



Mathematics AQA GCSE Mock II Revision Summary List – Higher Tier

Year 11 – March 2025

| Mock Paper Details | Topics will be from the following list and these may be on any of the papers | |
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| <p>Mathematics paper 1:</p> <p>Non-calculator paper (Main mock exam rooms)</p> <ul style="list-style-type: none"> • Written exam: 1hr 30 min • 80 marks • 33 ¹/₃ % of Mock <p>Mathematics paper 2:</p> <p>Calculator paper (Main mock exam rooms)</p> <ul style="list-style-type: none"> • Written exam: 1hr 30 min • 80 marks • 33 ¹/₃ % of Mock <p>Mathematics paper 3:</p> <p>Calculator paper (In class)</p> <ul style="list-style-type: none"> • Written exam: 1hr 30 min • 80 marks • 33 ¹/₃ % of Mock <p>Refer to your mock timetable for dates and times of paper 1 and paper 2.</p> <p>Paper 3 will be completed in class and your teacher will confirm a date for this.</p> | <ul style="list-style-type: none"> • Equations of a line • Writing one number as a fraction of another • Percentage calculations using single multipliers • Congruency of triangles – identifying and giving reasons for congruency E.G. SAS • Standard form • Rules of indices and working out the value of numbers given in index form • Venn diagrams • Interpreting ‘real life’ graphs • Calculations with fractions and decimals • Standard constructions using a pair of compasses in context • Area of sectors and parts of circles • Completing a probability tree & using the probability to calculate expected outcomes. • Solving Equations • Simplifying Algebraic fractions • Simplifying expressions including factorising quadratics & algebraic fractions • Speed-Time graphs linked to acceleration and distance travelled • Probability using and/or rules • Transformation of graphs • Calculations with exact trig values such as sin/cos/tan 30°, 60°, 45° - non calculator • Equivalent fractions and percentages • Set notation (symbol for union, intersection, complement) • Knowing special numbers such as squares, cubes, triangular numbers, primes • Representing inequalities on a number line • Calculations involving multiplication and division and units of time • Using the Mean average to complete a set of values • Relative frequency (probability from data) and expectation (the expected number) • Percentage increases and decreases • Pythagoras theorem • Area of 2D shapes | <ul style="list-style-type: none"> • Volume of 3D shapes such as cones and spheres and hemispheres • Solving problems with similar shapes using length, area and volume scale factors • Interpreting Pie charts • Understanding the term product (multiplication) and calculations with fractions and whole numbers. • Using a scale drawing and volume of a cylinder • Product rule for counting (combinations) • Circle theorems • Deriving and solving a quadratic equation based on information linking algebra and area • Compound interest • Sine rule (non-right angle triangles) • Composite functions E.G fg(x) given f(x) and g(x) • Linear/quadratic simultaneous equations • Exponential and quadratic graphs (finding equations using information on graphs) • Solving Ratio problems related to money • Plans and elevations of solid shapes • Solving quadratic equations using the quadratic formula • Coordinates on a grid linked to ratio • Equation of a circle • Reciprocals • Factorising quadratics • Find an equation of a straight line graph given two coordinates and information about lines that are perpendicular to it. • Functions (f(x)=.....). Related problems including inverse functions. • Problems related to pressure and ratio • Upper and Lower bounds problems (limits of accuracy/error intervals) • Interior and exterior angles of polygons • Completing the square and turning point • Order decimals including recurring decimals • Calculations with column vectors including with negative numbers • Scatter graphs, correlation, lines of best fit and outliers |

continued....



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| <ul style="list-style-type: none">• Relating variables in an algebraic equation to a percentage• Proportion and inverse proportion problems• Prisms and faces of a prism• Identifying a graph from cubic and quadratic graphs• Interpreting a cumulative frequency graph• Solving an identity• Problems related to sequences with terms with indices• Changing the subject (re-arranging) in algebra• Vector geometry• Converting recurring decimals to exact fractions• Representing inequalities on a graph (regions) | <ul style="list-style-type: none">• Trigonometry for sides and angles (right angled triangles sin, cos, tan SOHCAHTOA)• Calculating the percentage increase/decrease when values change• Solving a quadratic equation to find its roots• Arithmetic and geometric progressions (sequences)• Sharing in ratio problems• Speed, distance, time problems• Angles in special quadrilaterals• Bearings• Surds and algebra• Boxplots and interquartile range and median average• Population density• Histograms• Product of prime factors (HCF and LCM)• Multiply out three brackets (expanding and simplifying triple brackets) |
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Essential equipment

Black pens, pencils, rubber, ruler, protractor, pair of compasses and a scientific calculator for Papers 2 and 3.

Mathematical skills

Students will be required to complete calculations without a calculator (paper 1) and with a calculator (paper 2 and paper 3). Students will be required to recall what they have learnt and apply this to unfamiliar situations. Students will have to use some of the formulae that they are expected to have learnt, however a formula sheet provided gives other formula that students may have to use. For some of the questions a formula may be given with the question and in these cases, students are required to be able to use these formulae.

Working out and quality of written communication

Students are required to present their full working out for all questions and to answer questions in a clear manner that is easy to follow.

Revision materials

CGP Books GCSE Maths AQA Revision Guides and Workbooks for the Mathematics Grade 9-1 Course. TCS SharePoint – Students (Student Portal) – Subjects – Maths GCSE revision resources can be found in the Higher and Foundation folders. Downloadable content and other revision media is available here. Within these areas you will find some useful resources, that you may want to use now and prior to the summer examinations.

Suggested revision activities and websites

Make mind maps, revision mats or flash/revision cards for each topic. Answer practice exam questions and go back through your year 11 Mock I feedback. There are practice questions and answers in the revision workbooks from CGP Books and on SharePoint as detailed above. Re-do Mymaths tasks from Year 10 and Year 11 so far. Note also that the following websites may also prove useful:-

<https://www.mathsgenie.co.uk>
<https://www.corbettmaths.com>
<https://www.mrbartonmaths.com>

<https://www.aqa.org.uk/find-past-papers-and-mark-schemes>
<https://www.cgpbooks.co.uk>