Pearson Edexcel

Examiners' Report
Principal Examiner Feedback

October 2020

Pearson Edexcel International Primary Lower Secondary (iPLS)
Year 6 Mathematics (JMA11/01)

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October 2020
Publications Code JMA11_01_2010_ER

General comments

2020 saw the introduction of a second, autumn sitting, of JMA11. Candidates were able to access the majority of the questions well. As in previous sittings of this new specification, the paper has more questions where method marks are possible, and centres must continue to encourage their students to show working in order for these marks to be allocated. It is pleasing to see that centres are continuing to encourage candidates to show their working in the space provided on the examination paper, thus allowing for the award of method marks where possible.

Section A, as always, is a 20-question multiple choice section, each question worth 1 mark. Candidates continued to do well on this section, this new specification paper has more straight forward and accessible questions in this section with candidates scoring well throughout.

Section B is made up of 1- and 2-mark questions; the final question being a 3-mark problem solving question. Candidates who show their working are able to pick up more marks for their method. Those who do not show working sometimes miss out on awardable marks following arithmetic errors, as these could not be seen and worked through. As with the iGCSE it will become more common to see marks only awarded on some questions if working is seen.

Question 21: Interpreting Distance Charts
Students appeared to struggle with reading this type of distance chart. 65% were able to find the distance required in part a), however selecting the required distance and correct calculation for part b) proved to be much more challenging with just over 10% of students managing to score on this part of the question.

Question 22: Fractions, Decimals & Percentages
Converting between fractions decimals and percentages was tackled well, with an average of 85% of students scoring on each section. This was very pleasing to see.

Question 23: Measuring & Calculating Angles
Students found measuring an angle difficult with just over half scoring this mark. Centres need to ensure that students are able to use their protractor correctly. Calculating the missing angle was answered more successfully, with almost 80% success; students clearly knowing that there are 180° in a straight line.

Question 24: Ordering Decimals
As in past series, students seem well practiced in ordering decimals even when there are differing numbers of decimal places. This question was answered well with a success rate above 80%.

Question 25: Range
Not all students realised that the range of a mixed set of data required them to find the difference between the largest and smallest numbers. 40% did not score here; many due to selecting the first and last numbers in the list and finding the difference, rather than identifying the largest and smallest.

Question 26: Addition & Subtraction of Money
Pleasingly, over 80% of students successfully calculated the amount of money spent; with more than 70% then managing to subtract their total in part a) from $30. This was a follow through answer so any answer below $30 in part a) subtracted from $30 would have scored this mark.
It is worth centres reminding students to check 'does my answer make sense?' If I get an answer over $30 in part a) why would part be asking for change from $30 and if I am subtracting £29+ my answer is not going to be very large.

Question 27: Calculation Fractions
Working with fractions is another area students continue to achieve, which is nice to see. Almost 90% showed that they can add fractions with the same denominator. Pleasingly, around 75% of students also managed to successfully gain marks for finding fractions of whole numbers.

Question 28: Multiplication & Division by 100 and 1000
This question was tackled well with two thirds of students managing to work with both multiplication by 1000 and division by 100 successfully. This type of question is common at higher levels and centres would do well to ensure that more students understand this concept.

Question 29: Number Sequences
It was surprising that so many students could not identify the next number in a simple number sequence, with only 65% achieving this mark. It was pleasing though that over 40% were able to take the question a step further and work with the n^{th} term.

Question 30: Presenting Data
Presenting data in this way seemed challenging for students; with many appearing not to have previously worked with a 2-way table. Less than 50% achieved marks; many losing them in both part a) and b) because they failed to fill in the vertical total's column with 24 and 6 from an otherwise correct table of values.
Centres would do well to revisit this topic and ensure that students are aware that the values in the total row and total column can be used to verify a correct solution.

Question 31 (a): Multiplication
Multiplication is a regular question on this paper and as always it was well answered with over 80% gaining at least 1 mark. It is now much more pleasing to see students showing their working, thus allowing for method marks to be pick up for minor errors. However, a very disappointing error from many was the incorrect addition of their two correct rows of multiplication. A little more care would have given them both marks.

Question 31 (b): Division
Division is also a question which appears on most papers; and again, it is pleasing to see more students achieving well, with over 75% gaining at least 1 mark. Division has not always been well answered on past series, so it was pleasing to see that centres had clearly been working on this topic and encouraging students to show their working.
Long division was the most popular method seen but a number of students, although able to make a correct first step, thus scoring a method mark, were unable to complete the method and arrive at the correct answer.

Question 32: Square & Cube Numbers
A surprisingly poorly answered question with 80% of students failing to pick up 1 mark. Students were able to achieve the method mark for listing either the square or cube numbers up to 64. Many failed to show any working, with some jotting just the first few square numbers.
Centres should try and encourage their students to break down a problem into smaller steps. For example, in this question a list of the first 8 square numbers or a list of the first 4 cube numbers would have resulted in a method mark being awarded. Those students who arrived at the correct answer of 64 rarely showed any method. Again, students should continue to be encouraged to show their list of numbers before writing their answer on the answer line.

Question 33: Working with Time
This was a new approach to answering question, by explaining their method. It was answered extremely well with above 75% managing to score at least 1 mark.

Many well explained solutions were seen; with clear processes and deduction that Zain was in fact 1 minute late. Those students who did not manage to score any marks often appeared to know what calculations were required but were unable to fully explain the steps they were taking. A timeline is a useful technique to employ in answering this type of question which should eliminate the sight of times like 7.61when adding 19 minutes to 7:42

Question 34: Volume
For a question this late in the paper, students did well to realise that they were working from the volume answer to find the length of the missing side. It was pleasing to see almost half of the students gain this mark.

Question 35: Manipulating Algebra
It was pleasing to see how many students were able to gain some marks on this level of algebra. There appears to be more knowledge of manipulating these types of algebraic questions each series.
Students found simplifying most difficult with around 25% success, increasing to almost 50% achieving at least 1 mark for expanding and approximately 70% of students now able to solve a simple equation to find a value of x.

Question 36: Construction
Where attempted, this question was answered well with 60% of students being awarded at least 1 mark and almost 45% achieving both. A significant number of students were either unable to use a protractor, centres should practice this skill in readiness for future examinations and ensure all students have access to a protractor in the examination room. Common errors were from those students who thought the required triangle needed to be an isosceles or constructed an equilateral triangle.

Question 37: Problem Solving
As always, the last question on the paper is a 3-mark problem solving question. This question proved challenging for most students; however, it is an important life skills questions which centres would do well to practice. As a practical everyday example, it is a good way to understand ratio. Students need to learn how to build up from 12 cookies to 24 cookies by doubling the ingredients. The next step is to realise that the ingredients for 6 cookies will be half that needed for 12 cookies.
Very little method was shown; it was therefore very difficult to award marks for how the students worked through the problem. Common misconceptions with this question were for students to subtract the values needed for 12 cookies from the ingredients given or to just add both sets of values together and giving that as their answers.

General:

- It was very pleasing to see many more students showing their working on the paper, in pen, and not working out in pencil then erasing their working.

- **Presenting Data -** centres need to be aware that students might be asked to display and present data in a variety of ways and should look at different methods for this; as highlighted in the specification and scheme objectives.

- **Problem Solving –** centres need to encourage students to break down problems; to identify what information they are given, what they are being asked to find and what steps they might need to take.

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