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# Entry Level Certificate Mathematics

5930 ELC Mathematics Report on the Examination

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#### Introduction

This was the third series of the 5930 specification; the second series being taken in January 2018 with a smaller entry than the summer entry. The opportunity for a January entry is useful for centres with either strong students at Entry Level 3 who wish to secure an award before taking GCSE Maths or students who are not going to complete anything further on this award for various reasons. Centres are still predominately using the option of completing all eight components externally and students are being very successful at demonstrating their skills with this option.

This report on the examination is split into three sections:

- Externally Assessed Components
- Internally Assessed Components
- Administration

#### **Externally Assessed Components**

When externally assessed components are taken students must enter their centre number and candidate number on the front sheet of every externally assessed component. These are comparable to external exams that students take sitting in a hall and must include the candidate's identification. This information rarely appeared in the top boxes on the external assessments.

Please also note that for the externally assessed components corrections are not allowed. Moderators have seen an increase in this practice, and it is difficult to spot whether the candidate has corrected their own answers after spotting a mistake or have been prompted to do this by a teacher who has seen an incorrect answer. This can result in a centre being investigated for malpractice if the moderator is unclear about the nature of the candidate's work on the external assessments. Corrections are, however, allowed on internally assessed components.

Unfortunately for students, there have still been one or two centres submitting the specimen external assessments. Please take care when submitting portfolios that only live assessments from Sets 1, 2 or 3 have been used as students get no marks from specimen assessments. On the positive side, there were no centres completing a mixture of the current 5930 assessments with some assessments from the previous 4930 specification.

One or two centres sent two copies of the same assessment, which is not allowed and could be deemed to be malpractice. Students should be offered one of the other sets if they need to re-sit a component to achieve a higher score. When this is seen by a moderator the score that is used for the portfolio is the lower of the two scores.

One of the biggest problems this series, more than any other series, has been the addition of assessment scores. There have been very few portfolios where marks have been correctly added across the 8 components. Some of the problems arise from the variety of marking styles. Moderators have seen ticks, dots, and circles round scores. The recommended method of marking the assessments for complete clarity is that when answers are 'ticked' or 'crossed' the marks awarded for that question should then be written next to the number allocated for that question in the right-hand margin. If a question is worth 2 marks and there is a 'tick' next to the student's answer then there should also be a '2' in the right-hand margin. This is where inconsistencies in totalling of scores occurs most frequently. Moderators can then check if a question has been marked correctly. It is also helpful to add up the scores across the double/single page and put the page total boxed in, or circled, at the bottom of the right hand page.

Increasingly, moderators are seeing assessments marked in the same colour that the candidate has used to answer the questions. It is recommended that a colour such as red or green is used,

as students are expected to answer the questions in black pen, as stated on the front of the assessments. Corrected answers, by the assessor, should also not be seen on external assessments. There is no need to write anything on the external assessment other than the mark awarded for each question and the ticks or crosses.

It is expected that assessments within a centre have been standardised across teachers and teaching groups. The Centre Declaration Sheet is where this is declared to have happened. If there is only one teacher and one group it would be useful if there could still be a second person who verifies that the marking is accurate, to stop totalling errors occurring before the scores are entered on the e-submission system.

It is becoming more evident, from the amount of marking errors and totalling errors, that many centres are not using the published mark schemes, and if they do the comments columns are not being read or applied accurately enough to make the marking accurate. If there are queries on applying any mark scheme the Coursework Advisor can be approached for guidance.

In all external assessments, if a student writes down two answers, whether one is correct or not, then no mark can be awarded for this situation. Many centres give a mark for the 'correct' answer.

#### **Component 1 - Properties of Number**

This component has become badly marked. As long as the intention is clear, when numbers are written as words, any incorrect spelling of numbers to words is condoned. The value of an underlined digit also has several acceptable forms, which are all made clear in the mark scheme.

#### **Component 2 - The four operations**

Calculators **are not** allowed in this component, but increasingly moderators are seeing answers only, without evidence of a written method, which for the level of the students taking this award would be difficult. Students continue to find difficulty in division questions and the questions testing understanding of repeated addition as multiplication, as they fail to tackle these questions correctly. The other difficult question continues to be the 2-mark problem solving question testing outcome 3.4

#### Component 3 – Ratio

This is also a difficult component for many students. Students understand shading of sections of a diagram as a fraction, they can find unit fractions of a quantity, such as a fifth or a seventh, but have difficulty with four fifths or two thirds from outcome 3.4. They can often add and subtract fractions with the same denominator successfully, but have difficulty completing a number pattern going up in halves, thirds or quarters which tests outcome 2.3

#### **Component 4 - Money**

This is not a difficult component for the majority of students, except for the correct use of units of '£ or p' on their coins. Centres also badly mark this component, because marks are at times given when these units are missing and the mark schemes for all 3 sets are really clear in the 'Comments' column when these units must be present. When not marked correctly this can result in a big adjustment to students' scores. There was evidence this year that some students could have been prompted to add the units after the assessment has been taken, which is another trigger for an investigation of malpractice.

