

Suggested Topics for AQA GCSE Maths Paper 2 and Paper 3 Higher June 2017

Number	
BIDMAS (brackets)	
Interpret calculator displays	
Rounding and estimation, error intervals	
Compare fractions, decimals and percentages	
Fractions and ratio problems	
Recurring decimal to fraction (prove)	
Index Laws (division, negative and fractional)	
Multiples, factors, LCM and HCF and prime factor decomposition (problem / Venn diagram)	
Adding, subtracting, multiplying and dividing fractions (problem)	
Changing from standard form into an ordinary number	
Calculating with standard form (calculator)	
Upper and lower bounds (including calculations)	
Simplify and manipulate surds	

Geometry and Measures	
Properties of 2D Shapes	
Geometrical problems, alternate /corresponding angles and angles in polygons	
Perimeter and area of triangles and quadrilaterals, including trapezium	
Area of a triangle using $\text{Area} = \frac{1}{2}ab \sin C$	
Perimeter and area of composite shapes	
Circumference of a circle, arc length and perimeter and area of a sector	
Properties of 3D Shapes and plans and elevations	
Surface area and volume of prisms, pyramids, cones and spheres	
Draw transformations and combination of transformations	
Pythagoras' Theorem, including in 3D	
Trigonometry (SOH CAH TOA), including in 3D	
Standard constructions using a compass (including triangles)	
Loci	
Bearings (possibly with trigonometry or a geometrical problem)	
Scale factors and similarity	
Circle theorems	
Sine Rule	
Cosine Rule	
Vectors	

Algebra	
Forming expression, formulae and equations (then solving)	
Substitution ($v = u + at$; $s = ut + \frac{1}{2}at^2$; $v^2 = u^2 + 2as$)	
Mid-point and distance between two coordinates	
Simplify algebraic indices	
Expand single and double brackets	
nth term of a linear sequence	
Linear equations (including variable on both sides)	
Drawing graphs of linear functions	
Finding the equation of a line, and parallel and perpendicular lines	
Linear simultaneous equations (problem and / or graphically)	
Factorise single bracket	
Factorising quadratic expressions, including difficult where $a > 1$	
Quadratic equations (including when needs re-arrangement)	
Recognise Fibonacci and quadratic sequences	
nth term of a quadratic sequence	
Drawing quadratic graphs	
Rearranging Formulae (including when subject appears twice / factorising)	
Represent linear inequalities on number line and graphically	
Solving linear inequalities and represent on number line and graphically	
Represent quadratic inequalities graphically	
Solving quadratic inequalities	
The Quadratic Formula	
Completing the Square and turning points	
Simultaneous equations (linear/quadratic)	
Draw and recognise reciprocal and cubic graphs	
Graphs of exponential functions and growth and decay	
Graphical solution to equations, including quadratic roots	
Composite and inverse functions	
General iterative processes	
Algebraic fractions	
Algebra proof	
Graphs of trigonometric functions	
Translations and reflections of a function	

Ratio, Proportion and Rates of Change	
Ratio and proportion problems (there will be more!)	
Comparing quantities as a ratio and division of a quantity as a ratio	
Problems involving ratio	
Converting metric units	
Scale drawings	
Express one quantity as the percentage of another	
Compound interest and financial maths	
Reverse percentages and reverse percentage change	
Compare lengths, area, volume	
Problems involving compound units (including pressure)	
Direct and inverse proportion	
Non-standard real life graphs	
Reciprocal real-life graphs	
Gradient of graphs	
Distance-time graphs	
Area under a graph (compare estimate with actual)	

Probability	
Product rule	
Relative frequency	
Sampling and unbiased samples	
Venn diagrams	
Probability trees for both independent events and conditional probability	
Frequency trees	

Statistics	
Averages and range, problems and comparing distributions	
Comparing data on statistical diagrams, including time series graphs	
Mean from a discrete frequency table	
Scatter graphs and correlation	
Constructing and interpreting a boxplot	
Use a cumulative frequency graph to compare distributions (median and IQR)	
Histograms	

Based on the questions in AQA GCSE Maths Paper 1 Higher (examined Thursday 25 May), we have identified topics that have not yet been assessed and are likely to come up in Paper 2 and Paper 3. Please note that the topics already assessed in Paper 1 could be assessed again, so use our list with that in mind when planning your revision. Do not focus all your revision time on these topics alone.