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			

Unit 2

Non-calculator paper

Calculator <u>not</u> allowed...30% of qualification

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
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 21a
Algebraic Conventions - Introduction . . . 22
Coordinates 23
Simple Geometric Definitions 24
Properties of Solids 25
Symmetries 26

Grade E

Rounding to Decimal Places 29
Half-Way Values 30
Powers/Indices - Introduction 31
Working With Fractions 32
Percentages - Introduction 33
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BODMAS/BIDMAS 35
Function Machines 36
Algebraic Simplification (Add/Subtract) . 37
Generating a Sequence - Term to Term . 38
Circle Definitions 44
Calculating Probabilities 45
Possibility Spaces 46
Listing Outcomes 47

Prime Numbers

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

Each prime number has exactly two factors.

Grade D

Rounding to Significant Figures . . . 49a/c/d
Squares, Cubes and Roots 50
Working with Indices 51
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Fractions, Percentages, Decimals 54
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Four Rules of Fractions 58
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Substitution 66
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Subject of a Formula - Introduction 68
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Tangents, Arcs, Sectors and Segments . 72
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Angles and Parallel Lines 75
Angles in a Triangle 76
Angles in a Quadrilateral 77
Unit Conversions 78a
Midpoint of a Line on a Graph 84
Reflections 85
Rotations 86
Translations 87
Enlargements 88
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 +

eg. (-5) × (-3) = 15

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

eg. (-5) × 3 = -15

Grade C

Reciprocals 97
HCF and LCM 98
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Expanding and Simplifying Brackets . . 107
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Solving Linear Inequalities 112
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Quadratic Graphs 117
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Recognising and Sketching Functions . 119
Index Notation 120
Algebraic Fractions - Introduction 121
Geometric Properties of Quadrilaterals 124
Angle Sum of Polygons 125
Problems on Coordinate Axes 132
Enlargements - Fractional S.F. 133
Venn Diagrams 135
Tree Diagrams - Introduction 140

The Laws of Indices

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

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

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

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

Grade B

Negative Indices 141
Standard Form 142
Recurring Decimals - Advanced 146
Identities 147
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Equation of a Straight Line - Advanced 149
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Circle Theorems 160
Enlargements - Negative S.F. 161
Combinations of Transformations 162
Tree Diagrams - Advanced 165
Probability Using Venn Diagrams 166

Fractional Indices

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

Grade A/A*

Fractional Indices 167
Surds 170
Rearranging Difficult Formulae 172
Factorising Hard Quadratics 174
Forming and Solving Quadratics 175
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