Students should also be taught that the correct notation for money is in the form £3.65 not £3.65p, even though the mark scheme condones this incorrect version. Please also note that 0.75p is not the same as 75p or £0.75; this was marked correct by several centres on the Set 1 Assessments in question 13(a). There are also two questions on Set 1 that allow follow-through answers from an incorrect response for 13(a) or 19(a), which were often marked incorrectly.

#### Component 5 - The calendar and time

This component was marked much better this summer than last summer. Centres may have noted the comments from last year's report about not penalising students for the length of hands when drawing a time on a clock face. However, please note that the hour hand must be at least 'on' the correct hour for a mark to be awarded. It would be helpful if students could have additional practice on drawing hands on a clock face prior to taking the assessment.

As this component requires accurate drawing, some students may need a scribe to enable them to achieve all the marks, and if so, a JCQ Form should accompany the work.

#### **Component 6 – Measures**

In the first series, many students 'measured' the lines drawn on a centimetre grid, which, due to printing distortions, were not an exact number of centimetres, and the report on the exam and moderator feedbacks specified that only the published answers were to be marked correct. This has resulted in much better marking of this question this series.

Centres must follow the mark scheme and only give marks for the correct answer. However, in this component, some questions require precise measuring and have comments to ask centres to check the length of their printed papers and allow the 2mm tolerance either side of the true measurement, as distortions can occur when photocopying. On many occasions student answers were marked incorrect when, in fact, they had been answered correctly.

Students struggle to convert from one metric unit to another and also still find it difficult to select lengths in different units, such as metres and centimetres, and compare the total to a requirement, which tests outcome 3.1. Centres also have difficulty in marking this question, but all the acceptable answers can be found in the comments section of the mark scheme.

#### **Component 7 – Geometry**

This component continues to be the one on which students gain their highest marks. They recognise shapes and solids and can describe their properties. They have most difficulty with identifying horizontal, vertical and parallel lines and score badly on these questions. Some practice before taking the assessment may help alleviate this problem.

Rulers and pencils are still not being used for the drawing questions. Students show understanding of symmetry, but are careless when drawing lines freehand without a ruler and often draw their lines outside the 2mm tolerance or draw one or two lines near each other. When these questions are marked, the 2mm tolerance is often not adhered to, and questions are marked correct when the lines are out of tolerance.

#### **Component 8 – Statistics**

Students must be encouraged to use a ruler and a pencil when completing graphs, which should be drawn in the style of the rest of the bars/blocks already drawn, and if not drawn in that style then should be marked incorrect. There are a lot of very untidy graphs being seen.

This component continues to be badly marked, particularly when students are completing tally charts and frequency tables. The mark scheme must be followed exactly, as these questions carry 6 marks altogether. The completion of a tally chart, outcome 2.3, is being marked incorrectly when frequencies, instead of tallies, are written in the tally column of the table. In the question testing use of a frequency table, outcome 3.4/3.5, students get a mark for evidence of tallying in 5's, then they also gain a follow through mark if they convert 'their' tallies correctly into the frequency column, irrespective of whether the tallies were correct. If the frequencies are correct they gain the final mark.

#### Internally Assessed Components

AQA has provided free downloadable worksheets for each of the outcomes across all 8 internally assessed components. These resources are annotated correctly and fulfil all the requirements for each outcome. When submitting internally assessed work most centres did use these resources. Please note that most of the worksheets comprise at least 2 pages and have a box at the bottom of the worksheet that can be ticked to show awarding of an outcome, and if the outcome is not awarded a comment for the moderator would be very useful. Some centres only printed the first sheet of the outcome and therefore there was not enough evidence to award the outcome.

One or two centres continue to use their own worksheets, and it is always pleasing to see a few really well thought out worksheets that enable students to show their competency. However, as I noted in my report last year, some centres chose to use a commercially produced set of worksheets. Unfortunately, this resource does not address all the outcomes adequately, particularly in Components 1, 3 and 6, where up to 8 outcomes cannot be credited because these outcomes had either been misunderstood by the author or there were insufficient examples to prove competency. When centres used this resource as evidence, students had scores adjusted significantly during moderation, with the result that students might receive a lower level of award.

