  |
| Number : Surds : Simplifying |  |
| Number : Types of Number : Prime Numbers |  |
| Number : Types of Number : Product of Prime numbers |  |
| Number : Working with Money |  |

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| Probability : Independent Events : Conditional Probability |  |
| Probability : Independent events : Tree Diagrams |  |
| Probability : Independent events : Using the AND rule |  |
| Probability : Listing Strategies : Counting |  |
| Probability : Relative Frequency |  |
| Probability : Theoretical Probability : Expectation |  |
| Probability : Theoretical Probability : Probabilities adding up to 1 |  |
| Probability : Venn Diagrams : Completing |  |
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| Ratio : Relations : Relationship between two amounts |  |
| Ratio : Sharing a quantity in a given ratio |  |
| Ratio : Simplifying : Writing as 1 : n |  |
| Ratio : Using and Applying |  |
| Ratio : Writing Ratio : Simplifying Ratio |  |
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| Statistics : Averages : Working with the mean |  |
| Statistics : Averages and Spread : Mean and Range |  |
| Statistics : Diagrams : Box Plots |  |
| Statistics : Diagrams : Cumulative Frequency |  |
| Statistics : Diagrams : Histograms |  |

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| **Useful revision resources**  **Websites**  Mathswatch - <https://vle.mathswatch.co.uk/vle/>  Corbett Maths – <https://corbettmaths.com/>  GCSEPod - <https://www.gcsepod.com/>  Seneca Learning -<https://senecalearning.com/en-GB/>  BBC Bitesize Learning - <https://www.bbc.co.uk/bitesize/examspecs/z8sg6fr>  Oak National Academy - <https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/maths>  SPARX  **Recommended Revision Guides**  Collins GCSE AQA revision guides - £4.50 from your mathematics teacher  Corbett Maths revision cards - £6.50 from your mathematics teacher  **Recommended Calculators**  Casio fx-83 GTX, fx-85 GTX, Casio Classwiz EX-991 (recommended if continuing onto A-Level Mathematics) |
| <**Revision Tips**  Revision for Mathematics is based upon practice (and more practice). You need to be confident at the skills and concepts that make up the course in order to be able to work through the more challenging problems. Revision should be interactive, not just reading notes  Students can work through the Mathswatch 6 week plan (available from the Mathswatch Website under Extras > GCSE) or identify key topic areas via the Mathswatch list below. On the 6 week plan, students can split it up according to the two assessment periods)  A potential plan of action would be   * Work through the plans below watching the relevant videos (try the one minute videos first and if you do not understand then watch the longer videos) * Attempting the interactive questions if needed * Work through maths problems and past papers. * Do not just read your notes/revision guides as you need to practice your Maths skills.   Any additional information will be placed into the GSHS Maths Revision Area <http://bit.ly/GSHSMathsRevision> |

**Given Formulae for Assessments – Higher**

