

Pearson Edexcel GCSE (9–1)

May–June 2022 Assessment Window

Syllabus
reference

1MA1

Mathematics Advance Information

You are not permitted to take this notice into the examination.
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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.
- The 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 25 pages.

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Paper 1F – grouped by content area

Number (*see Ratio – some overlap of topic areas)	
Arithmetic	Money
	Negative number
Fractions	Order fractions, decimals, percentages
	Fraction of an amount
	Fraction arithmetic
Properties	Place value
	Product of prime factors
Standard Form	Conversion
	Calculation
Approximation and Estimation	Estimation
Algebra	
Manipulation	Simplification
	Substitute values
Equations and inequalities	Linear inequality
	Quadratic equation
Graphs	Quadratic graph
Sequences	Linear sequence
Ratio, proportion, and rates of change (*see Number – some overlap of topic areas)	
Conversion	Length
Percentages	Percentage of an amount
	Percentage increase
Ratio	Write as a ratio
	Share in a ratio
Proportion	Direct proportion

Compound Measures	Speed
	Density
Geometry and measures	
Shape	Reflection
	Plan and elevation
Angles	Angles in a polygon
Length, area and volume	Volume of a cube
	Volume of a cylinder
Pythagoras's Theorem and Trigonometry	Exact trigonometric values
Probability	
Probability	Probability
	Frequency tree
Statistics	
Diagrams	Pictogram
	Bar chart
	Stem and leaf diagram

Paper 2F – grouped by content area

Number (*see Ratio – some overlap of topic areas)	
Arithmetic	Money
	Negative number
Fractions	Fraction arithmetic
	Order fractions
Properties	Order integers
	Multiples
Approximation and Estimation	Rounding
	Error interval
Other	Straight line graph
Algebra	
Manipulation	Simplification
	Expansion of bracket
	Factorisation
	Laws of indices
Equations and inequalities	Linear simultaneous equations
Graphs	Coordinates
	Straight line graph
Functions	Number machines
Ratio, proportion and rates of change (*see Number – some overlap of topic areas)	
Conversions	Mass, time, area
	Scale drawing
Percentages	Decimal to percentage
	Percentage profit
	Depreciation



Ratio	Write as a ratio
	Use of ratio
Proportion	Direct proportion
	Currency conversion
Geometry and measures	
Shape	Polygons
	Circles
	Parallel and perpendicular lines
	Transformations
Angles	Angles in a triangle
	Vertically opposite angles
Length, area and volume	Area of a rectangle
Probability	
Probability	Tree diagram
	Combined events
Statistics	
Diagrams	Interpret graph
	Two-way table
	Frequency table
Measures	Mode
	Median
	Mean

Paper 3F – grouped by content area

Number (*see Ratio – some overlap of topic areas)	
Arithmetic	Four operations
	Negative number
Fractions	Fraction of an amount
	One amount as a fraction of another
	Equivalent fractions
Properties	Factors
	Lowest Common Multiple
Powers and roots	Square root
Approximation and estimation	Rounding
Other	Calculator use
Algebra	
Manipulation	Simplification
	Expansion of bracket
	Factorisation
	Substitute values
	Change subject of a formula
	Forming an expression
Equations and inequalities	Linear equation
	Form an equation
Sequences	Linear sequence
Ratio, proportion and rates of change (*see Number – some overlap of topic areas)	
Conversions	Time
	Compound units
	Scale drawing

Percentages	Percentage to fraction
	One quantity as a percentage of another
	Percentage decrease
	Reverse percentage
Ratio	Write as a ratio
	1 : n form
Proportion	Direct proportion
Compound measures	Average speed
Geometry and measures	
Shape	Triangle properties
	Quadrilaterals
	Triangular prism
Angles	Angle properties of parallel lines
	Angles in a triangle
	Vertically opposite angles
	Bearings
Length, area and volume	Area of a triangle
	Area of a trapezium
Pythagoras's Theorem and Trigonometry	Pythagoras's Theorem
Probability	
Probability	Probability scale
	Probability
Statistics	
Diagrams	Frequency polygon
Measures	Median
	Range
Population	Comparison of distributions

Foundation Tier Formulae Sheet

Perimeter, area and volume

Where a and b are the lengths of the parallel sides and h is their perpendicular separation:

$$\text{Area of a trapezium} = \frac{1}{2} (a + b) h$$

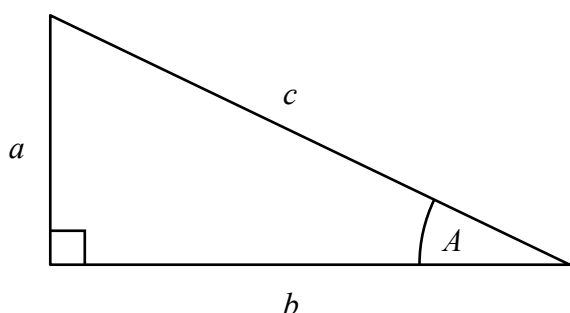
Volume of a prism = area of cross section \times length

Where r is the radius and d is the diameter:

$$\text{Circumference of a circle} = 2\pi r = \pi d$$

$$\text{Area of a circle} = \pi r^2$$

Pythagoras' Theorem and Trigonometry



In any right-angled triangle where a , b and c are the length of the sides and c is the hypotenuse:

$$a^2 + b^2 = c^2$$

In any right-angled triangle ABC where a , b and c are the length of the sides and c is the hypotenuse:

$$\sin A = \frac{a}{c} \quad \cos A = \frac{b}{c} \quad \tan A = \frac{a}{b}$$

Compound Interest

Where P is the principal amount, r is the interest rate over a given period and n is number of times that the interest is compounded:

$$\text{Total accrued} = P \left(1 + \frac{r}{100} \right)^n$$

Probability

Where $P(A)$ is the probability of outcome A and $P(B)$ is the probability of outcome B :

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$