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# Examiners' Report Principal Examiner Feedback

January 2018

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

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## **Edexcel Award in Number and Measure (ANM10) Principal Examiner Feedback – Level 1**

### **Introduction**

This exam paper was accessible to many and gave a good range of marks for the award of a pass.

Students must be persuaded to show all their working out to maximise mark potential.

Students continue to mix up methods, especially for area and perimeter of a rectangle. For the volume of a cuboid, many students found the surface area or the total length of the edges instead of what was required.

Students must read questions very carefully and give the answer required. For example, in the percentage question, they needed to identify whether they had to simply find 15% of the amount or to take 15% off the amount.

There was some evidence to suggest that some students did not bring a ruler and protractor to the examination.

### **Reports on Individual Questions**

#### **Section A**

##### **Question 1**

Nearly all students were able to correctly identify the number shown by the arrow in part (a).

Part (b) was slightly less well done as a few students struggled with the scale being one interval to 2 units; some put the arrow at 538 and others between the dashes on the scale to show numbers such as 54.5

##### **Question 2**

Part (a) required the students to write down a multiple of 21, but we saw more factors of 21 than multiples. A few wrote a product such as  $3 \times 7$  which was not awarded the mark.

Part (b) was well attempted and most students were able to write down a common factor of 36 and 60.

While it was common to see a correct answer in (c) for the number 672 written to the nearest hundred, we saw several incorrect answers such as 670, 680 and 600

### Question 3

Many students did well on this question, especially parts (a)(i) – (a)(iii) requiring the use of a calculator to do some calculations. The only mistakes appeared to be misreading and writing the answer from their calculator.

Part (b) requiring students to write down the value of the digit 4 in 7.84 was poorly done with many stating it was units or hundreds or leaving the answer space blank.

### Question 4

It was pleasing to see this 'shopping bill' and change question so well answered by many students, who in many cases showed their working. Some gave an answer close to the correct one but with no working or a few odd figures on the page, so we could not award any marks as there was no evidence of correct working.

Reversing figures or not realising the meaning of figures on the calculator was common in this question and we saw calculations such as  $3 \times 1.17 = 3.15$  or  $2 \times 95p = 1.09$

There were some students who calculated the change from buying just one of each item for which they could gain a maximum of 2 marks; it must be stressed to students to read all questions very carefully.

### Question 5

Part (a) was poorly done with several wrong answers such as 1.5 or 0.5 instead of 0.2

Part (b) was fairly well answered with many students picking up a method mark for dividing 320 by 8. Some had a misconception of adding on the numerator after dividing by the denominator and a small proportion found  $\frac{8}{3}$  rather than  $\frac{3}{8}$  of 320

We saw many correct answers for part (c) but also the common incorrect answer of  $\frac{9}{33}$  from students who had multiplied both the numerator and denominator of the fraction by 3.

In part (d), finding 15% of £280 proved problematic to many, a common incorrect method being to find 10% of 280 correctly and then to multiply this by 5 to find 5%. Other incorrect responses included dividing by 15 and subtracting 0.15 or 15 from 280. Some who were able to gain a method mark, subtracted their correct answer from 280, giving an incorrect answer.

## **Question 6**

This question differentiated well between students, with part (a) being mainly correct as it just needed a correct reading from the table.

Overall, students found part (b) the hardest, but many were able to pick up a method mark for finding a total of euros from the table that summed to 69, but then some failed to add the pounds equivalent to the euros.

Part (c) had a pleasing response and there were several correct answers seen, usually from adding a sum of euros equivalent to the sum in pounds, rather than multiplying by 1.15.

In both (b) and (c) responses were found where students did not realise the need to change the whole value into euros or pounds so for instance in (c) a common incorrect answer of 179 euros was seen from adding 115 euros (the equivalent to £100) and adding this to £69.

## **Question 7**

There was a lot of confusion between area and perimeter seen for this question on area. Those attempting to find the area usually gained at least a method mark.

Common incorrect answers were some form of perimeter or a product of all four given lengths.

## **Question 8**

Finding the cost of a unit item to the nearest penny was not as straightforward to all students as we felt it might be. Most did a division sum, but for several, it was done the wrong way round. Those who did the correct calculation, often gave the incorrect answer of 0.17p, 17p or 0.18p; these answers all gained a method mark.

## **Question 9**

This question on time was done reasonably well, but many students only gained 1 mark rather than 2 for part (a) because they gave an incomplete time, i.e. 8.15 rather than 8.15 pm or 20:15.

In part (b), adding two times in hours and minutes was straightforward for some, but others treated times as decimals and gave an incorrect number of minutes such as 375 or 415, gaining no marks unless preceded by relevant working that differentiated between hours and minutes. A few tried to work out a time by starting with the time given in part (a).

### **Question 10**

In part (a) a pleasing number knew the metric unit that could be used for the weight of an egg and for the length of a mobile phone.

Part (b) was poorly done, with many students unable to change 3.5 litres into millilitres, the incorrect answers having various amounts of zeros or an incorrect placing of the decimal point.

Part (c) was quite well answered with a common error being to add all the lengths, which with the correct units was awarded a special case method mark. Other errors included using 1000 centimetres in 1 metre and adding metres and centimetres as if they were the same unit, e.g.  $4\text{ m } 63\text{ cm} = 67\text{ cm}$ .

### **Question 11**

This question about a bus timetable was quite well done.

