Subject report: Endorsement

General Mathematics — 2026 cohort

This resource identifies strengths and opportunities to improve the development and submission of internal assessment instruments for General Mathematics (General subject). Refer to *QCE and QCIA policy and procedures handbook v7.0*, Section 9.5.

Summary of endorsement for the 2026 cohort

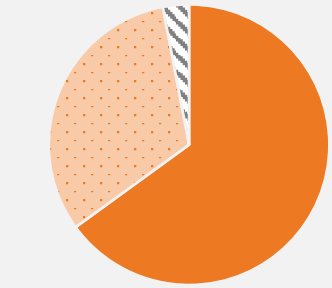
Number of internal assessment (IA) instruments submitted for endorsement

IA1	IA2	IA3
470	470	470

Note: Number of instruments may vary due to changes in schools offering the subject after the endorsement process started.

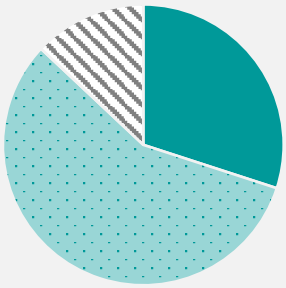
Percentage of instruments endorsed at Applications 1 and 2

IA1: Problem-solving and modelling task



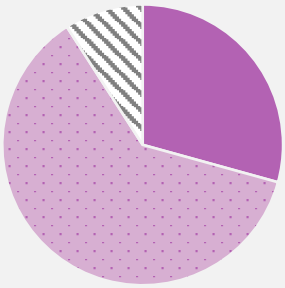
- Application 1: 65%
- Application 2: 32%
- Intervention: 3%

IA2: Examination — short response



- Application 1: 30%
- Application 2: 57%
- Intervention: 13%

IA3: Examination — short response



- Application 1: 29%
- Application 2: 61%
- Intervention: 9%

Note: Percentages have been rounded to whole numbers and, therefore, may not add up to 100%.

Validity: Reasons for non-endorsement at Application 1 by assessment priority

IA1		IA2		IA3	
Alignment	68	Alignment	214	Alignment	236
Authentication	22	Authentication	0	Authentication	0
Authenticity	19	Authenticity	25	Authenticity	27
Item construction	56	Item construction	156	Item construction	143
Scope and scale	47	Scope and scale	65	Scope and scale	59

Accessibility: Reasons for non-endorsement at Application 1 by assessment priority

IA1		IA2		IA3	
Bias avoidance	0	Bias avoidance	23	Bias avoidance	9
Language	8	Language	28	Language	15
Layout	1	Layout	9	Layout	5
Transparency	9	Transparency	31	Transparency	23

Note: A priority may be identified more than once in the endorsement decision for an assessment instrument.

Advice for assessment design

Endorsement is the quality assurance process based on the attributes of validity and accessibility. The following advice is based on the endorsement process for the 2026 completion year. In acknowledging effective practices and areas for refinement, it offers schools timely and evidence-based guidance to further develop valid and accessible assessment.

IA1: Problem-solving and modelling task (20%)

Effective practices

Assessment instruments demonstrated validity and accessibility when they:

- provided an authentic, real-life context and defined a specific problem to be solved that allowed for unique student responses **(authenticity)**
- used a range of strategies to monitor progress and authenticate student work, including clearly defined checkpoints that required the submission of a draft response for teacher feedback **(authentication)**
- used accessible, everyday language that clearly and concisely described the problem and task requirements, and any specialised language was suitable for the intended audience (General Mathematics students) **(language)**
- correctly identified in the conditions at least one of the topics in Units 3 and 4 that aligned with the relevant subject matter to complete the task **(transparency)**.

Practices to strengthen

Schools can improve the validity and accessibility of assessment instruments by:

- allowing students to make their own observations, assumptions and choices about the mathematical concepts and procedures to use, by not providing these in the task sheet. Scaffolding could refer to the approach to problem-solving and mathematical modelling in the 2025 syllabus; including a version of this is optional **(item construction)**
- ensuring the task and context statements align with the chosen syllabus topics, e.g. a problem involving bivariate data analysis aligns with Unit 3 Topics 1 and 2, and a problem that analyses historical trends over time is likely to require subject matter from Unit 3 Topics 2 and 3 **(alignment)**
- considering the expected components of a typical written response to ensure that the task allows students to demonstrate all aspects of the problem-solving and modelling approach and the instrument-specific marking guide (ISMG) criteria — formulate, solve, evaluate and communicate **(alignment)**
- providing suitable stimulus items, e.g. sample data or websites that have readily accessible data **(scope and scale)**.

