

GCSE MATHEMATICS SUMMARY OF ASSESSMENT Summer 2022 only

Unit 1: Non-calculator Written examination Higher: 1 hour 35 minutes (70 marks) Intermediate:1 hour 35 minutes (70 marks) Foundation: 1 hour 25 minutes (60 marks) 50% of qualification
The written paper for each tier will comprise a number of short and longer, both structured and unstructured questions which may be set on any part of the subject content of the specification. Candidates entered for GCSE Mathematics will be expected to be familiar with the knowledge, skills and understanding implicit in GCSE Mathematics – Numeracy. Questions may be set on topics that are explicitly listed in the content of GCSE Mathematics – Numeracy. Some questions will use multiple-choice assessment. A calculator will not be allowed in this paper.
Unit 2: Calculator-allowed Written examination Higher: 1 hour 35 minutes (70 marks) Intermediate:1 hour 35 minutes (70 marks) Foundation: 1 hour 25 minutes (60 marks) 50% of gualification
The written paper for each tier will comprise a number of short and longer, both structured and unstructured questions which may be set on any part of the subject content of the specification. Candidates entered for GCSE Mathematics will be expected to be familiar with the knowledge, skills and understanding implicit in GCSE Mathematics – Numeracy. Questions may be set on topics that are explicitly listed in the content of GCSE Mathematics – Numeracy. Some questions will use multiple-choice assessment. A calculator will be allowed in this paper.

This linear qualification will be available in the summer of 2021, the autumn of 2021 and the summer of 2022 only.

Candidates entering the qualification in all other series should use the approved <u>specification</u>.

GCSE MATHEMATICS - NUMERACY SUMMARY OF ASSESSMENT Summer 2022 only

Unit 1: Non-calculator Written examination Higher: 1 hour 35 minutes (70 marks) Intermediate: 1 hour 35 minutes (70 marks) Foundation: 1 hour 25 minutes (60 marks) 50% of qualification

The written paper for each tier will comprise a number of short and longer, both structured and unstructured questions which may be set on any part of the subject content of the specification. Some of these questions will involve different parts that assess different aspects of numeracy but in the same context. Part-questions may vary in level of demand. Some questions will use multiple-choice assessment. A calculator will **not** be allowed in this paper.

Unit 2: Calculator-allowed Written examination Higher: 1 hour 35 minutes (70 marks) Intermediate: 1 hour 35 minutes (70 marks) Foundation: 1 hour 25 minutes (60 marks) 50% of qualification

The written paper for each tier will comprise a number of short and longer, both structured and unstructured questions which may be set on any part of the subject content of the specification. Some of these questions will involve different parts that assess different aspects of numeracy but in the same context. Part-questions may vary in level of demand. Some questions will use multiple-choice assessment. A calculator will be allowed in this paper.

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Summary of changes for 2022

For both GCSEs, the higher tier and intermediate tier units will have a total of 70 marks. The foundation tier units will have a total of 60 marks.

The higher tier and intermediate tier units will have a duration of 95 minutes (1h 35min). The foundation tier units will have a duration of 85 minutes (1h 25min).

Below is a list of the topics that will **not be assessed** in the GCSE Mathematics or GCSE Mathematics-Numeracy examinations in Summer 2022.

Foundation tier topics are in standard text.

Intermediate tier topics that are in addition to foundation tier topics are in <u>underlined</u> text. Higher tier topics that are in addition to intermediate tier topics are in **bold** text.

	Topics that will not be assessed in the Summer 2022 examinations.	Mathematics- Numeracy and Mathematics <i>OR</i> Mathematics only	Additional Comments
	Number		
1	Understanding annual rates, e.g. AER, APR.	Mathematics- Numeracy and Mathematics	
2	Understanding and using Venn diagrams to solve problems.	Mathematics- Numeracy and Mathematics	
	Algebra		
3	Finding the <i>n</i> th term of a sequence where the rule is quadratic.	Mathematics only	The following could be assessed: <u>Finding the <i>n</i>th term of a</u> <u>sequence where the rule is</u> <u>linear.</u>
4	Drawing, interpretation, recognition and sketching the graphs of $y = \frac{a}{x}$, $y = ax^3$. Drawing and interpretation of graphs of $y = ax^3 + b$. Drawing and interpretation of graphs of $y = ax + b + \frac{a}{x}$ with x not equal to 0, x $y = ax^3 + bx^2 + cx + d$, $y = k^x$ for integer values of x and simple positive values of k. Drawing and interpreting graphs when y is given implicitly in terms of x.	Mathematics only	Drawing, interpretation, recognition and sketching of graphs of linear and quadratic functions could be assessed.
5	The use of straight-line graphs to locate regions given by linear inequalities.	Mathematics only	
6	Distinguishing in meaning between equations, formulae, identities <u>and</u> expressions.	Mathematics only	It is only identities that will not be assessed. The following could be assessed: <u>Distinguishing in meaning</u> <u>between equations, formulae</u> <u>and expressions.</u>