Part (c) was the most likely to be incorrect with the length of time from 08 31 to 09 04 often seen as 73 minutes where a candidate had done the sum  $904 - 831$ , using the times as if they were hundreds, tens and units.

### **Question 12**

This question was generally well done and it was pleasing to see most students giving a response suggesting they had a protractor and a ruler; although the blank spaces we suspect meant they were without this equipment.

Part (a) was quite well done for measuring an obtuse angle which can cause difficulties.

The majority of students who attempted part (b) were able to accurately draw a line of 7 cm, with the most common incorrect answer being a line drawn of 6 cm.

### **Question 13**

About half of the students were able to correctly give the perimeter of this rectangle. Several others found the area of the rectangle and a few added just one length and one width together.



### **Question 14**

For those who were well rehearsed in this type of question, they followed a correct method and gained 4 marks. Unfortunately, many students find this type of question very challenging and we saw many mistakes. Commonly, students added the readings rather than subtracting them to find the units used.

Many students stopped once they had found the cost of the units used and forgot to add on the quarterly charge. Others did sums of all types with the various numbers that were found in the 'gas bill', often doing nothing that was able to gain them any marks.



## Section B

### Question 1

There was a mixed response from this question on basic number skills.

We saw several correct answers for part (a) but also many incorrect. If students had correctly lined up the numbers and showed they were taking the 6 tenths away were awarded a method mark. Several had trouble with place value and lined the numbers up incorrectly and many gave 0.6 as part of their answer, not having attempted to take it away. Some students tried to take 92 from 42.6 by incorrect lining up of columns. Few attempted an 'adding on' method for this question.

In part (b), for the multiplication of 354 by 7 we saw several correct answers and many who gained a method mark for a correct process seen with a mistake or a 'box' method with just one mistake. Unfortunately, there were also several students who showed little understanding of what to do and so gained no marks.

### Question 2

Most students were able to give the correct answer to  $6 \times 9$  and  $64\,000 \div 100$  with few incorrect.

### Question 3

This question on fractions was quite well done, with most getting at least 3 marks out of 5

In part (a) the fraction shaded was generally correct.

For part (b) writing  $\frac{20}{30}$  as a fraction in simplest form had a mixed response with some not cancelling at all and some showing a partially cancelled answer such as  $\frac{10}{15}$

Many correct answers were seen for part (c). Writing an equivalent fraction to  $\frac{4}{5}$  had a mixed response with the most popular correct answer being  $\frac{8}{10}$  but many other correct equivalent fractions were seen.

Others gave, it appeared, quite randomly selected fractions such as  $\frac{1}{2}$ ,  $\frac{1}{4}$  or  $\frac{3}{4}$  while others tried to convert the given fraction to a decimal or percentage. It was pleasing to see that the majority of students could convert 17% to a fraction.

#### **Question 4**

This question about a bar chart was generally very well answered with many students gaining full marks for the question. A

few students, for some reason, missed out part (a) completely.

It was very rare to see an incorrect answer to (b).

For part (c) most answers were correct and if not correct were able to pick up a mark for correct working or the answer of 20, the total excluding kiwi.

#### **Question 5**

These four questions on ordering were quite well done.

Part (a) ordering numbers and part (c), ordering percentages were almost always correct.

Ordering fractions in part (b) was often incorrect with many students putting the two fractions with a numerator of 1 first, but the fraction with the smallest denominator before the other, so their ascending order began  $\frac{1}{4}, \frac{1}{12}, \dots$

For part (d) it was not uncommon to see the amount of 326p appear before £2.81 in ascending order, presumably because it had p and not £

#### **Question 6**

Many students were able to give the correct answer of C or £30, with some apparent guesses and some who used the incorrect operation; often division rather than multiplication.

We would suggest a rounding approach, such as, in this case,  $5 \times £6$

#### **Question 7**

We saw several correct responses for the volume of the cuboid, although it was disappointing to see a lack of working in some cases. There were also a lot of variations of responses trying to work out the surface area or the total length of the 3 given edges or the total length of all the edges.

### **Question 8**

Most students were able to tell us that the 25th May would be a Friday – but there were students who gave the incorrect answer and surprised us by not using the calendar to write dates in.

In part (b), some students found it challenging to find the date eighteen days later and some still chose to give us the date eighteen days earlier.

2nd May was a date frequently seen, presumably as they had May in their minds from the given calendar – we awarded 1 mark in this case. Some students clearly get mixed up with the numbers of days in a month and used 30 days for May, giving an answer of 3rd June, again this was awarded 1 mark.

Some students lost marks due to not writing enough information, e.g. giving 'Saturday' or 'Saturday 2nd' as the answer.

### **Question 9**

In part (a) we found that many students were not able to give us the prime number from the list, with 15 being a common incorrect answer.

In part (b), some also struggled to find the correct pair of numbers with a difference of 11

### **Question 10**

For this question on negative and positive integer sums, the inclusion of the number line made it accessible to the majority of students.

Only a handful of incorrect answers were seen, mostly for part (c) where many gave the answer  $-2$  for  $-1-3$  presumably starting at 1 rather than  $-1$  on the number line.

## **Summary**

Based on their performance on this paper, students are offered the following advice:

- Read questions very carefully.
- Show all working clearly.
- Learn conversions between metric units of length, weight and capacity.
- Learn the difference between the calculations needed for area, perimeter and volume, and know not to get them mixed up.
- Have plenty of practice on household finance bills of various types.
- Learn the use of the calendar, fill in the spaces with dates and know how many days in each of the months of the year.

## **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>



