

CAMBRIDGE IGCSE MATHS EXAMINATION BOARD COVERAGE

TIER	TOPIC	HEADING	SUB HEADING
Both	Number	Integers	Ordering numbers
Both	Number	Integers	Rounding numbers
Both	Number	Integers	Adding and subtracting whole numbers
Both	Number	Integers	Dividing whole numbers
Both	Number	Integers	BIDMAS
Both	Number	Integers	Inverse operations
Both	Number	Negative numbers	Understanding negative numbers
Both	Number	Decimals	Integers and decimals : the four basic operations
Both	Number	Decimals	Ordering decimals
Both	Number	Decimals	Using place value in calculating with decimals
Both	Number	Decimals	Order of operation : BIDMAS
Both	Number	Decimals	Rounding decimals
Both	Number	Decimals	Estimating decimals
Both	Number	Decimals	Recognising their corresponding fractions
Both	Number	Factors, primes and powers	Multiples, factors and prime numbers
Both	Number	Factors, primes and powers	Highest common factor (hcf) and lowest common multiple (lcm)
Both	Number	Factors, primes and powers	Squares, cubes and roots
Both	Number	Factors, primes and powers	Index form
Both	Number	Factors, primes and powers	Reciprocals
Both	Number	Fractions	Equivalent fractions
Both	Number	Fractions	Adding and subtracting fractions
Both	Number	Fractions	Multiplying and dividing fractions
Both	Number	Fractions	Comparing fractions
Both	Number	Fractions	Improper fractions and mixed numbers
Both	Number	Fractions	Performing calculations with mixed numbers
Both	Number	Fractions	Solving problems involving fractions
Both	Number	Fractions, decimals and percentages	Converting fractions
Both	Number	Fractions, decimals and percentages	Converting decimals
Both	Number	Fractions, decimals and percentages	Converting percentages
Both	Number	Fractions, decimals and percentages	Ordering decimals, fractions and percentages
Higher	Number	Fractions, decimals and percentages	Recurring decimals
Higher	Number	Index notation and surds	Index form and the law of indices
Higher	Number	Index notation and surds	Fractional indices
Both	Number	Index notation and surds	Standard form
Higher	Number	Index notation and surds	Surds
Both	Number	Percentages	Writing one quantity as a percentage of another

TIER	TOPIC	HEADING	SUB HEADING
Both	Number	Percentages	Calculating the percentage of an amount
Both	Number	Percentages	Increasing or decreasing an amount by a percentage
Both	Number	Percentages	Real-life percentage problems
Higher	Number	Percentages	Percentage of a quantity
Higher	Number	Percentages	Multiplier use in calculations
Higher	Number	Percentages	Profit and loss
Higher	Number	Percentages	Compound and simple interest
Higher	Number	Percentages	Depreciation
Higher	Number	Percentages	Reverse percentages
Higher	Number	Ratio and proportion	Simplifying a ratio
Higher	Number	Ratio and proportion	Unitary form
Higher	Number	Ratio and proportion	Solving ratio problems
Higher	Number	Ratio and proportion	Direct and inverse proportion
Higher	Number	Ratio and proportion	More complex direct and inverse proportion problems
Both	Number	Ratio and proportion	Simplifying a ratio
Both	Number	Ratio and proportion	Unitary form (1 : n)
Both	Number	Ratio and proportion	Ratio problems
Both	Number	Ratio and proportion	Dividing a quantity in a given ratio
Both	Number	Ratio and proportion	Direct proportion
Both	Number	Set notation and Venn diagrams	Use set notation and Venn diagrams
Higher	Algebra	Algebraic expressions	Evaluating expressions
Higher	Algebra	Algebraic expressions	Simplifying expressions
Higher	Algebra	Algebraic expressions	Multiplying out a pair of brackets
Higher	Algebra	Algebraic expressions	Introduction to factorising
Higher	Algebra	Algebraic expressions	Factorising a quadratic
Higher	Algebra	Algebraic expressions	Factorising a more complex quadratic
Higher	Algebra	Algebraic expressions	Simplifying algebraic fractions
Both	Algebra	Algebraic expressions	Writing an expression
Both	Algebra	Algebraic expressions	Evaluating and simplifying an expression
Both	Algebra	Algebraic expressions	Multiplying in algebra
Both	Algebra	Algebraic expressions	Factorising
Both	Algebra	Algebraic statements	Equation, expression or formula?
Both	Algebra	Linear equations	Methods for solving equations
Both	Algebra	Linear equations	Setting up and solving equations
Both	Algebra	Linear equations	Solving equations with an unknown on both sides
Both	Algebra	Linear equations	Solving equations which contain brackets
Both	Algebra	Linear equations	Solving equations with brackets and negative numbers
Higher	Algebra	Linear equations	Solving equations
Higher	Algebra	Linear equations	Setting up equations
Higher	Algebra	Linear equations	Solving equations with an unknown on both sides