	Geometry and Measure		
7	Interpretation and drawing of nets.	Mathematics- Numeracy and Mathematics	
8	<i>Drawing</i> 2-D representations of 3-D shapes, including the use of isometric paper.	Mathematics- Numeracy and Mathematics	The following could be assessed: <i>Using</i> 2-D representations of 3- D shapes (but not ones drawn on isometric paper).
9	Bisecting a given line, bisecting a given angle. <u>Constructing the perpendicular from a point to</u> <u>a line.</u>	Mathematics- Numeracy and Mathematics	The following could be assessed (but not in questions assessing constructions): Accurate use of ruler, pair of compasses and protractor.
10	Constructing 2-D shapes from given information and drawing plans and elevations of any 3-D solid.	Mathematics- Numeracy and Mathematics	
11	Use of ruler and pair of compasses to do constructions.	Mathematics only	
	Constructing angles of 60°, 30°, 90° and 45°.		
12	The identification of congruent shapes.	Mathematics only	
	Understanding and using SSS, SAS, ASA and RHS conditions to prove the congruence of triangles using formal arguments. Reasons may be required in the solution of problems involving congruent triangles.		
13	Using angle and tangent properties of circles. Understanding that the tangent at any point on a circle is perpendicular to the radius at that point.	Mathematics only	
	Using the facts that the angle subtended by an arc at the centre of a circle is twice the angle subtended at any point on the circumference, that the angle subtended at the circumference by a semicircle is a right angle, that angles in the same segment are equal, and that opposite angles of a cyclic guadrilateral sum to 180°.		
	Using the alternate segment theorem.		
	<u>Understanding and using the fact that</u> tangents from an external point are equal in length.		
	Understanding and constructing geometrical proofs using circle theorems.		
14	Location determined by distance from a given point and angle made with a given line.	Mathematics only	
15	Solving problems in the context of tiling patterns and tessellation.	Mathematics- Numeracy and Mathematics	

16	Constructing the locus of a point which moves such that it satisfies certain conditions, for example,(i) a given distance from a fixed point or line, (ii) equidistant from two fixed points or lines.Solving problems involving intersecting loci in two dimensions. Questions on loci may involve inequalities.	Mathematics- Numeracy and Mathematics	
17	Distinguishing between formulae for length, area and volume by considering dimensions.	Mathematics- Numeracy and Mathematics	
18	Using the compound measures: density and population density. Using compound measures that relate to density, such as kg/m ³ , g/cm ³ , population per km ²	Mathematics- Numeracy and Mathematics	All compound measures that are not density-related, e.g. speed, could be assessed.
	Statistics		
19	Specifying the data needed and considering potential sampling methods. Sampling systematically. Working with stratified sampling techniques and defining a random sample.	Mathematics- Numeracy and Mathematics	The following could be assessed: <u>Considering the effect of</u> <u>sample size and other factors</u> <u>that affect the reliability of</u> <u>conclusions drawn.</u>
20	Designing and criticising questions for a questionnaire, including notions of fairness and bias.	Mathematics- Numeracy and Mathematics	Learners will need to understand the notion of fairness and bias, but not in the context of questionnaires.
21	Estimating the probability of an event as the proportion of times it has occurred. Relative frequency. Understanding the long-term stability of relative frequency. <u>Graphical representation of relative frequency against the number of trials.</u> Estimating probabilities based on experimental evidence. Comparing an estimated probability from experimental results with a theoretical probability.	Mathematics only	The following could be assessed: Calculating theoretical probabilities based on equally likely outcomes.
22	Identifying all the outcomes of a combination of two experiments using Venn diagrams.	Mathematics only	Identifying outcomes using all other methods could be assessed.