

Subject: Mathematics		
Exam Board: AQA – all exams of equal weight		
Mock paper 1: 90 minutes Non-Calculator	Mock Paper 2: 90 minutes Calculator Allowed	Mock Paper 3: 90 minutes Calculator Allowed
<p>This is a full GCSE paper so any element of the Maths course could be covered on any paper</p> <p>After each paper we will review what has already been assessed and work with you to look to cut down the topics that could still be asked as we would do in any exam series.</p> <p>The Mathswatch Revision Schedules attached to this cover all the aspects needed at each tier but you can also find the entire list here</p> <p>Higher - http://bit.ly/GSHSMathsDec2020H Foundation - http://bit.ly/GSHSMathsDec20F</p>		

<p>Useful revision resources:</p> <p>Websites</p> <p>Mathswatch - https://vle.mathswatch.co.uk/vle/ Corbett Maths – https://corbettmaths.com/ GCSEPod - https://www.gcsepod.com/ Seneca Learning - https://senecalearning.com/en-GB/</p> <p>Recommended Revision Guides</p> <p>Collins GCSE AQA revision guides - £4.50 from your mathematics teacher Corbett Maths revision cards - £6.50 from your mathematics teacher</p>
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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

Below are the Mathswatch 6 week revision guide plans for students to follow the tier they will take in December via Corbett Maths

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.

Additional Papers, Questions and Advice will be placed into this area throughout the coming months - <http://bit.ly/GSHSMathsRevision>

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Subject Content

Number	1
Algebra	2
Ratio, Proportion, Rates of Change	3
Geometry and Measures	4
Probability and Statistics	5

Grades that will be examined:

Higher	1	2	3	4	5	6	7	8	9
Foundation	1	2	3	4	5				

You will find some formulas and information in this insert. It will be very helpful to learn it all, off-by-heart for your exam.



Grade 1

Place Value	1
Ordering Integers	2
Ordering Decimals	3
Reading Scales	4
Simple Mathematical Notation	5
Interpreting Real-Life Tables	6
Introduction to Algebraic Conventions	7
Coordinates	8
Simple Geometric Definitions	9
Polygons	10
Symmetries	11
Tessellations and Congruent Shapes	12
Names of Angles	13
The Probability Scale	14
Tally Charts and Bar Charts	15
Pictograms	16

Addition/Subtraction	
$\begin{matrix} (+) \\ (+) \end{matrix}$ becomes +	eg. $5 - (-3) = 5 + 3$
$\begin{matrix} (-) \\ (-) \end{matrix}$ becomes -	eg. $5 + (-3) = 5 - 3$
$\begin{matrix} (+) \\ (-) \end{matrix}$ becomes -	eg. $5 + (-3) = 5 - 3$
Multiplication/Division	
$\begin{matrix} (+) \\ (+) \end{matrix}$ becomes +	eg. $(-5) \times (-3) = 15$
$\begin{matrix} (+) \\ (-) \end{matrix}$ becomes -	eg. $(-5) \times 3 = -15$
$\begin{matrix} (-) \\ (-) \end{matrix}$ becomes +	eg. $(-5) \times 3 = -15$

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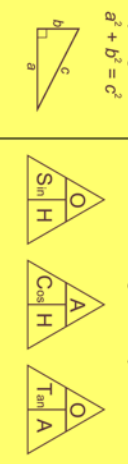
Grade 4

Index Notation	131
Introduction to Bounds	132
Midpoint of a Line on a Graph	133
Expanding and Simplifying Brackets	134
Solving Equations	135
Rearranging Simple Formulae	136
Forming Formulae and Equations	137
Inequalities on a Number Line	138
Solving Linear Inequalities	139
Simultaneous Equations Graphically	140
Fibonacci Sequences	141
Compound Units	142
Distance-Time Graphs	143
Similar Shapes	144
Bisecting an Angle	145
Constructing Perpendiculars	146
Drawing a Triangle Using Compasses	147
Enlargements	148
Tangents, Arcs, Sectors and Segments	149
Pythagoras' Theorem	150
Simple Tree Diagrams	151
Sampling Populations	152
The Series	153

Grade 5

Negative Indices	154
Error Intervals	155
Mathematical Reasoning	156
Factoringising and Solving Quadratics	157
The Difference of Two Squares	158
Finding the Equation of a Straight Line	159
Roots and Turning Points of Quadratics	160
Cubic and Reciprocal Graphs	161
Simultaneous Equations Algebraically	162
Geometric Progressions	163
Compound Interest and Depreciation	164
LoL	165
Congruent Triangles	166
Sectors of a Circle	167
Trigonometry	168
Spheres	169
Pyramids	170
Cones	171
Frustums	172
Exact Trigonometric Values	173
Introduction to Vectors	174
Harder Tree Diagrams	175
Stratified Sampling	176

