

ENTRY LEVEL

Moderators' report

MATHEMATICS

R449

For first teaching in 2016

R449/01/02 Summer 2023 series

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Introduction

Our moderators' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

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General overview

Thank you to all those centres who correctly administered the tests and ensured that the required samples were sent to the moderator, after they were notified, along with the correct paperwork. Please remember that centres should wait until they are notified by email and then send their sample to the moderator.

There was a proportion of centres whose paperwork was incomplete or unsatisfactory in some way. Please make sure that the Coursework Summary forms GCW183 and the Controlled Assessment Cover Sheet CCS159 (both available from Teach Cambridge) are sent to the moderator with the sample. All correspondence with the moderator will be through email initially. Please make sure that the email contact address given to the board is correct and regularly checked. It is also essential that deadlines are kept to for all correspondence with the moderator if results are to be issued on time, especially informing OCR of the marks initially.

The area that is continuing to cause many problems with a significant number of centres was an increase in arithmetical and clerical errors as well as, for some centres, a lack of consistency across papers. Moderators were concerned that a significant proportion of centres (especially those new to Entry Level) were not completing sufficient internal moderation before marks were submitted. This should be done to check the following:

- - the mark scheme has been correctly and accurately applied
- - notes within the mark scheme have been read and applied
- - the mark scheme has been consistently applied by all markers
- - totals on individual papers are correct
- - totals submitted to OCR are correct.

In the long run good internal moderation will cause both moderators and centres fewer problems.

Moderators did note that a number of centres continued to use only one version of the assessments. While this is acceptable, it may be disadvantaging a proportion of candidates. Centres are reminded that there are 3 versions of each of the Preliminary and Final papers and candidates can attempt all versions and submit their best results. Centres are also reminded that the candidates should not resit the same paper twice within a two week period.

Centres are also considering how papers will be presented to candidates – whether back-to-back copies, as colour papers to differentiate versions or produced as a booklet. Please check that when papers are printed, all pages are present and stapled in the correct order when given to candidates and that all pages are correctly scanned if uploading the work to OCR. It is also not advisable to reduce the size of scripts although for some candidates, enlargements may be useful.

Marking – Written Tests

There was a general concern shown by moderators that a small number of centres were still not using the new versions of the mark schemes or not applying them correctly on both Preliminary and Final papers and therefore disadvantaging candidates. Where more than 1 mark is available for a question, in general the correct answer will gain full marks even if intermediate working has not been seen. In a reasonable number of cases the marking seen by all the moderators seemed to show a general adherence to the mark scheme, although there was a significant minority of centres where the mark scheme seemed to be incidental rather than central to the marking. A number of centres had candidates who had incorrect answers marked right and correct ones marked wrong. Teachers can (and should) write on scripts to clarify marking. There was also an increase in centres where candidates work had not been marked wrong. Please remember, these are examination scripts and should be fully marked even if they are also to be used as internal diagnostic tests. It is recommended that actual marks awarded are written on the scripts, not purely ticks to be counted.

Marking – Practical Task

It is essential that Practical Tasks are sent to the moderator with information regarding all of the following:

- -indication of the starter task and guidance given to candidates on their task
- -clear notes of how marks have been awarded for all three strands, especially on AO1 where reference to the skills criteria and level should also be clear
- -annotation of the scripts with skills criteria and level to explain where marks have been awarded for all three strands.

Where centres' final marks were out of tolerance, this was mainly to do with poor marking on the Practical Task.

When moderating the Practical Task, it was noted that a significant proportion of candidates were following a structure given to them and/or answering a set of questions supplied by centres but their work was being marked as if it had been done independently. If the supervisor has done the planning on behalf of the candidate by providing the structure or a set of questions, then there should be a maximum of 6 marks awarded on AO1 and no marks on AO3 unless the candidate has done subsequent independent planning. Where most candidates did the same task within each centre, this was more obvious. Centres are also reminded that marks for AO1 should either be marked out of 6 (structured tasks) OR out of 12 (unstructured tasks) NOT including both AO1 marks in the total.

Additionally, it is important that candidates who complete their own task and who are to be awarded more than 6 marks in AO1 should have a significant number of mathematical techniques to show at all levels and that the rough working is also included if a lot of work has been done using Excel or similar IT programs as this does not show mathematical skills at drawing graphs, for example. Just using IT to research information is not a mathematical skill. To achieve more than 10 marks there should be mathematical skills at all three levels obvious within the task.

With a large proportion of centres, there was no indication of how much discussion had occurred to help the candidates to improve their work. A discussion about the project should occur between an independent supervisor and the candidate to make sure the candidate understands the project they are presenting and has worked independently. This should then be annotated on the scripts where necessary. For many centres there was also no commentary included to justify how marks had been awarded in each strand. It is important that the breakdown of marks between AO1, AO2 and AO3 is included. Without this it is impossible for moderators to understand why marks are awarded.

OCR support

Please make sure that you have understood the difference between a 'structured' and 'unstructured' Practical Task. [Exemplars to help are available on Teach Cambridge.](#)

Comments on individual questions

On A1

Question 5: Please make sure the directions are clear and unambiguous for full marks. Do not accept the word 'up'; reference to '2nd right' must be clear.

Question 7 (b): The tally must be completed correctly.

Question 11: The explanation must include reference to 'tens' and 'units' (or 'ones').

Question 12: The numbers should have a description, not just be written out as a list.

Question 13: A minimum of 4 congruent triangles must be drawn for full marks but if one triangle is drawn correctly then 1 mark is available.

Question 15: The rectangle drawn must be correct for marks to be awarded. Part marks can only be awarded if the rectangle is wrong but some working can be seen.

On B1

Question 10: The explanation must include reference to 'tens' and 'units' (or 'ones').

Question 11: There should be no additional incorrect lines drawn.

Question 12: If the answer is wrong but the sum is seen (1 mark) and if they then do 'their total' $\div 7$ (1 mark).

On C1

Question 3 (d): The range must be given as '11' not '4 to 15' for a mark.

Question 5: Please make sure the measurements reflect the actual sizes on the paper.

Question 8: Shading is not required.

Question 9 (b): The angle is 40° .

On A2

Question 3: For full marks estimation must be seen. But the sight of 11.95 and 'no' can be awarded 2 marks.

Question 4 (b): Coins with values must be shown for full marks.

Question 12 (a): 'pm' must be included for full marks.

Question 13 (b): The coordinate must be in correct notation, not $x = \dots y = \dots$

On B2

Question 10: Please check that the angle matches that on the printed copy.

Question 11: The statement must compare their estimate with the amount of money.

Question 12: The triangle drawn, if wrong, may get part marks. Please read the notes.

On C2

Question 1 (b): Please read the notes to see alternative acceptable answers.

Question 10 (b): There must not be 'pm' with 24 hr clock times.

Question 12: The tolerance for this syllabus is ± 2 mm.

Question 13 (c): Please read the notes to check what marks can be awarded if the candidate does not get the answer correct.

Helpful resources

There is exemplar material to help centres marking the Practical Task available via [Interchange](#), alongside the live assessment material.

Candidate exemplars can be found on [Teach Cambridge](#).

Supporting you

Teach Cambridge

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