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Principal Examiner Feedback

Summer 2016

Pearson Edexcel Level 1 Award in Number and Measure (ANM10) Paper 1A + 1B

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Introduction

This exam paper was found to be relatively straight forward and gave a good range of marks for the award of a pass.

Though many students showed their working out there was still far too many cases when it was missing and caused many students to lose marks.

Almost all students had the necessary equipment which was gratifying to see. However there were some blank responses to Q7, indicating there were some students without equipment such as ruler and protractor so that some students drew their lines freehand.

Judging by the number of non-calculator methods shown for some of the solutions in Section A, the calculator allowed section, a significant number of students did not seem to have a calculator or if they did they chose not to use it.

Some students continue to mix up their methods when finding the perimeter and area of a rectangle and the volume of a cuboid.

The design of this paper was consistent with previous papers and the performance of students on this paper was consistent with that expected when the paper was set so that a pass mark of about 66% of the total mark could be considered as showing proficiency in Number and Measure at Level 1

Reports on Individual Questions

Section A

Question 1

This question was very well understood and almost all students gained the 3 marks. The cost of the cheapest fridge (£81) was condoned as a correct answer in part (a) though the correct makes were needed for (b) and (c).

Question 2

Parts (a) and (b) were well answered with almost all students gaining the marks. However the success rate dropped slightly in (c) as students often chose to write 822 to the nearest hundred or incorrectly rounded up to 830. Those students with calculators usually gained the marks for parts (d) and (e) though some chose to add the 13.6 in (d) rather than subtract it.

Question 3

There were mixed responses to this question. Part (a) was poorly answered as many students wrote that $\frac{4}{5}$ or 0.45 was 45% as a fraction. Common mistakes in (b) and(c) were to divide by 3 and multiply by 5 in the fraction in part (b) and to divide 600by 30 or 3 whilst trying to find the percentage in (c).

Question 4

A well understood question with almost all students scoring marks. The most common mistakes were to ignore the multiple amounts but 2 marks were allowed for an answer of £5.51 following a correct follow through for this error. Many students found the cost of
3 bottles or 2 packets but not both and could gain 3 marks for a follow through answer from their incorrect total.

Question 5

Drawing the hands on a clock face correctly in part (a) was a skill that was sadly lacking by many students with many drawing the minute hand to show a time of twenty past three and some showing the hour hand pointing towards the two and even passing the three. Inaccuracy was also a problem with many students choosing to draw the hands freehand rather than using a ruler. In part (b) a large number of students still think that there are 100 minutes in an hour with many responses of 2 hours 75 minutes being seen. The most successful students were those that added the component parts by counting on 15 minutes, 2 hours and 20 minutes.

Question 6

Almost all students were able to read correctly the thermometer in (a) but then came unstuck when they tried to find the difference between 14 and –6. Some incorrectly counted whilst other just wrote down the reading on the scale.

Question 7

Many students find using a protractor difficult and 105° was a common wrong answer to part (a). In part (b) almost all students with a ruler were able to draw a line of the correct length.

Question 8

Changing units questions often cause problems for students as they frequently multiply when they need to divide and vice versa. A common wrong answer to part (a) was 360 with a variety of wrong answers to part (b), dependent upon whether the student had divided by 10 or 100 instead of 1000.

Question 9

Parts (a) and (c) were almost always written in the correct order but students sometimes made mistakes with the decimals in part (b), though these were fewer in number than in many previous sessions.

Question 10

This question on interpreting and drawing a graph was well understood and well answered with almost all students gaining the mark in part (a) though a few mistakes were made in part (b), usually for inaccurate drawing of the lines. The total number of packets of crisps in part (c) was usually correct though some students tried to add up 7 days information rather than the 5 that were given.

Question 11

Correct answers were almost always seen for part (a) though some students did not have a calculator and said so on their script. In part (b) there were many incorrect responses as students often gave the answer as 135.8 or 1.358 or 13.60 showing little understanding of approximating a number by writing it correct to one decimal place.