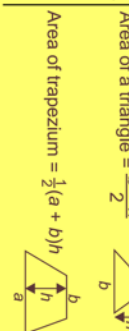
Trigonometry



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Grade 2

Adding Integers and Decimals	17
Subtracting Integers and Decimals	18
Multiplying Integers	19
Dividing Integers	20
Investing Operations	21
Money Questions	22
Negatives in Real Life	23
Introduction to Fractions	24
Equivalent Fractions	25
Simplifying Fractions	26
Half-Way Values	27
Factors, Multiples and Primes	28
Introduction to Powers/Indices	29
Multiply and Divide by Powers of 10	30
Rounding to the Nearest 10, 100 etc	31
Rounding to Decimal Places	32
Simplifying - Addition and Subtraction	33
Simplifying - Multiplication	34
Simplifying - Division	35
Function Machines	36
Generating a Sequence - Term to Term	37
Introduction to Ratio	38
Using Ratio for Recipe Questions	39
Introduction to Percentages	40
Value for Money	41
Introduction to Proportion	42



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Grade 6

Recurring Decimals to Fractions	177
Product of Three Binomials	178
Iteration - Trial and Improvement	179
Iterative Processes	180
Enlargement - Negative Scale Factor	181
Combinations of Transformations	182
Circle Theorems	183
Proof of Circle Theorems	184
Probability Using Venn Diagrams	185
Cumulative Frequency	186
Boxplots	187

Grade 7

Fractional Indices	188
Recurring Decimals - Proof	189
Rearranging Difficult Formulae	190
Solving Quadratics with the Formula	191
Factorising Hard Quadratics	192
Algebraic Proof	193
Exponential Functions	194
Trigonometric Graphs	195
Transformation of Functions	196
Equation of a Circle	197
Regions	198
Direct and Inverse Proportion	199
Similarity - Area and Volume	200
The Sine Rule	201
The Cosine Rule	202
Area of a Triangle Using Sine	203
And and Or Probability Questions	204
Histograms	205

Fractional Indices	Surds
$x^{\frac{a}{b}} = (\sqrt[b]{x})^a$	$\sqrt{a} \times \sqrt{a} = a$
$\sqrt{a \times b} = \sqrt{a} \times \sqrt{b}$	$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$
Quadratic Formula $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	
Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$	Histograms frequency density frequency = class width
Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$	

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Grade 3

Multiplying Decimals	66
Dividing Decimals	67
Four Rules of Negatives	68
Listing Strategies	69
Comparing Fractions	70
Adding and Subtracting Fractions	71
Finding a Fraction of an Amount	72
Multiplying Fractions	73
Dividing Fractions	74
BODMAS/BIDMAS	75
Reciprocals	76
Calculator Questions	77
Product of Primes	78
Highest Common Factor (HCF)	79
Lowest Common Multiple (LCM)	80
Squares, Cubes and Roots	81
Working with Indices	82
Standard Form	83
Decimals and Fractions	84
Fractions, Percentages, Decimals	85
Percentage of an Amount (Calc.)	86
Percentage of an Amount (Non-Calc.)	87
Change to a Percentage (Calc.)	88
Change to a Percentage (Non-Calc.)	89
Rounding to Significant Figures	90
Estimating Answers	91
Using Place Value	92
Expanding Brackets	93
Simple Factorisation	94
Substitution	95
Straight Line Graphs	96
The Gradient of a Line	97
Drawing Quadratic Graphs	98

Sketching Functions	99
Solving Equations Using Flowcharts	100
Subject of a Formula Using Flowcharts	101
Generate a Sequence from n th Term	102
Finding the n th Term	103
Special Sequences	104
Exchanging Money	105
Sharing Using Ratio	106
Ratios, Fractions and Graphs	107
Increase/Decrease by a Percentage	108
Percentage Change	109
Reverse Percentage Problems	110
Simple Interest	111
Metric Conversions	112
Problems on Coordinate Axes	113
Surface Area of a Prism	114
Volume of a Cuboid	115
Circle Definitions	116
Area of a Circle	117
Circumference of a Circle	118
Volume of a Prism	119
Angles and Parallel Lines	120
Angles in a Triangle	121
Properties of Special Triangles	122
Angle Sum of Polygons	123
Bearings	124
Experimental Probabilities	125
Possibility Spaces	126
Venn Diagrams	127
Representing Data	128
Scatter Diagrams	129
Averages From a Table	130

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MATHSWATCH COVERS EVERY TOPIC ON THE 2015 SYLLABUS

Grades that will be examined:

Higher	1	2	3	4	5	6	7	8	9
Foundation	1	2	3	4	5				

Grades that can be obtained:

Higher	4	5	6	7	8	9
Foundation	1	2	3	4	5	

The Maths Grade 1 to 9 syllabus is split into 5 areas and 240 videos.

