OCR

Oxford Cambridge and RSA

ENTRY LEVEL

Moderators' report

MATHEMATICS

R449

For first teaching in 2016

R449/01/02 Summer 2022 series

Contents

Introduction

Our moderators' reports are produced to offer constructive feedback on centre's assessment of moderated work, based on what has been observed by our moderation team. These reports include a general commentary of accuracy of internal assessment judgements; identify good practice in relation to evidence collation and presentation and comments on the quality of centre assessment decisions against individual Learning Objectives. This report also highlights areas where requirements have been misinterpreted and provides guidance to centre assessors on requirements for accessing higher mark bands. Where appropriate, the report will also signpost to other sources of information that centre assessors will find helpful.

OCR completes moderation of centre-assessed work to quality assure the internal assessment judgements made by assessors within a centre. Where OCR cannot confirm the centre's marks, we may adjust them to align them to the national standard. Any adjustments to centre marks are detailed on the Moderation Adjustments report, which can be downloaded from Interchange when results are issued. Centres should also refer to their individual centre report provided after moderation has been completed. In combination, these centre-specific documents and this overall report should help to support centres' internal assessment and moderation practice for future series.

Advance Information for Summer 2022 assessments

To support student revision, advance information was published about the focus of exams for Summer 2022 assessments. Advance information was available for most GCSE, AS and A Level subjects, Core Maths, FSMQ, and Cambridge Nationals Information Technologies. You can find more information on our website.

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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 were a large proportion of centres whose paperwork was incomplete or unsatisfactory in some way. Please ensure that both the Coursework Summary Form (GCW183) and a Controlled Assessment Cover Sheet (CCS159) for each candidate are sent to the moderator with the sample. All correspondence with the moderator will be through email initially. Please ensure that the contact email 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 is 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.

Centres who did well with their internal moderation generally checked 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 were correct   - totals submitted to OCR were correct.

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

Moderators did note that a number of centres continued to be using only one version of the assessments. Whilst this is acceptable, it may be disadvantaging a proportion of candidates. Centres are reminded that there are three versions of each of the Preliminary and Final Written Tests and candidates can attempt all versions and submit their best results. Centres are also reminded that candidates may only attempt each version of each test once within any two week period.

Centres are also considering how papers will be presented to candidates – whether back-to-back copies, on coloured paper 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. It is also not advisable to reduce the size of scripts although for some candidates' enlargements may be useful.

Marking of the Written Tests

There was a general concern shown by moderators that a number of centres were not using the new versions of the mark schemes or applying them correctly on both Preliminary and Final Written Tests and therefore disadvantaging candidates.

Where more than one 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 is 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.

Comments on individual questions

R449/W1A

Question 5: Please ensure that the directions are clear and unambiguous for full marks. Do not accept the word 'up'.

Question 7: The tally must be completed correctly for marks in part (b).

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

Question 13: A minimum of 4 congruent triangles must be drawn for full marks.

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.

R449/W1B

Question 10: The explanation must include reference to 'tens' and 'units'.

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

Question 12: In part (c), if the answer is wrong but the sum is seen then one mark can be awarded. If they then do '*their* total' ÷ 7 they can earn another mark.

R449/W1C

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

Question 5: In part (a) please ensure the measurements reflect the actual sizes on the printed paper.

Question 8: Shading is not required.

Question 9: In part (b) the angle is 40°.

R449/W2A

Question 3: For full marks estimation must be seen.

Question 4: values of coins must be shown for full marks.

Question 7: In part (a) the reflection MUST be in a vertical line, not horizontal.

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

R449/W2B

Question 11: In part (b) the statement must compare their estimate with the amount of money.

Question 12: An incorrectly drawn triangle may be awarded part marks. Please read the Guidance column carefully.

R449/W2C

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

Question 12: In part (b) the tolerance is $\pm 2\,$mm (this is the tolerance for the R449 specification).

Marking of the Practical Task

It is essential that Practical Tasks are sent to the moderator with the information as shown in the following textbox.

Centres who did well with the marking of their Practical Task had generally checked the following
• there was an indication of the starter task included • guidance about how the task was introduced was available • clear notes were written either on the task or accompanying paperwork to explain how marks had been awarded for all three strands • reference to the attainment criteria and levels attained for AO1 were clear • scripts were annotated to show why marks had been awarded.

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

Additional comments

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). Do NOT include 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. Rough working should also be included, particularly 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 10 marks or more, there should be mathematical skills at all three levels shown 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 task should occur between an independent supervisor and the candidate to ensure the candidate understands the task they are presenting and has worked independently. This should then be annotated on the tasks 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 have been awarded.

> **OCR support**
>
> (i) Exemplar material, to help centres mark the Practical Task, is available via Interchange, alongside the live assessment materials. Of particular note are the examples of what is deemed a structured task and how to mark them.

Supporting you

Post-results services

If any of your students' results are not as expected, you may wish to consider one of our post-results services. For full information about the options available visit the OCR website.

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ExamBuilder is the question builder platform for a range of our GCSE, A Level, Cambridge Nationals and Cambridge Technicals qualifications. Find out more.

ExamBuilder is **free for all OCR centres** with an Interchange account and gives you unlimited users per centre. We need an Interchange username to validate the identity of your centre's first user account for ExamBuilder.

If you do not have an Interchange account please contact your centre administrator (usually the Exams Officer) to request a username, or nominate an existing Interchange user in your department.

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01223 553998

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