

Pearson Edexcel International GCSE

May–June 2022 Assessment Window

Syllabus
reference

4MB1

Mathematics

Advance Information

Version 2

You are not permitted to take this notice into the examination.
This document is valid if downloaded from the [Pearson Qualifications website](https://www.pearsonqualifications.com).

Instructions

- Please ensure that you have read this notice before the examination.

Information

- This notice covers all examined components.
- The format/structure of the assessments remains unchanged.
- This advance information details the focus of the content of the exams in the May–June 2022 assessments.
- There are no restrictions on who can use this notice.
- This notice is meant to help students to focus their revision time.
- Students and teachers can discuss the advance information.
- This document has 19 pages.

There are two option codes for this qualification. Some centres will enter for option “R”, depending on their location – if you’re unsure if your centre uses option “R” papers you should contact your centre who can confirm and check the [Information Manual](#). Please ensure you consult the advance information relevant to the option code used within your centre. Information related to the “R” option is indicated by an “R” after the paper number, e.g. 4MB1/02R or Paper 2R.

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General advice

- In addition to covering the content outlined in the advance information, students and teachers should consider how to:
 - manage their revision of parts of the specification which may be assessed in areas not covered by the advance information
 - manage their revision of other parts of the specification which may provide knowledge which helps with understanding the areas being tested in 2022.
- For specifications with synoptic assessments, topics not explicitly given in the advance information may appear, e.g. where students are asked to bring together knowledge, skills and understanding from across the specification.
- For specifications with optional papers/topics/content, students should only refer to the advance information for their intended option.
- For specifications with NEA, advance information does not cover any NEA components.

A link to the Joint Council for Qualifications guidance document on advance information can be found on the Joint Council for Qualifications website or [here](#).

Advance Information

Subject specific section

- Advance information will be provided for each paper and for each tier of entry.
- The information is presented in approximate specification order and does not reflect the order of the questions.
- Questions may be answerable using one or more of the indicated areas of specification content.
- The areas of content listed are suggested as key areas of focus for revision and final preparation, in relation to the May–June 2022 examinations.
- The aim should still be to cover all specification content in teaching and learning.
- Students may need to draw on prior knowledge and skills.
- Students will still be expected to apply their knowledge to unfamiliar contexts.
- Students responses to questions may draw upon knowledge, skills and understanding from across the content listed when responding to questions.
- Students will be credited for using any relevant knowledge from any other topic areas when answering questions.

Paper 01 – grouped by content area

Number	
Integers	Highest Common Factor
	Prime factorisation
Fractions	Use of the four rules
Powers and roots	Surds
Measures	Speed
Ratio	Use of ratio
Standard form	Calculation
Other	Natural numbers, integers, rational and irrational numbers
Sets	
Venn diagram	Complete Venn diagram
Algebra	
Manipulation	Subject of a formula
	Factorisation
	Algebraic fractions
	Simplification
	Factor theorem
	Completing the square
	Algebraic division
Equations	Linear equation
	Quadratic equation
Sequences	n th term of a sequence
Inequalities	Linear inequalities in 2-D

Functions	
Graphs	Equation of a straight line
Calculus	Kinematics
Matrices	
Manipulation	Addition and multiplication
Geometry	
Angles and shapes	Symmetry
	Angle properties of parallel lines, triangles and polygons
	Geometrical reasoning
	Area and volume of similar figures
	Construction
	Circle properties
Mensuration	
In 2-D	Area and perimeter of a sector
	Area and perimeter of composite shape
Vectors and transformation geometry	
Vectors	Modulus of a vector
Trigonometry	
	Sine and cosine rule and use of $\frac{1}{2}ab\sin C$
Statistics and probability	
Diagrams	Pie chart
Statistical measures	Mean, median and mode, discrete data
Probability	Probability
	Tree diagram