Number - 65 videos
Algebra - 64 videos
Ratio and Proportion - 17 videos
Geometry and Measures - 66 videos
Probability and Statistics - 28 videos

How long will it take to revise?
The timings of our videos are:

0 to 5 mins	103 videos
5 to 10 mins	110 videos
10 to 15 mins	22 videos
15 to 20 mins	4 videos
20 to 25 mins	1 video

Six Week Revision Schedule for the GCSE Foundation Maths Exam

	Number	Algebra	Ratio & Proportion	Geometry & Measures	Probability & Stats	Total time of clips (OMM)	Grade Completed?
Monday	1, 2, 3, 4, 5, 6	7, 8		9, 10, 11, 12, 13	14, 15, 16	8 mins	1
Tuesday	17, 18, 19, 20	33, 34, 35	38, 39			8 mins	1
Wednesday	21, 22, 23	36, 37	40, 41, 42			9 mins	2
Thursday	24, 25, 26			43, 44, 45, 46, 47	57, 58	8 mins	2
Friday						10 mins	2
Saturday							
Sunday							
Monday	27, 28, 29			48, 49, 50	59, 60	8 mins	2
Tuesday	30, 31, 32			51, 52	61, 62, 63	8 mins	2
Wednesday				53, 54, 55, 56	64, 65	6 mins	2
Thursday	66, 67, 68, 69	93, 94, 95	105	112		9 mins	3
Friday	70, 71, 72, 73, 74	96, 97	106			8 mins	3
Saturday							
Sunday							
Monday	75, 76, 77	98, 99	107	113		7 mins	3
Tuesday	78, 79, 80	100, 101		114a/b, 115		8 mins	3
Wednesday	81, 82, 83	102, 103, 104			125, 126	8 mins	3
Thursday	84, 85			116, 117, 118	127a/b	7 mins	3
Friday	86, 87, 88, 89		108, 109, 110			7 mins	3
Saturday							
Sunday							
Monday	90, 91, 92		111	119	128, 129	7 mins	3
Tuesday				120, 121, 122, 123, 124	130a/b	7 mins	3
Wednesday	131, 132	133		145, 146a/b, 147		7 mins	4
Thursday		134a/b, 135(a or b)	142, 143	148		6 mins	4
Friday		136, 137	144	149		4 mins	4
Saturday							
Sunday							
Monday		138, 139, 140, 141			151	5 mins	4
Tuesday				150a/b	152, 153	4 mins	4
Wednesday	154		164			2 mins	5
Thursday	155	157, 158				3 mins	5
Friday	156	159a/b		165		4 mins	5
Saturday							
Sunday							
Monday		160, 161		166		3 mins	5
Tuesday		162		167		2 mins	5
Wednesday		163		168		2 mins	5
Thursday				169, 170, 171	175	4 mins	5
Friday				172, 173, 174	176	4 mins	5

Six Week Revision Schedule for the GCSE Higher Maths Exam

	Number	Algebra	Ratio & Proportion	Geometry & Measures	Probability & Stats	Total time of clips (OMM)	Grade Completed?
Monday	32			48, 49, 50, 54, 55, 56		7 mins	2
Tuesday	66, 67, 68, 69	93, 94, 95	105	112		9 mins	3
Wednesday	70, 71, 72, 73, 74	96, 97	106			8 mins	3
Thursday	75, 76, 77	98, 99	107	113		7 mins	3
Friday	78, 79, 80	100, 101		114a/b, 115		8 mins	3
Saturday							
Sunday							
Monday	81, 82, 83	102, 103, 104			125, 126	8 mins	3
Tuesday	84, 85			116, 117, 118, 119	127a/b	8 mins	3
Wednesday	86, 87, 88, 89		108, 109, 110, 111		128, 129	10 mins	3
Thursday	90, 91, 92			120, 121, 122, 123, 124	130a/b	10 mins	3
Friday	131, 132	133		145, 146a/b, 147		7 mins	4
Saturday							
Sunday							
Monday		134a/b, 135(a or b)	142, 143	148		6 mins	4
Tuesday		136, 137	144	149		4 mins	4
Wednesday		138, 139, 140, 141			151	5 mins	4
Thursday				150a/b	152, 153	4 mins	4
Friday	154, 155, 156		164	165		5 mins	5
Saturday							
Sunday							
Monday		157, 158, 159a/b		166, 167		6 mins	5
Tuesday		160, 161, 162, 163		168		5 mins	5
Wednesday				169, 170, 171	175	4 mins	5
Thursday				172, 173, 174	176	4 mins	5
Friday	177	178, 179, 180				4 mins	6
Saturday							
Sunday							
Monday				181(a or b), 182	185, 186, 187	5 mins	6
Tuesday				183, 184		2 mins	6
Wednesday	188, 189	190, 191		200	204	6 mins	7
Thursday		192, 193, 194		201, 202, 203		6 mins	7
Friday		195, 196, 197, 198	199		205	6 mins	7
Saturday							
Sunday							
Monday	206	208, 209				3 mins	8/9
Tuesday	207a/b	210, 211				4 mins	8/9
Wednesday		212, 213		217		3 mins	8/9
Thursday		214, 215		218		3 mins	8/9
Friday		216		219		2 mins	8/9