MATHSWATCH COVERS EVERY TOPIC ON THE GCSE (Double Award) SYLLABUS

Grades that will be examined:

Higher	G	F	E	D	C	B	A	A*
Foundation	G	F	E	D	C			

Grades that can be obtained:

Higher	D	C	B	A	A*
Foundation	G	F	E	D	C

The GCSE Mathematics and Numeracy syllabus is split into 4 areas and 252 videos.

Number - 81 videos
Algebra - 64 videos
Geometry and Measures - 73 videos
Statistics and Probability - 34 videos

Grade G	12 videos
Grade F	19 videos
Grade E	25 videos
Grade D	70 videos
Grade C	57 videos
Grade B	36 videos
Grade A/A*	33 videos

This is a **unitised** qualification.

Unit 1: Financial Mathematics and Other Applications of Numeracy
Calculator allowed...30% of qualification

Unit 2: Non-calculator
Calculator not allowed...30% of qualification

Unit 3: Calculator-allowed
Calculator allowed...40% of qualification

MathsWatch - Revision lessons just a click away . . .

Grade G

Integers and Even/Odd Numbers 1
Place Value 2
Rounding to the Nearest 10, 100, 1000 . . 3
Ordering Integers 4
Mathematical Notation - Introduction 5
Names of Angles 6
Polygons 7
Reading Scales 8
Congruent and Similar Shapes 9
Tally Charts and Bar Charts 10
Pictograms 11
The Probability Scale 12

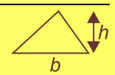
Grade F

Factors, Multiples and Primes 13
Ordering Decimals 14
Fractions - Introduction 15
Inverse Operations 16
Add and Subtract (Integers and Decimals) . 17
Multiply and Divide (Integers) 18
Multiply and Divide by Powers of 10 19
Negatives in Real Life 20
Interpreting Real-Life Tables 21
Algebraic Conventions - Introduction . . . 22
Coordinates 23
Simple Geometric Definitions 24
Properties of Solids 25
Symmetries 26
Data - Discrete and Continuous 27
Vertical Line Charts 28

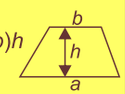
Grade E

Rounding to Decimal Places 29
Half-Way Values 30
Powers/Indices - Introduction 31
Working With Fractions 32
Percentages - Introduction 33
Multiply and Divide (Decimals) 34
BODMAS/BIDMAS 35
Function Machines 36
Algebraic Simplification (Add/Subtract) . 37
Generating a Sequence - Term to Term . 38
Nets 39
Measuring and Drawing Angles 40
Drawing a Triangle Using a Protractor . . 41
Perimeters 42
Area of a Rectangle 43
Circle Definitions 44
Calculating Probabilities 45
Possibility Spaces 46
Listing Outcomes 47
Two-Way Tables 48

Area of a triangle = $\frac{b \times h}{2}$



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



Prime Numbers

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, . . .

Each prime number has exactly two factors.

MathsWatch - Revision lessons just a click away . . .

Grade D

Rounding to Significant Figures 49
Squares, Cubes and Roots 50
Working with Indices 51
Product of Primes 52
Decimals and Fractions 53
Fractions, Percentages, Decimals 54
Percentage of an Amount 55
Change to a Percentage 56
Four Rules of Negatives 57
Four Rules of Fractions 58
Calculator Questions 59
Ratio 60
Direct Proportion - Introduction 61
Money Questions 62
Algebraic Simplification (Multiply/Divide) . . 63
Expanding Brackets 64
Simple Factorisation 65
Substitution 66
Solving Equations - Introduction 67
Subject of a Formula - Introduction 68
The *n*th Term 69
Straight Line Graphs - Drawing 70
Distance-Time Graphs 71
Tangents, Arcs, Sectors and Segments . 72
Constructions 73
Angles on a Line and at a Point 74
Angles and Parallel Lines 75
Angles in a Triangle 76
Angles in a Quadrilateral 77
Unit Conversions 78
Area of a Triangle 79
Area of a Parallelogram 80
Area of a Trapezium 81
Surface Area of a Cuboid 82
Volume of a Cuboid 83
Midpoint of a Line on a Graph 84
Reflections 85
Rotations 86
Translations 87
Enlargements 88
Questionnaires 89
Time Series 90
Frequency Tables and Diagrams 91
Scatter Diagrams 92
Averages and the Range 93
Experimental Probabilities 94
Mutually Exclusive Events 95

Addition/Subtraction

(+ +) becomes +
(– –) becomes +
(+ –) becomes –
(– +) becomes –

eg. 5 – (-3) = 5 + 3

eg. 5 + (-3) = 5 – 3

Multiplication/Division

(+) × (+) becomes +
(–) × (–) becomes +
(+) × (–) becomes –
(–) × (+) becomes –

eg. (-5) × (-3) = 15

eg. (-5) × 3 = -15

MathsWatch - Revision lessons just a click away . . .

