Subject	Foundation Mathematics	Exam Board	AQA	Course Code	8300
Overview					
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)					
Algebra : Equations : Forming and Solving Equations					
Algebra : Equations : Solving Linear equations					
Algebra : Equations of Lines : Understanding $v = mx + c$					
Algebra : Expressions : Writing Expressions					
Algebra : Factorising : Factorising into 1 bracket					
Algebra : Formulae : Changing the Subject					
Algebra : Graphs : Quadratic Graphs					
Algebra : Linear Graphs : Gradient of Line					
Algebra : Manipulation : Collecting Like Terms					
Algebra : Manipulation : Expanding 1 bracket					
Algebra : Manipulation : Forming Expressions					
Algebra : Proof : Defining statements with positive and negative numbers					
Algebra : Sequences : Fibonacci-style sequences					
Algebra : Sequences : Generating from nth term					
Algebra : S	ubstitution : Substituting into	expressions			
Algebra : Ir	nequalities : Representing Ine	equalities			
Algebra : Ir	nequalities : Solving Inequaliti	ies			
Algebra : Manipulation : Expanding single brackets					
Algebra : Manipulation : Multiplying terms					
Algebra : Manipulation : Simplifying Expressions					
Algebra : Proportionality : Graphs of proportional					
Algebra : Quadratic expressions : Factorising Quadratics					
Algebra : Real-Life Graphs : Understanding the gradient and intercept in context					
Geometry	and Measure : 2D Shapes : Pr	operties of Quadril	aterals		
Geometry and Measure : 2D Shapes : Properties of Shapes					
Geometry and Measure : 3D Shapes : Properties of Solids					
Geometry and Measure : Angle Properties : Angles around a point					
Geometry	and Measure : Angle propert	ies : Parallel Lines			
Geometry	and Measure : Angle Propert	ies : Triangles and E	xterior Angles		
Geometry	and Measure : Area : Circles				
Geometry	and Measure : Area : Triangle	2S			
Geometry	and Measure : Bearings and S	Scale Drawing			
Geometry	and Measure : Circle Properti	les : Parts of a Circle			
Geometry and Measure : Compound Units : Speed Dictance					
Geometry	and Measure : Constructions	· Pulor and Protrac	e		
Geometry	and Measure : Constructions	ite			
Geometry	and Measure : Loci	iits			
Geometry and Measure : Metric Units : Converting between units					
Geometry and Measure : Plans and Elevations					
Geometry and Measure : Pythagoras' Theorem					
Geometry and Measure : Regular Polygons : Exterior and Interior Angles					
Geometry and Measure : Scale Drawings : Measuring and Estimating					
Geometry	and Measure : Similarity		0		
Geometry and Measure : Time and Measure					
/					

Geometry and Measure : Transformations : Enlargements Geometry and Measure : Transformations : Reflection Geometry and Measure : Transformations : Rotation Geometry and Measure : Trigonometry : Exact trigonometric values Geometry and Measure : Trigonometry : Finding sides Geometry and Measure : Volume : Spheres Geometry and Measure : Volume : Volume of Cuboid Number : Approximation : Estimating Answers Number : Approximations : Lower and Upper Bounds Number : Bank Statements : Understanding Debits and Credits Number : Decimals : Ordering Number : Direct Proportion : Unitary Method Number : Directed Numbers : Multiplication Number : Directed Numbers : Positive and Negative Numbers in context Number : Four Operations : Adding and Subtracting Number : Four Operations : Multiplication Number : Four Operations : Using existing calculations to work out further answers Number : Fractions : Fractions of Quantities Number : Fractions : Mixed Numbers Number : Fractions : Simplifying Number : Fractions, Decimals and Percentages : Fractions and Decimals Number : Indices : Powers of 10 Number : Money problems : Calculations Number : Number Problems Number : Number Problems with Time Number : Percentages : Percentages of Quantities Number : Percentages : Reverse Percentages Number : Percentages : Percentage Increase Number : Place Value Number : Problems with Money Number : Product of Primes Number : Proportion : Direct Proportion Number : Proportion Number : Reasoning : Money Number : Reasoning Number : Standard Form : Calculations Number : Standard Form : Converting between standard form and ordinary numbers Number : Types of Number : Factors Number : Types of Number : Multiples Number : Types of Number : Prime Numbers Number : Types of number : Square Numbers Number : Using a Calculator : Showing a statement is true Number : Using and Applying : Calculating with fractions and ratio Number : Using and Applying : Four Operations Number : Working with Money Number : Fractions : Adding Fraction Number : Fractions, Decimals and Percentages : Converting between fractions and decimals Probability : Basics : Sum of all events equal to 1 Probability : Frequency Trees : Constructing **Probability : Listing Outcomes Probability : Relative Frequency Probability : Sample Space Diagrams**

Probability : Venn Diagrams : Completing Probability : Writing Probabilities : Understanding the OR rule Probability : Writing Probabilities

Ratio and Proportion : Best Buy Problems Ratio and Proportion : Sharing a quantity in a given ratio Ratio and Proportion : Understanding Ratio : Ratio and Fractions Ratio and Proportion : Writing Ratio

Statistics : Averages : Median Statistics : Averages and Spread : Mean and Range Statistics : Collecting Data : Tally Charts Statistics : Diagrams : Pictograms Statistics : Displaying Data : Bar Charts Statistics : Scatter Graphs

Useful revision resources

Websites

Mathswatch - <u>https://vle.mathswatch.co.uk/vle/</u> Corbett Maths – <u>https://corbettmaths.com/</u> GCSEPod - <u>https://www.gcsepod.com/</u> Seneca Learning - <u>https://senecalearning.com/en-GB/</u> BBC Bitesize Learning - <u>https://www.bbc.co.uk/bitesize/examspecs/z8sg6fr</u> Oak National Academy - <u>https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/maths</u> 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

Perimeter, area and volume

Where a and b are the lengths of the parallel sides and h is their perpendicular separation:

Area of a trapezium =
$$\frac{1}{2}(a+b)h$$

Volume of a prism = area of cross section × length

Where r is the radius and d is the diameter:

Circumference of a circle = $2\pi r = \pi d$

Area of a circle = πr^2

Pythagoras' Theorem and Trigonometry



In any right-angled triangle where a, b and c are the length of the sides and c is the hypotenuse:

$$a^2 + b^2 = c^2$$

In any right-angled triangle ABC where a, b and c are the length of the sides and c is the hypotenuse:

$$\sin A = \frac{a}{c}$$
 $\cos A = \frac{b}{c}$ $\tan A = \frac{a}{b}$

Compound Interest

Where P is the principal amount, r is the interest rate over a given period and n is number of times that the interest is compounded:

Total accrued =
$$P\left(1 + \frac{r}{100}\right)^n$$

Probability

Where P(A) is the probability of outcome *A* and P(B) is the probability of outcome *B*:

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$