

Examiners' Report

Summer 2014

Pearson Edexcel PLSC in Mathematics Year 6
(JMA01/01)

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PLSC Mathematics Year 6

Specification JMA01/01

General Introduction

This year the overall performance of JMA01 was very encouraging with the vast majority of students attempting all questions. The test allowed students to achieve P1, P2 or P3 and a good mix of achievement was seen.

The paper is divided into two sections; the first being multiple choice and designed for OMR. The students on the whole provided answers correctly identified for the OMR reader. On occasion answers were not clear or more than one was offered. There were a number of students who circled the correct multiple choice answers or marked more than one response, also on occasion students chose to write the correct answer alongside the question. As this paper is still being traditionally marked in both sections, examiners were able to award marks to these students, however students need to be made aware of these issues for future papers.

In Section B, for the most part students made a good attempt at this paper, with the majority providing an answer for every question. The lack of visible working penalised some students as marks for method could not be awarded and potential transcription errors could not be identified as previous steps were not shown. On occasion, students had set out their working in pencil then rubbed it all out and written their final answer in pen. Students must be reminded that their working can gain marks and therefore be encouraged to leave all working out visible and available to mark.

Report on Individual Questions

Question 21

A well answered question with most students scoring the mark. The $\pm 2\text{mm}$ tolerance allowed for most lines and vertices to fall within scoring range.

Question 22

Many students looked at this as if the shape that needed to be shaded was the rhombus inside the rectangle, rather than the whole shape made up of 8 triangles. This led to a great deal of 3 inner triangles shaded seen as the final answer (rather than 6).

Question 23

Students appeared to go with their first multiplication here, not many showed that they had tried different methods to find larger totals. 212 was seen as a regular common error, also just putting 43×5 onto the cards and not actually writing the final answer of 215. On the whole, this question was well answered.

Question 24

The majority of students picked up at least one mark here, usually for 29 and 37, however a good number also scored the second mark for finding -3. The special case allowed a few students to gain a mark when they had found -3 but made a calculation error with 29 but followed through correctly.

Question 25

A number of students could not read the analogue clock and gave a variety of incorrect times in Q25(a). The most common being 11:45 and 9:54. The follow through mark allowed these students to show that they could actually add times by offering answers of 1:20 and 11:29 respectively for Q25(b). Other students managed to read the time and present it in digital form, however could not offer a time 1 hour and 35 minutes later.

On the whole this question was found to be challenging.

Question 26

A well answered question with the vast majority of students managing to pick up both marks.

Question 27

There were plenty of fully correct answers here, but a clear indication that this sorting diagram is not fully understood. It was clear that the majority of students understood multiples and odd numbers. The majority placed 6 and 13 correctly therefore gaining the first mark. However many seemed to have misunderstood the intersection and placed 9 and 21 as odd numbers and again as multiples of 3 (rather than inside the intersection).

Question 28

This question provided mixed responses.

- (a) Was either correctly answered with correct decimal notation or clear misunderstanding of place value with $8.95 - 5.2$ giving a variety of answers depending on where 5.2 had been placed in column subtraction.
- (b) Unfortunately many students could not be awarded the method mark here as working was not available to mark. If 13.5 was not given as the correct answer very few students managed to add up the three times and subtract them from 51.3

Question 29

The vast majority of students managed to score this mark.

Question 30

This question picked out the students who could work through a problem style question with a good number gaining both marks.

Question 31

Q31(a) and Q31(b) of this question were well answered, with only a minority of students giving the co-ordinates of D the wrong way round.

Q31(c) seemed to be more challenging, and gained a variety of responses. A number of students just redrew the original shape underneath. Common incorrect responses were also; 14 x 1 rectangle, 5x2 rectangle or L and T shapes of area 12 cm^2 .

Question 32

On the whole this question was found to be challenging; many students again chose not to show their working.

Question 33

Students struggled to gain marks on this question and of the minority who did, they tended to score all three. A small percentage of students managed to score the first mark, which was a dependent mark, but were unable to use the length to answer to following parts of the question. Students need to show systematic working out.

Question 34

Most students were able to show a correct method to evaluate this question, which in the majority of cases went on to produce the correct answer. It was good to see fully worked through methods here. One common error which lost the mark was in the final working, for not knowing that eight 6's are 48.

Question 35

There was good proportion of correct responses to this question. The majority of students attained the mark for Q35(a) with the majority of these also attaining the mark for Q35(b). Where the mark was not gained for Q35(b) many students gave the answer 4.

Question 36

In the first part of this question, most students were able to identify $\frac{3}{10}$ and represent it as 0.3 on the number line. A frequent error was indicating 0.7.

Students found the second part of this question difficult and struggled to express their answers. Very few marks were awarded and many incorrect responses included; 'because we do not know how many balls are blue' or 'there were no blue balls'. The students who did gain this mark gave very clear and precise reasons for not being able to have half of 5 balls.

Question 37

This was found to be a challenging question. Q37(a) was frequently incorrect with students offering a time rather than length of time. Q37(b) and Q37(c) were answered correctly more frequently with students showing the ability to read a response directly off a graph.

Question 38

This question attracted a mixed response of answers. Students either understood mean and range, gaining the marks for using their skills to solve the given problems or they understood mean and range and used the data offered in the question rather than solving the problem – therefore offering an answer of 3 in Q38(b). This did however gain a follow through mark if no response had been given in Q38(a).

Q38(a) saw the least marks awarded and common incorrect responses of 8 and 11. Many students scored in Q38(b), frequently gaining the follow through mark. Q38(c) was well answered, students who scored nothing in Q38(a) or Q38(b) often gained this mark.

Question 39

Overall a well answered question. Q39(a) was answered correctly by the majority of students with them working out that the triangle would be the 20th shape. Q39(b) was less successful, but still many students managing to identify 4 as the 20th number. Where 4 was not given, the most frequent incorrect number offered was 2.

Where working was seen for this question students continued to draw and number the pattern, this usually produced the correct triangle with a 4 inside – which gained both marks.

Question 40

Very few students gave the correct answer for this question. The most common correct response being $1 \times 2 \times 10$.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

<http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx>