TIER	TOPIC	HEADING	SUB HEADING
Higher	Algebra	Linear equations	Solving equations containing brackets or fractions
Higher	Algebra	Formulae	Using formulae
Higher	Algebra	Formulae	Changing the subject of a formula
Both	Algebra	Formulae	Formulae
Both	Algebra	Formulae	Writing an algebraic formula
Both	Algebra	Formulae	Changing the subject of a formula
Higher	Algebra	Function	Understand and use function notation
Higher	Algebra	Further graphs	Cubic functions
Higher	Algebra	Further graphs	Reciprocal functions
Higher	Algebra	Further graphs	Exponential functions
Higher	Algebra	Further graphs	Equations and their graphs
Higher	Algebra	Further graphs	Trigonometric functions
Higher	Algebra	Further graphs	Graph of the circle
Higher	Algebra	Further graphs	Using graphs to solve a pair of equations
Both	Algebra	Index notation	Using index notation
Both	Algebra	Inequalities	Solving inequalities and showing inequalities on a number line
Both	Algebra	Inequalities	Finding integer solutions to an inequality
Higher	Algebra	Inequalities	Solving linear inequalities
Higher	Algebra	Inequalities	Inequalities with integer solutions
Higher	Algebra	Inequalities	Solving inequalities with two variables graphically
Both	Algebra	Linear graphs	Simple linear graphs
Both	Algebra	Linear graphs	Using y = mx + c
Higher	Algebra	Linear graphs	Parallel and perpendicular lines
Both	Algebra	Number patterns and sequences	Introduction to number sequences
Both	Algebra	Number patterns and sequences	The nth term
Higher	Algebra	Quadratic equations	Factorising quadratic equations : example
Higher	Algebra	Quadratic equations	Solving quadratic equations by completing the square
Higher	Algebra	Quadratic equations	The quadratic formula
Higher	Algebra	Quadratic equations	Equations with algebraic fractions
Higher	Algebra	Quadratic equations	Problems involving quadratic equations
Higher	Algebra	Quadratic graphs	Plotting quadratic graphs
Higher	Algebra	Quadratic graphs	Solving quadratic equations : example
Both	Algebra	Real-life graphs	Real-life plots and graphs
Both	Algebra	Simultaneous equations	Solving simultaneous equations using elimination
Both	Algebra	Simultaneous equations	Solving simultaneous equations using substitution
Both	Algebra	Simultaneous equations	Solving simultaneous equations graphically
Both	Algebra	Simultaneous equations	Setting up and solving simultaneous equations
Both	Algebra	Simultaneous equations	Solving a linear and quadratic equation simultaneously
Both	Algebra	Substitution	Substitution in an expression
Both	Algebra	Trial and improvement	Trial and improvement

