



## Alternative Certification Model 2020–21: National QA Exercise Key Messages

<b>Subject</b>	<b>Statistics</b>
<b>Level</b>	<b>Advanced Higher</b>

This report provides information on themes emerging from the national quality assurance exercise, which is part of the Alternative Certification Model for National 5, Higher and Advanced Higher courses.

A sample of candidates' assessed work from selected centres was reviewed to determine whether assessment was in line with the national standard. The evidence submitted may have been partial or incomplete and is unlikely to have represented all of the evidence that will be gathered to allow the centre to determine a provisional result.

The centres selected for review in this subject and at this level have been provided with specific feedback on the evidence that they submitted. The comments below highlight key points about the assessment approaches and instruments used and the sampled centres' assessment judgements, for all centres delivering the subject at this level to reflect upon and make any appropriate adjustments.

## Section 1: Comments on approach to assessment

In each centre, candidates had been assessed against the same assessment instrument(s), rather than different instruments for different candidates. This supported the consistent application of standards and marking instructions within each centre.

In general, most centres provided assessments that had been administered during the first term of Session 2020–21. There was a wide range of course coverage in these. However, most assessment instruments contained a good range of challenge and an appropriate number of questions examining the candidates' understanding of relevant assumptions behind the theory.

The number of major assessment events scheduled during a session varied between centres, appearing to range from zero to three major assessments of significant time duration. Centres are reminded that it is not the quantity of evidence, but the quality of evidence that is most valued. See here: [https://www.sqa.org.uk/sqa/files\\_ccc/ah-guidance-evidence-statistics.pdf](https://www.sqa.org.uk/sqa/files_ccc/ah-guidance-evidence-statistics.pdf)

Where questions and marking instructions from older past exam papers were used, centres are advised that some of the older marking instructions do not contain sufficient details of how individual marks are allocated. In addition, the number of marks previously awarded for a standard solution may have changed. Centres should refer to the 2017, 2018 and 2019 marking instructions for the latest guidance on how their own questions can be calibrated. Similarly, older examination questions' marking instructions did not clearly signpost which marks were considered more challenging, at grade A. Centres should make use of the 'Advanced Higher Statistics Subject-specific guidance on gathering key evidence in session 2020–21', which explains what makes both grade C and grade A skills. It is acknowledged that this information has only been available since January 2021, but it can inform the future use of internal assessment instruments. We recommend that when constructing future internal assessments, close attention is given to the challenge of each mark.

Where the 2021 SQA secure papers were being used, but could not be administered in a single sitting, the assessment paper had been appropriately split into two smaller papers whilst also including elements of optionality.

However, centres should be aware that if they were unable to use the new Paper 1, then the skills associated with the topics of Linear Regression and Exploratory Data Analysis may need to be assessed by other means, to ensure full course coverage and greater reliability of provisional grades.

## Section 2: Comments on assessment judgements

The marking of scripts revealed a range of standards being employed by colleagues who are not experienced markers of AH Statistics, and this is understandable especially alongside the immense time pressures this session. On the whole it was evident that, in all cases, the very best efforts had been made by individuals and teams to fully engage with the process of consistent marking to the required standard.

There was ample evidence of colleagues collaborating with those from other centres when moderating assessment scripts, and this is to be applauded — especially when operating under COVID-19 restrictions on distancing.

Where a full moderation process had not been completed ahead of sending materials to the SQA, centres did indicate that this was to be done before provisional results were determined.

Where candidate scripts had been moderated and a difference of opinion for the number of marks to be awarded was evident, in nearly all cases it was clear what the final decision was for each candidate.

The illustrative information of SQA marking instructions is often the minimum response required to gain a mark. For example, candidates need to include ' $H_0$ ' and ' $H_1$ ' as part of their statement of hypotheses in order to gain the mark. Also, when the Central Limit Theorem is used, clear communication that the distribution of the sample mean is approximately normal (for sufficiently large sample sizes) must be made by either the explicit use of the word 'approximate' or the use of the double tilde ( $\approx$ ) symbol. The omission of both of these would not gain the mark for this point of communication.

Where the secure SQA papers were used, centres sensibly included their extra notes and comments to the marking instructions to ensure consistency in the way these were applied.

In some candidates' scripts, there were instances of 'bad form' that were correctly not penalised by markers. However, this is an opportunity to remind candidates of best practice, including such aspects as using capital letters for random variables, and avoiding premature rounding of decimals.

Centres are reminded of the range of materials available on the Understanding Standards website (<https://www.understandingstandards.org.uk/Subjects/Statistics/AdvancedHigher>) that can assist in better understanding how to mark scripts in line with SQA standards.

Some markers indicated on scripts that the 'Benefit of Doubt' had been exercised, shown by a letter 'B'. Centres are advised that use of this marking convention only relates to the marking of unit assessments (that are no longer part of the course award), and not for course assessments. However, their inclusion is understandable as it can often assist a moderator in better understanding those marks that were confidently awarded and those that may require closer scrutiny.