

Edexcel A-level Mathematics matching grid

This table shows how the book *Core Maths C1+C2* (Smedley and Wiseman) in the *Advanced Maths for AQA* series fits to the Edexcel Advanced GCE in Mathematics (9371) specification, and can be used practically in the classroom or for home study.

EDEXCEL MODULE	ADVANCED MATHS FOR AQA CORE MATHS C1+C2
CORE 1	Page reference
1 Algebra and functions	
Laws of indices for all rational exponents.	C2 section 9.1 pages 221-225
Use and manipulation of surds.	C1 section 1.1 pages 2-5
Quadratic functions and their graphs.	C1 section 1.2 pages 5-9
The discriminant of a quadratic function.	C1 section 1.5 pages 20-23
Completing the square. Solution of quadratic equations.	C1 section 1.4 pages 14-10 C1 section 1.6 pages 23-25
Simultaneous equations: analytical solution by substitution	C1 section 1.8 pages 26-32
Solution of linear and quadratic inequalities.	GCSE review R3 pages 284-287 C1 section 1.7 pages 25-29
Algebraic manipulation of polynomials, including expanding brackets and collecting like terms, factorisation.	C1 section 2.3 pages 36-39
Graphs of functions; sketching curves defined by simple equations. Geometrical interpretation of algebraic solution of equations. Use of intersection points of graphs of functions to solve equations.	C2 chapter 6 pages 134-146
Knowledge of the effect of simple transformations on the graph of $y = f(x)$.	C2 chapter 6 pages 134-146
2 Coordinate geometry in the (x, y) plane	
Equation of a straight line, including the forms $y - y_1 = m(x - x_1)$ and $ax + by + c = 0$. Conditions for two straight lines to be parallel or perpendicular to each other.	C1 sections 3.1 - 3.5 pages 56-72
3 Sequences and series	
Sequences, including those given by a formula for the n th term and those generated by a simple relation of the form $x_{n+1} = f(x_n)$	C1 sections 7.1 - 7.3 pages 148-160
Arithmetic series, including the formulae for the sum of the first n natural numbers.	C1 sections 7.1 - 7.3 pages 148-160
4 Differentiation	
The derivative of $f(x)$ as the gradient of the tangent to the graph of $y = f(x)$ at a point; the gradient of the tangent as a limit; interpretation as a rate of change; second order derivatives.	C1 sections 4.1, 4.2, 4.4 pages 87-103
Differentiation of x^n , and related sums and differences.	C2 section 10.1 pages 235-240
Applications of differentiation to gradients, tangents and normals.	C2 section 10.2 pages 240-246
5 Integration	
Indefinite integration as the reverse of differentiation.	C1 section 5.1 pages 117-122
Integration of x^n .	C1 section 11.1 pages 256-262

CORE 2	Page reference
1 Algebra and functions	
Simple algebraic division; use of the Factor Theorem and the Remainder Theorem	C1 sections 2.3 - 2.5 pages 36-46
2 Coordinate geometry in the (x, y) plane	
Coordinate geometry of the circle using the equation of a circle in the form $(x - a)^2 + (y - b)^2 = r^2$ and including use of the following circle properties: (i) the angle in a semicircle is a right angle; (ii) the perpendicular from the centre to a chord bisects the chord (iii) the perpendicularity of radius and tangent	C1 sections 3.6 - 3.9 pages 72-84
3 Sequences and series	
The sum of a finite geometric series; the sum to infinity of a convergent geometric series, including the use of $ r < 1$.	C2 sections 7.4, 7.5 pages 160-169
Binomial expansion of $(1 + x)^n$ for positive integer n .	C2 section 7.6 pages 169-174
4 Trigonometry	
The sine and cosine rules, and the area of a triangle in the form $1/2 ab \sin C$.	C2 sections 8.2, 8.3 pages 179-190
Radian measure, including use for arc length and area of sector.	C2 section 8.4 pages 190-195
Sine, cosine and tangent functions. Their graphs, symmetries and periodicity.	C2 sections 8.5 - 8.7 pages 195-215
Knowledge and use of $\tan x = \sin x / \cos x$, and $\sin^2 x + \cos^2 x = 1$.	C2 sections 8.5 - 8.7 pages 195-215
Solution of simple trigonometric equations in a given interval.	C2 sections 8.5 - 8.7 pages 195-215
5 Exponentials and logarithms	
$y = a^x$ and its graph. Laws of logarithms. The solution of equations of the form $ax = b$.	C2 sections 9.2 - 9.4 pages 225-232
6 Differentiation	
Applications of differentiation to maxima and minima and stationary points, increasing and decreasing functions.	C1 sections 4.5 - 4.7 pages 103-114 C2 sections 10.3-10.5 pages 246-255
7 Integration	
Evaluation of definite integrals.	C1 sections 5.2, 5.3 pages 122-128
Interpretation of the definite integral as the area under a curve.	C2 section 11.2 pages 262-267
Approximation of area under a curve using the trapezium rule.	C2 section 11.3 pages 267-272