Question 12

This volume of a cuboid question was not well answered as there were far too many students who simply added the three lengths rather than multiplying them whilst, a smaller number tried to find the surface area of some of the faces.

Question 13

The most common incorrect answer to this question was 34. If students had shown their working for perimeter then they could have gained one mark for finding either the missing length of 8 cm or the missing length of 5 cm. The most common response was to see
$7 \times 2 + 10 \times 2$, which also gave an answer of 34 and could have gained 1 mark if 7×2 was seen. An answer of 21 was also seen for adding the four given lengths as was 280 from multiplying the given lengths.

Question 14

The bill question was better answered than in previous years, probably because the question involved calculating a mobile phone bill rather than a utilities bill. However many students could not correctly calculate 120×5p or 150×8p with many choosing to divide the number of calls or units by the cost. There were also many students that could not handle working in pence for the cost of the calls and the texts and then often adding 1800p to £12.50 and giving a common wrong answer of £1812.50 for a monthly phone bill.

Question 15

Though this was seemingly a straightforward question many students could not cope with the complexity of the rounding to the nearest penny. The most successful students were those that showed their working by writing $7.99 \div 6$ followed by an answer of 1.33166… with a correct rounding to £1.33. Many students did not show any working and wrote an answer of £1.30 on the answer line. Unfortunately this wrong answer did not gain any credit.

Section B

Question 1

Though this question was straightforward, many students made simple calculation errors. The method in part (a) was mostly correct though 247 was a very common wrong answer. In part (b) the most common wrong answer was 29.87 where students mispositioned the 0.9 and calculated with 0.09. Part (c) was answered reasonably well but 32 ÷ 6 giving an answer of 5 with a remainder 3 rather than 2 was a common wrong response.

Question 2

This negative number question with a number line was very well understood and well answered.

Question 3

Another successful question where students remembered their multiplication tables in parts (a) and (b) but were less successful in dividing 45 000 by 100 with 45 often seen as a wrong answer.

Question 4

This question that tested fractions had mixed responses with students making errors in all parts. In part (a) common incorrect answers were 7.1, 0.71 etc instead of 0.7 whilst in
part (b) many students did not arrive at $\frac{3}{4}$, leaving their answer partially simplified. Part (c) was usually correct though $\frac{7}{0}$ was a common incorrect answer. Part (d) was poorly attempted with $\frac{3}{12}$ often given as the largest fraction and many different combinations of fractions from the list seen as being equivalent.

Question 5

This question on multiples and factors was usually well understood and well answered.

Question 6

Students often make mistakes with perimeter and area and this proved to be the case in this paper. Many students mistook perimeter for area and vice versa and less than half of the students were able to match the correct units to the area and the perimeter.

Question 7

Students are getting better at dealing with calendar questions though many still could not remember that there are 31 days in July in part (a). In part (b) there were many responses of 16 days rather than 17 days, showing that many students thought July contained 30 days.

Question 8
A well understood question that was answered well by most students. Interestingly each of the distractors was selected by at least one student.

Question 9

Most students were able to attempt all parts of this question and many gave the correct answer to part (a). However in part (b) few of the students were able to spot and use the link between $322 in the question and $3.22 or $32.20 in the table and many incorrect answers of 2 were seen. Students also frequently multiplied 322 by 1.61. In part (c) students were most successful when they used a build-up method by adding $161.00, $80.50 and 2 × $3.22.

Summary

Based on their performance on this paper, students should ensure that they can:

- write numbers to the nearest whole number and to one decimal place and calculate the cost of an item to the nearest penny
- calculate utility bills from given information, particularly combining amounts in pence with amounts in pounds and pence
- deal with time eg finding the difference between two times, knowing the number of days in a month and finding the number of days between two dates
- work out fractions and percentages of quantities
- calculate the perimeters and the areas of rectangles and the volumes of cuboids
- avoid finding the perimeter of a rectangle when having to find the area of a rectangle and vice versa

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