Paper 02 – grouped by content area

Number	
Powers and roots	Indices
Standard form	Calculation
Other	Bounds
Sets	
Set notation	List members of sets
Algebra	
Manipulation	Construction and use of formulae
	Algebraic fractions
	Simplification
Equations	Simultaneous equations, linear
	Quadratic equation
Functions	
Function language and notation	Domain and range of functions
	Composition and inverse of functions
Graphs	Plot and draw graphs
	Gradient of a curve by drawing
	Solve equations graphically
Calculus	Differentiation
Matrices	
Manipulation	Determinant of a matrix

Geometry	
Angles and shapes	Geometrical reasoning
	Area and volume of similar figures
Pythagoras' Theorem	Pythagoras in 2-D
	Pythagoras in 3-D
Mensuration	
In 2-D	Area of a trapezium
	Area of a circle
In 3-D	Surface area of a cuboid
	Volume
Vectors and transformation geometry	
Vectors	Apply vectors to geometrical problems
Transformations	Transformations
	Multiplication of a vector by a matrix
Trigonometry	
	Angles of elevation and depression
	Trigonometry in 3-D
Statistics and probability	
Diagrams	Histogram
Statistical measures	Grouped data
	Median
	Mean
Probability	Probability

Paper 01 and 02 combined – grouped by content area

Number	
Integers	Highest Common Factor
	Prime factorisation
Fractions	Use of the four rules
Powers and roots	Surds
	Indices
Measures	Speed
Ratio	Use of ratio
Standard form	Calculation
Other	Natural numbers, integers, rational and irrational numbers
	Bounds
Sets	
Set notation	List members of sets
Venn diagram	Complete Venn diagram
Algebra	
Manipulation	Subject of a formula
	Factorisation
	Algebraic fractions
	Simplification
	Factor theorem
	Completing the square
	Algebraic division
	Construction and use of formulae

Equations	Linear equation
	Quadratic equation
	Simultaneous equations, linear
Sequences	n th term of a sequence
Inequalities	Linear inequalities in 2-D
Functions	
Function language and notation	Domain and range of functions
	Composition and inverse of functions
Graphs	Equation of a straight line
	Plot and draw graphs
	Gradient of a curve by drawing
	Solve equations graphically
Calculus	Kinematics
	Differentiation
Matrices	
Manipulation	Addition and multiplication
	Determinant of a matrix
Geometry	
Angles and shapes	Symmetry
	Angle properties of parallel lines, triangles and polygons
	Geometrical reasoning
	Area and volume of similar figures
	Construction
	Circle properties

Pythagoras' Theorem	Pythagoras in 2-D
	Pythagoras in 3-D
Mensuration	
In 2-D	Area and perimeter of a sector
	Area and perimeter of composite shape
	Area of a trapezium
	Area of a circle
In 3-D	Surface area of a cuboid
	Volume
Vectors and transformation geometry	
Vectors	Modulus of a vector
	Apply vectors to geometrical problems
Transformations	Transformations
	Multiplication of a vector by a matrix
Trigonometry	
	Sine and cosine rule and use of $\frac{1}{2}ab\sin C$
	Angles of elevation and depression
	Trigonometry in 3-D

Statistics and probability

Diagrams

Pie chart

Histogram

Statistical measures

Mean, median and mode, discrete data

Grouped data

Median

Mean

Probability

Probability

Tree diagram

Paper 01R – grouped by content area

Number	
Fractions	The four operations
Powers and roots	Surds
Percentages	Reverse percentage
Standard form	Calculation
Other	The four operations
	Natural numbers, integers, rational and irrational numbers
Algebra	
Manipulation	Subject of a formula
	Algebraic formulae
	Factorisation
	Completing the square
	Algebraic fractions
Equations	Linear equation
	Simultaneous equations, linear and quadratic
	Quadratic equation
Sequences	n th term of a sequence
Inequalities	Linear inequality
	Linear inequalities in 2-D
Functions	
Proportion	Direct proportion
	Inverse proportion
Calculus	Differentiation
	Stationary points