TIER	TOPIC	HEADING	SUB HEADING
Higher	Algebra	Trial and improvement	Finding an approximate solution using trial and improvement
Both	Geometry and Measure	Angles and lines	Types of angles
Both	Geometry and Measure	Angles and lines	Estimating the size of angles
Both	Geometry and Measure	Angles and lines	Measuring angles and lengths
Both	Geometry and Measure	Angles and lines	Parallel and perpendicular lines
Both	Geometry and Measure	Angles and lines	Constructing an angle
Both	Geometry and Measure	Angles and lines	Constructing a triangle
Both	Geometry and Measure	Angles and lines	Angles on a straight line and angles around a point
Higher	Geometry and Measure	Angles and polygons	Triangles and quadrilaterals
Higher	Geometry and Measure	Angles and polygons	Interior and exterior angles in a polygon
Higher	Geometry and Measure	Angles and polygons	Corresponding and alternate angles
Higher	Geometry and Measure	Angles and polygons	Proving angle facts
Higher	Geometry and Measure	Angles and polygons	Bearings
Both	Geometry and Measure	Shapes and angles	Angle facts: triangles
Both	Geometry and Measure	Shapes and angles	Angle facts: quadrilaterals
Both	Geometry and Measure	Shapes and angles	Interior and exterior angles
Both	Geometry and Measure	Shapes and angles	Parallel lines
Both	Geometry and Measure	Shapes and angles	Bearings
Both	Geometry and Measure	Circles	The circle
Both	Geometry and Measure	Circles	Circumference and area
Higher	Geometry and Measure	Circles	Circles and arcs
Higher	Geometry and Measure	Circles	Sectors and segments
Higher	Geometry and Measure	Circles	Circle theorems
Higher	Geometry and Measure	Circles	Circle theorem: examples
Both	Geometry and Measure	Construction and loci	Constructing a triangle
Both	Geometry and Measure	Construction and loci	Constructing other shapes
Both	Geometry and Measure	Construction and loci	Constructing a perpendicular bisector of a line
Both	Geometry and Measure	Construction and loci	Bisecting an angle
Both	Geometry and Measure	Construction and loci	Constructing the perpendicular from a point to a line
Both	Geometry and Measure	Construction and loci	Constructing the perpendicular to a line from a point on the line
Both	Geometry and Measure	Construction and loci	Constructing the locus of points from a fixed point
Both	Geometry and Measure	Construction and loci	Constructing the locus of points from a fixed line
Both	Geometry and Measure	Construction and loci	Constructing a region that satisfies a given set of conditions
Both	Geometry and Measure	Co-ordinates	Understanding co-ordinates
Higher	Geometry and Measure	Co-ordinates	3-D co-ordinates
Higher	Geometry and Measure	Matrices	Adding, subtracting and multiplying matrices by a scalar
Higher	Geometry and Measure	Matrices	Multiplying 2 matrices together
Higher	Geometry and Measure	Matrices	Finding the inverse of a matrix
Higher	Geometry and Measure	Matrices	Matrices and transformations
Both	Geometry and Measure	Measure	Imperial and metric units

TIER	TOPIC	HEADING	SUB HEADING
Both	Geometry and Measure	Measure	Convert metric units
Both	Geometry and Measure	Measure	Speed, distance and time
Both	Geometry and Measure	Measure	Mass, density and volume
Higher	Geometry and Measure	Measure	Converting metric units
Higher	Geometry and Measure	Measure	Converting imperial units
Higher	Geometry and Measure	Measure	Speed, distance and time conversion
Higher	Geometry and Measure	Measure	Mass, density and volume conversion
Higher	Geometry and Measure	Measure	Length, area or volume expressions
Both	Geometry and Measure	Measure	Upper and lower bounds
Both	Geometry and Measure	Measuring from scales	Measurements and scales
Both	Geometry and Measure	Measuring from scales	Time and units
Both	Geometry and Measure	Measuring from scales	Timetables
Both	Geometry and Measure	Perimeter and area	Calculating perimeter
Both	Geometry and Measure	Perimeter and area	Calculating area
Both	Geometry and Measure	Perimeter and area	Compound shapes
Both	Geometry and Measure	Perimeter and area	Converting units
Higher	Geometry and Measure	Perimeter and area	Area and perimeter of 2-d shapes
Higher	Geometry and Measure	Perimeter and area	Area and circumference of a circle
Higher	Geometry and Measure	Perimeter and area	Converting between units of measure
Higher	Geometry and Measure	Volume and surface area	Volume of 3-D shapes
Higher	Geometry and Measure	Volume and surface area	Converting units of volume
Higher	Geometry and Measure	Volume and surface area	Surface area of a prism and a cylinder
Higher	Geometry and Measure	Volume and surface area	Surface area of a sphere and a cone
Both	Geometry and Measure	3-D shapes	Names and nets of common shapes
Both	Geometry and Measure	3-D shapes	Front and side elevations
Both	Geometry and Measure	3-D shapes	Using elevations to draw shapes
Both	Geometry and Measure	3-D shapes	Planes of symmetry
Both	Geometry and Measure	Pythagoras' theorem	Finding the hypotenuse using Pythagoras' theorem
Both	Geometry and Measure	Pythagoras' theorem	Finding a shorter side using Pythagoras' theorem
Both	Geometry and Measure	Pythagoras' theorem	Calculating the distance between two points
Both	Geometry and Measure	Pythagoras' theorem	Pythagoras' theorem and real-life problems
Higher	Geometry and Measure	Pythagoras' theorem	3-dimensional shapes
Higher	Geometry and Measure	Similarity and congruence	Calculating sides and areas of similar shapes
Higher	Geometry and Measure	Similarity and congruence	Calculating volumes of similar 3-d shapes
Higher	Geometry and Measure	Similarity and congruence	Volume and area of similar solids: example
Both	Geometry and Measure	Similarity, congruence and symmetry	Similarity and congruence
Both	Geometry and Measure	Similarity, congruence and symmetry	Line symmetry
Both	Geometry and Measure	Similarity, congruence and symmetry	Rotational symmetry
Both	Geometry and Measure	Similarity, congruence and symmetry	Tessellation
Both	Geometry and Measure	Surface area and volume	Calculating volume of 3-d shapes

