

Edexcel GCSE (Foundation) 1MA1 (9-1) Specification map

Number

		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25
N1	order positive and negative integers, decimals and fractions; use the symbols =, ≠, <, >, ≤, ≥	●			●		●																			
N2	apply the four operations, including formal written methods, to integers, decimals and simple fractions (proper and improper), and mixed numbers – all both positive and negative; understand and use place value (e.g. when working with very large or very small numbers, and when calculating with decimals)	●			●		●																			
N3	recognise and use relationships between operations, including inverse operations (e.g. cancellation to simplify calculations and expressions); use conventional notation for priority of operations, including brackets, powers, roots and reciprocals	●	○				●																			
N4	use the concepts and vocabulary of prime numbers, factors, multiples, common factors, common multiples, highest common factor, lowest common multiple, prime factorisation, including using product notation and the unique factorisation theorem		●				●																			
N5	apply systematic listing strategies									●																
N6	use positive integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5		●				●																			
N7	<u>calculate with roots, and with integer indices</u>		●				●											○								
N8	calculate exactly with fractions <u>and multiples of π</u>		●				●																			
N9	calculate with and interpret standard form $A \times 10^n$, where $1 \leq A < 10$ and n is an integer																●									
N10	work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 or 3/8)								●																	
N11	identify and work with fractions in ratio problems										●															
N12	interpret fractions and percentages as operators								●									○								
N13	use standard units of mass, length, time, money and other measures (including standard compound measures) using decimal quantities where appropriate													●			○					●			○	
N14	estimate answers; check calculations using approximation and estimation, including answers obtained using technology				●	●																				
N15	round numbers and measures to an appropriate degree of accuracy (e.g. to a specified number of decimal places or significant figures); <u>use inequality notation to specify simple error intervals due to truncation or rounding</u>				●	●																				●
N16	apply and interpret limits of accuracy																									●

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Algebra

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25
A1			●																						
A2			●																						
A3			●																						
A4			●																	●					
A5			●		○										○			○					○		●
A6																				●					
A7			●									○													
A8							●								●										
A9							●					○													
A10							●											●							
A11																		●							

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Algebra

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25
A12							●										●								
A13	Higher only																								
A14													●				●							●	
A15	Higher only																								
A16	Higher only																								
A17			●		○		●												●						●
A18																	●								●
A19																	●								●
A20	Higher only																								
A21			●		○														●						●
A22												●													
A23												●													
A24												●													
A25												●													

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Ratio	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25
R1	●			●						●		●	●			●									●
R2					●					●															
R3		●				●																			
R4										●															
R5										●			●												
R6										●															
R7													●												
R8										●															
R9								●								●									●
R10							●			●			●				●								
R11							●					●				●	●								●
R12											●				●			●		●				●	●
R13																	●							●	●
R14							●			●						●									●
R15	Higher only																								
R16																									

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Geometry

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25
G1											●				●			○							
G2																		●							
G3											●														
G4															●										
G5																		●							
G6															●			●							
G7											●														
G8	Higher only																								
G9															●								●		
G10	Higher only																								
G11															●										
G12															●										
G13					●																				
G14					●								●												○

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Geometry

		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25	
G15	measure line segments and angles in geometric figures, including interpreting maps and scale drawings and use of bearings					●					●																
G16	know and apply formulae to calculate: area of triangles, parallelograms, trapezia; volume of cuboids and other right prisms (including cylinders)					●																					
G17	know the formulae: circumference of a circle = $2\pi r = \pi d$, area of a circle = πr^2 ; calculate: perimeters of 2D shapes, including circles; areas of circles and composite shapes; surface area and volume of spheres, pyramids, cones and composite solids															●									●		
G18	calculate arc lengths, angles and areas of sectors of circles																								●		
G19	apply the concepts of congruence and similarity, including the relationships between lengths, in similar figures																			●							
G20	know the formulae for: Pythagoras' theorem $a^2 + b^2 = c^2$, and the trigonometric ratios, $\sin \theta = \text{opposite/hypotenuse}$, $\cos \theta = \text{adjacent/hypotenuse}$ and $\tan \theta = \text{opposite/adjacent}$; apply them to find angles and lengths in right-angled triangles in two-dimensional figures																			●							
G21	know the exact values of $\sin \theta$ and $\cos \theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ and 90° ; know the exact value of $\tan \theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ$ and 60°																				●						
G22	Higher only																										
G23	Higher only																										
G24	describe translations as 2D vectors											●															
G25	apply addition and subtraction of vectors, multiplication of vectors by a scalar, and diagrammatic and column representations of vectors																								●		

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Probability

		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25
P1	record, describe and analyse the frequency of outcomes of probability experiments using tables and frequency trees									●																
P2	apply ideas of randomness, fairness and equally likely events to calculate expected outcomes of multiple future experiments									●													●			
P3	relate relative expected frequencies to theoretical probability, using appropriate language and the 0-1 probability scale									●																
P4	apply the property that the probabilities of an exhaustive set of outcomes sum to one; apply the property that the probabilities of an exhaustive set of mutually exclusive events sum to one									●																
P5	<u>understand that empirical unbiased samples tend towards theoretical probability distributions, with increasing sample size</u>																						●			
P6	enumerate sets and combinations of sets systematically, using tables, grids, Venn diagrams and tree diagrams									●													●			
P7	construct theoretical possibility spaces for single and combined experiments with equally likely outcomes and use these to calculate theoretical probabilities									●																
P8	<u>calculate the probability of independent and dependent combined events, including using tree diagrams and other representations, and know the underlying assumptions</u>																						●			
P9	Higher only																									

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Statistics

		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25
S1	infer properties of populations or distributions from a sample, while knowing the limitations of sampling																						●			
S2	interpret and construct tables, charts and diagrams, including frequency tables, bar charts, pie charts and pictograms for categorical data, vertical line charts for ungrouped discrete numerical data, tables and line graphs for time series data and know their appropriate use														●								●			
S3	Higher only																									
S4	interpret, analyse and compare the distributions of data sets from univariate empirical distributions through: <ul style="list-style-type: none"> • appropriate graphical representation involving discrete, continuous and grouped data • appropriate measures of central tendency (median, mean, mode and modal class) and spread (range, including consideration of outliers) 														●											
S5	apply statistics to describe a population														●											
S6	use and interpret scatter graphs of bivariate data; recognise correlation <u>and know that it does not indicate causation</u> ; draw estimated lines of best fit; make predictions; <u>interpolate and extrapolate apparent trends while knowing the dangers of so doing</u>																						●			

Key:  Covered  Indirectly covered