Matrices	
Manipulation	Addition and multiplication
	Inverse of a 2×2 matrix
Geometry	
Angles and shapes	Angle properties of parallel lines, triangles and polygons
	Construction
	Geometrical reasoning
	Congruent triangles
	Circle properties
	Similarity
Pythagoras' Theorem	Pythagoras in 3-D
Mensuration	
In 2-D	Area of a trapezium
In 3-D	Volume of a cylinder
	Volume of a cuboid
Vectors and transformation geometry	
Vectors	Apply vectors to geometrical problems
	Modulus of a vector
Trigonometry	
	Bearings
	Trigonometry in 2-D
	Sine and cosine rules and use of $\frac{1}{2}ab\sin C$
Statistics and probability	
Diagrams	Histogram
Statistical Measures	Mean, median and mode, discrete data
Probability	Expected frequency
	Probability

Paper 02R – grouped by content area

Number	
Percentages	Percentage profit
	Percentage increase
Ratio	Share in a ratio
Other	Bounds
Sets	
Set notation	Use of set notation
Venn diagram	Complete Venn diagram
Algebra	
Manipulation	Indices
	Factor theorem
	Algebraic division
	Factorisation
Equations	Quadratic equation
	Simultaneous equations, linear
Inequalities	Quadratic inequality
Functions	
Function language and notation	Composition and inverse of functions
Graphs	Equation of a straight line
	Plot and draw graphs
	Solve equations graphically
Calculus	Differentiation
	Kinematics

Matrices	
Manipulation	Determinant of matrix
	Addition and multiplication
Transformations	Transformations
Geometry	
Angles and shapes	Angle properties of parallel lines, triangles and polygons
	Circle properties
Pythagoras' Theorem	Pythagoras in 2-D
Mensuration	
In 2-D	Area of a triangle
Vectors and transformation geometry	
Vectors	Apply vectors to geometrical problems
Transformations	Transformations
Trigonometry	
	Trigonometry in 2-D
Statistics and probability	
Diagrams	Pie charts
Statistical measures	Grouped data
	Mean
Probability	Tree diagram
	Probability
	Conditional probability

Paper 01R and 02R combined – grouped by content area

Number	
Fractions	The four operations
Powers and roots	Surds
Percentages	Reverse percentage
	Percentage profit
	Percentage increase
Ratio	Share in a ratio
Standard form	Calculation
Other	The four operations
	Natural numbers, integers, rational and irrational numbers
	Bounds
Sets	
Set notation	Use of set notation
Venn diagram	Complete Venn diagram
Algebra	
Manipulation	Subject of a formula
	Algebraic formulae
	Factorisation
	Completing the square
	Algebraic fractions
	Indices
	Factor theorem
	Algebraic division

Equations	Linear equation
	Simultaneous equations, linear
	Simultaneous equations, linear and quadratic
	Quadratic equation
Sequences	n th term of a sequence
Inequalities	Linear inequality
	Linear inequalities in 2-D
	Quadratic inequality
Functions	
Function language and notation	Composition and inverse of functions
Proportion	Direct proportion
	Inverse proportion
Graphs	Equation of a straight line
	Plot and draw graphs
	Solve equations graphically
Calculus	Differentiation
	Stationary points
	Kinematics
Matrices	
Manipulation	Addition and multiplication
	Determinant of matrix
	Inverse of a 2×2 matrix

Geometry	
Angles and shapes	Angle properties of parallel lines, triangles and polygons
	Construction
	Geometrical reasoning
	Congruent triangles
	Circle properties
	Similarity
Pythagoras' Theorem	Pythagoras in 2-D
	Pythagoras in 3-D
Mensuration	
In 2-D	Area of a trapezium
	Area of a triangle
In 3-D	Volume of a cylinder
	Volume of a cuboid
Vectors and transformation geometry	
Vectors	Apply vectors to geometrical problems
	Modulus of a vector
Transformations	Transformations
Trigonometry	
	Bearings
	Trigonometry in 2-D
	Sine and cosine rules and use of $\frac{1}{2}ab\sin C$

Statistics and probability

Diagrams	Histogram
	Pie charts
Statistical Measures	Mean, median and mode, discrete data
	Grouped data
	Mean
Probability	Expected frequency
	Probability
	Tree diagram
	Conditional probability

END OF ADVANCE INFORMATION