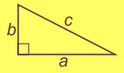
Grade C

Error Intervals 96
Reciprocals 97
HCF and LCM 98
Inverse Proportion 99
Sharing Using Ratio 100
Ratios, Fractions and Graphs 101
Exchanging Money 102
Percentage Change 103
Increase/Decrease by a Percentage . . 104
Interest and Depreciation 105
Recurring Decimals to Fractions 106
Expanding and Simplifying Brackets . . 107
Solving Equations - Advanced 108
Rearranging Simple Formulae 109
Forming Formulae and Equations 110
Inequalities on a Number Line 111
Solving Linear Inequalities 112
Trial and Improvement 113
The *n*th Term - Quadratic Sequences . . 114
Special Sequences 115
Straight Line Graphs - The Gradient . . . 116
Quadratic Graphs 117
Simultaneous Equations Graphically . . 118
Recognising and Sketching Functions . 119
Index Notation 120
Algebraic Fractions - Introduction 121
Loci 122
Plans and Elevations 123
Geometric Properties of Quadrilaterals 124
Angle Sum of Polygons 125
Compound Measures 126
Area of a Circle 127
Circumference of a Circle 128
Surface Area of a Prism 129
Volume of a Prism 130
Pythagoras' Theorem 131
Problems on Coordinate Axes 132
Enlargements - Fractional S.F. 133
Bearings 134
Venn Diagrams 135
Sampling Populations 136
Pie Charts 137
Averages From a Table 138
Data Distribution 139
Tree Diagrams - Introduction 140

Area of a circle = πr^2

Circumference of a circle = $2\pi r$

Pythagoras



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

The Laws of Indices

$x^a \times x^b = x^{a+b}$

$x^a \div x^b = x^{a-b}$

$(x^a)^b = x^{ab}$

$x^{-a} = \frac{1}{x^a}$

MathsWatch - Revision lessons just a click away . . .

Grade B

Negative Indices 141
Standard Form 142
Bounds - Introduction 143
Reverse Percentage Problems 144
Compound Interest - Advanced 145
Recurring Decimals - Advanced 146
Identities 147
Simultaneous Equations Algebraically . 148
Equation of a Straight Line - Advanced 149
Inequalities on a Graph 150
Solving Linear Inequalities - Advanced . 151
Factorising and Solving Quadratics . . . 152
Roots/Turning Points of Quadratics . . . 153
Expanding and Simplifying - Advanced 154
Cubic and Reciprocal Graphs 155
Similar Shapes 156
Pythagoras' Theorem - Advanced 157
Trigonometry 158
Sectors of a Circle 159
Circle Theorems 160
Enlargements - Negative S.F. 161
Combinations of Transformations 162
Sampling Methods 163
Data Distribution - Advanced 164
Tree Diagrams - Advanced 165
Probability Using Venn Diagrams 166

Fractional Indices

$x^{\frac{a}{b}} = (\sqrt[b]{x})^a$

Quadratic Formula

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Grade A/A*

Fractional Indices 167
Real-Life Finance - Introduction 168
Upper and Lower Bounds 169
Surds 170
Direct and Inverse Proportion 171
Rearranging Difficult Formulae 172
Solving Quadratics with the Formula . . 173
Factorising Hard Quadratics 174
Forming and Solving Quadratics 175
Algebraic Fractions - Advanced 176
*n*th Term of a Quadratic Sequence . . . 177
Simult. Equa. Graphically - Advanced . 178
Interpreting Time Graphs 179
Spheres 180
Pyramids 181
Cones and Frustums 182
Trigonometry - Advanced 183
Pythagoras in 3D 184
Trigonometry in 3D 185
Trigonometric Graphs 186
Similarity - Area and Volume 187
Congruent Triangles 188
And and Or Probability Questions 189
Histograms 190

Trigonometry