Several centres continue to misunderstand the awarding of internally assessed outcomes by rewarding students for just attempting to complete an outcome on a worksheet, rather than by demonstrating their competency in it. Internal work can be corrected by students and work can be annotated to show amended answers are now correct.

In a few instances, work was submitted that bore no resemblance to the specification and/or was not annotated with the component and outcome, which provided moderators with the difficult task of trying to secure marks for the students who, through no fault of their own, were not going to receive the award at the correct level. Please check through the outcome requirements carefully, as they are very specific. For example, Component 2 outcomes 2.4 and 3.4 require students to use and interpret +, -,  $\times$  and  $\div$ . If students only answer questions on addition and subtraction this does not fulfil the requirements.

Some centres were overly severe on their awarding of outcomes. Students do not have to get 100% on the internal work to be awarded an outcome. As long as approximately two thirds of the questions are answered correctly and the assessor knows that the student has achieved the outcome then the moderator will support the decision. However, in some instances, the assessor may need to look specifically at the questions that the student has answered correctly to make sure that the full outcome has been successful.

Internal work is also expected to be marked. It is not the role of the moderator to mark the work, therefore if work is not marked moderators will return it to centres to be marked. There should also be no 'global' ticks. Each question should be marked right or wrong so that the moderator can see how much of an outcome has been answered correctly. There were also instances of internal work being incorrectly marked by centres. Work sent in exercise books without annotation or a copy of the worksheets used is not acceptable and will be returned to the centre for further clarification.

Please take care when using internal work for Component 4 - Money. It is expected that answers will only be deemed to be correct if the students include the '£ or p' on their answers, as in the external assessment. Students should be taught to include the units as, for example, '2' could stand for £2 or 2p. It is good teaching to get students to correct their answers with the appropriate units, which will help them as they move up to GCSE.

#### Administration

This year there has been a big increase in the omission of necessary paperwork in the samples being sent. Moderators sent many emails to centres to request this paperwork, and in many instances moderators have received parcels with loose piles of assessments, not even secured together in any form.

The bullet points below list the main mistakes with administration, when Moderators have had to contact centres before moderation can be started or completed:

- no Centre Declaration Sheet the most common problem
- no Candidate Record Forms, or incorrect completion or addition of scores
- no Candidate Record Sheet used to inform the moderator which outcomes are being claimed
- marks not being input by May 15<sup>th</sup>
- incorrect totals being entered into the e-submissions
- portfolios not arriving by May 15<sup>th</sup> if there is going to be a delay then an extension might be given if agreed with AQA
- centres not responding to moderator emails, requiring further emails or phone calls
- no JCQ form when a candidate has had a scribe or a reader

The following common errors have been made with students' portfolios:

- plastic wallets or folders/files have been used portfolios must be secured with a treasury tag, with the Candidate Record Form on top followed by the Candidate Record Sheet, which is only required if there are internally assessed components
- work has been organised in Component order, i.e. all Component 1 for all students has been collated together - all the work for one student should be together, preferably in component order
- no candidate number or centre number on the front page of each external assessment with a candidate signature on the front of each of the external assessments
- incorrect addition on the Candidate Record Form when this happens some students may end up with a level different to the one they expect. For example, if a student's score should be 193 but was added to 189 then they might be awarded an Entry Level 2 rather than an Entry Level 3 if the incorrect score straddles a grade boundary. This may not be picked up at moderation if that candidate's work has not been selected for moderation by the e-submission system
- on internally assessed components some centres failed to award 'subsumed' outcomes, which are easily spotted on the Candidate Record Sheet. If an outcome has been completed and there is another outcome in brackets on the sheet, then this outcome can also be awarded. Evidence does not have to be seen for the subsumed outcome.

Overall, students have scored very well on this specification for Entry Level Mathematics and moderators have seen a lot of very high marks. There are very few students at the lower end of scores, implying that students have responded well to the increase in content for this award. However, because the grade boundary marks may change from year to year, centres should try to make sure that students achieve as many outcomes as possible and re-take external assessments in order maximise the points achieved. This should enable the majority of students to move forward onto GCSE Mathematics post-16.

Please note that each centre has a Coursework Advisers who can be contacted to help with any questions. If a centre does not have details of their coursework advisor then AQA can be contacted to provide details – please email <u>maths@aqa.org.uk</u> to request the information.

### **Use of statistics**

Statistics used in this report may be taken from incomplete processing data. However, this data still gives a true account on how students have performed for each question.

## Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the <u>Results Statistics</u> page of the AQA Website.