

# PAPER 1 (Non-Calculator)

**Higher Tier**  
**8300/1H**

Topic	Detail
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Number (see Ratio)	
<b>Arithmetic</b>	Negative numbers CM 205 - 209
<b>Fractions</b>	Arithmetic CM 132 - 134
	Fraction to decimal CM 127
<b>Properties</b>	Square root, power CM 228
<b>Decimals</b>	Decimal to fraction CM 123
	Recurring CM 96
	Recurring to fraction CM 96
<b>Indices</b>	Fractional CM 173
	Laws of indices CM 174
	Negative CM 175
<b>Surds</b>	Rationalise denominator CM 307
	Simplification CM 305

Algebra	
<b>Equations</b>	Identity CM 367
	Linear CM 110
	Number line CM 177
	Quadratic inequality CM 378
	Quadratic problem
<b>Manipulation</b>	Multiply out CM 13 - 15
	Simplification CM 9
<b>Graphs</b>	Points on quadratic problem
<b>Other</b>	Double inequality CM 179

Ratio (see Number)	
<b>Ratio</b>	n : 1 form CM 271c
	Share in a ratio CM 270
<b>Applications</b>	Graph problem
	Ratio to fraction problem CM 269a

Geometry and Measures	
<b>Shape</b>	Circle theorems CM 64 - 65
	Invariant point CM 392
	Isosceles triangle CM 327
	Reflection CM 272 - 273
	Rotation CM 275
	Tangent to a circle problem CM 372, CM 65f
	Trigonometry exact values CM 341
<b>Other</b>	Column vectors CM 353a
	Geometric proof CM 366

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Statistics	
Cumulative frequency graph	CM153 - 154
Cumulative frequency table	
Frequency table	CM54, CM51
Interpret	
Lower quartile	CM57b
Median	CM50-52
Range	CM 57 - 57a
Venn diagram	CM380

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## PAPER 2 (Calculator)

**Higher Tier**  
**8300/2H**

Topic	Detail
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Number (see Ratio)	
<b>Properties</b>	Cube root problem CM 214
	Highest common factor problem CM 219, 224
<b>Standard Form</b>	Calculation CM 300
<b>Other</b>	Product rule for counting CM 383
	Use of calculator

Algebra	
<b>Equations</b>	Linear CM 110
	Quadratic CM 266
	Set up and solve CM 115
<b>Manipulation</b>	Change subject CM 7-8
	Difference of two squares CM 120
	Factorisation CM 117
	Simplification CM 9
<b>Graphs</b>	Intercept CM 187
	Interpret
	Recognise CM 344-346
	Speed-time CM 299
<b>Reasoning</b>	Equation
<b>Functions</b>	Composite CM 370
	Inverse CM 369
<b>Sequences</b>	Linear sequence problem CM 286-288
	Triangular numbers

Ratio (see Number)	
<b>Conversions</b>	Area
	Iterative process CM 373
	Rate
	Speed CM 299
<b>Applications</b>	Vectors
	Percentage of an amount CM 234-235
<b>Percentages</b>	Reverse percentage CM 240

Geometry and measures	
<b>Area and Volume</b>	Perimeter problem CM 241
	Surface area of cube CM 310
	Trapezium CM 48
	Volume of cuboid problem
<b>Shape</b>	3D Sine rule / Cosine rule CM 332-336
	Pythagoras' theorem CM 257
	Similar triangles CM 291-292
	Sine rule / Cosine rule CM 333-336
<b>Vectors</b>	Vector proof CM 353
<b>Other</b>	Bearing CM 26-27a

Statistics	
Box plot	CM149-150
Composite bar chart	CM148
Estimate mean from table	CM 55
Interpret box plot	CM149-
Interpret histogram	CM158
Lower quartile	
Median	CM50
Reasoning	
Upper quartile	

Probability	
Dependent events	CM 247
Independent events	CM 249