IA2: Examination — short response (15%)

Effective practices

Assessment instruments demonstrated validity and accessibility when they:

- were developed for the school's context and cohort with questions sufficiently different from items in QCAA-provided assessments and other publicly available resources, to avoid authentication issues and enable students to produce unique, non-rehearsed responses **(authenticity)**
- contained error-free, appropriately worded questions that provided clear instructions and were suitable for the intended audience (General Mathematics students), degree of difficulty and expected response **(language)**
- provided appropriate visual elements as stimulus for relevant questions (e.g. equations, plots and maps) and allowed students to fully respond to questions in the provided space by demonstrating the required knowledge and skills indicated in the marking scheme's suggested responses, for which an appropriate number of marks were allocated **(layout)**.

Practices to strengthen

Schools can improve the validity and accessibility of assessment instruments by:

- writing short response questions that do not lead students to a predetermined response and are not structured with given options, e.g. not including a list of words to choose from or requiring a yes/no response, because the IA2 specifications do not include multiple choice items **(item construction)**
- ensuring complex familiar and complex unfamiliar questions are not scaffolded as a series of simple familiar parts or step-by-step instructions to align with the specification for complexity, i.e. these situations have multiple interacting elements, such that connections are made with subject matter within and/or across the domains of mathematics **(alignment)**
- providing opportunities for students to demonstrate all syllabus objectives, including Objective 4: Evaluate the reasonableness of solutions, and ensuring the mark allocation in the marking scheme reflects the assessment of this objective **(alignment)**
- including an appropriate number of questions for the syllabus condition of 90 minutes working time, allowing students to demonstrate knowledge and skills for a representative sample of subject matter from only the three Unit 3 topics selected by the school **(scope and scale)**.

IA3: Examination — short response (15%)

Effective practices

Assessment instruments demonstrated validity and accessibility when they:

- used realistic and appropriate contexts that avoided bias in questions designed to assess subject matter such as investments, loans, minimal spanning trees, critical paths and flow networks **(bias avoidance)**
- contained error-free, appropriately worded questions that provided clear instructions and were suitable for the intended audience (General Mathematics students), degree of difficulty and expected response **(language)**
- provided appropriate visual elements as stimulus for relevant questions, such as suitably sized network diagrams and graphs with legible, clear and accessible information for students to use and respond to the question **(layout)**.

Practices to strengthen

Schools can improve the validity and accessibility of assessment instruments by:

- checking the syllabus to identify the subject matter in each topic and ensuring all questions allow students to demonstrate a representative sample of the required knowledge and skills from only the three Unit 4 topics selected in the Conditions section **(scope and scale)**
- structuring short response questions so options are not provided for students to select from (e.g. yes/no, higher/lower, word lists, matching possibilities) because the IA3 specifications do not include multiple choice items. Provide open short response questions, such as requiring students to state, calculate, justify or explain their response **(item construction)**
- ensuring complex familiar and complex unfamiliar questions meet the specified degree of difficulty. Design complex unfamiliar questions such that all the information is not immediately identifiable, e.g. the concepts and procedures should not be obvious because students must decide how to approach and solve the problem **(alignment)**
- assessing Objective 4: Evaluate the reasonableness of solutions, e.g. by including at least one question that instructs students to judge whether a result is reasonable or refer to a context, scale, assumption or limitation. Ensure the marking scheme explicitly allocates marks to this evaluation **(alignment)**.

Additional advice

- If an assessment instrument is not endorsed at Application 1, it is recommended to consult with the lead endorser about the endorsement decision directives before submitting the revised instrument at Application 2. These consultations are supportive and provide feedback to school communities to strengthen the endorsement process.
- Use the Print preview function in the Endorsement application (app) to check that the assessment instrument has appropriate page breaks, layout and other formatting features.
- Schools should provide correct marking schemes for IA2 and IA3 with marks allocated to indicative responses for all questions, as these support validity and accessibility in the design of the assessment instruments.
- Schools should check that IA2 and IA3 questions align with the 2025 syllabus subject matter, e.g.
  - concepts, formulas and conditions are explicitly described in the syllabus using defined terminology and notation
  - in Unit 3 Topic 1, students use techniques and statistical measures for identifying and describing associations between variables, whereas Unit 3 Topic 2 focuses on fitting a linear model to numerical data, association and causation
  - in Unit 4 Topic 1, students calculate the present value of ordinary annuities and compound interest loans and investments, whereas Unit 4 Topic 2 focuses on the future value of ordinary annuities and perpetuities
  - in Unit 4 Topic 4, students construct a project network diagram with the activity on the arc and dummy activities are excluded
  - in Unit 4 Topic 5, solving small-scale practical problems involving flow networks is for up to 8 possible cuts and the required concepts and skills are clearly identified
  - in Unit 4 Topic 5, the required optimum assignment could be a minimum or a maximum and the Hungarian algorithm is used for up to 5 x 5 square matrices.