TIER	TOPIC	HEADING	SUB HEADING
Both	Geometry and Measure	Surface area and volume	Converting units of volume
Both	Geometry and Measure	Surface area and volume	Calculating the surface area of a prism
Higher	Geometry and Measure	Transformations	Rotation
Higher	Geometry and Measure	Transformations	Reflection
Higher	Geometry and Measure	Transformations	Translation
Higher	Geometry and Measure	Transformations	Enlargement
Higher	Geometry and Measure	Transformations	Multiple transformations and describing these as a single transformation
Both	Geometry and Measure	Transformations	Rotation
Both	Geometry and Measure	Transformations	Reflection
Both	Geometry and Measure	Transformations	Translation
Both	Geometry and Measure	Transformations	Enlargement
Both	Geometry and Measure	Transformations	Multiple transformations
Higher	Geometry and Measure	Transformations	Additional transformations
Both	Geometry and Measure	Trigonometry	The three trigonometric ratios
Both	Geometry and Measure	Trigonometry	Using trigonometry to find a length
Both	Geometry and Measure	Trigonometry	Using trigonometry to find angles
Both	Geometry and Measure	Trigonometry	Using trigonometry to solve problems
Higher	Geometry and Measure	Trigonometry	Using trigonometry in 3-d shapes
Higher	Geometry and Measure	Trigonometry	The area of a triangle
Higher	Geometry and Measure	Trigonometry	The sine rule
Higher	Geometry and Measure	Trigonometry	The cosine rule
Both	Geometry and Measure	Vectors	Vector quantities
Both	Geometry and Measure	Vectors	The laws of vector addition
Both	Geometry and Measure	Vectors	Parallel vectors
Higher	Geometry and Measure	Vectors	Solving geometric problems involving vectors
Both	Statistics and Probability	Averages	Comparing distributions
Both	Statistics and Probability	Averages	Mean, median, mode and range
Both	Statistics and Probability	Averages	Stem and leaf diagrams
Both	Statistics and Probability	Averages	Ungrouped frequency tables
Both	Statistics and Probability	Averages	Grouped frequency tables
Higher	Statistics and Probability	Averages	Inter-quartile range and stem and leaf diagrams
Higher	Statistics and Probability	Averages	Moving averages
Both	Statistics and Probability	Collecting data	Collecting and recording data
Both	Statistics and Probability	Collecting data	Two-way tables
Both	Statistics and Probability	Collecting data	Questionnaires
Higher	Statistics and Probability	Collecting data	Sampling
Both	Statistics and Probability	IPresenting data	Bar charts, pie charts, line graphs, frequency diagrams, histograms and frequency polygons
Both	Statistics and Probability	Presenting data	Pictograms
Higher	Statistics and Probability	Presenting data	Cumulative frequency graphs
Higher	Statistics and Probability	Presenting data	Box plots, data comparison and histograms with unequal widths

TIER	TOPIC	HEADING	SUB HEADING
Both	Statistics and Probability	Presenting data	Scatter graphs and correlations
Both	Statistics and Probability	Probability	The probability scale and writing probabilities
Both	Statistics and Probability	Probability	Two-way probability tables
Both	Statistics and Probability	Probability	Mutually exclusive events
Both	Statistics and Probability	Probability	Relative frequency
Higher	Statistics and Probability	Probability	Probability and sample spaces
Higher	Statistics and Probability	Probability	Mutually exclusive events
Higher	Statistics and Probability	Probability	Independent events
Higher	Statistics and Probability	Probability	Probability trees
Higher	Statistics and Probability	Probability	Relative frequency