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Examiners' Report  
Principal Examiner Feedback

Summer 2022

Pearson Edexcel Awards  
In Number and Measure Level 2 (ANM20)  
Paper 2B

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## **Edexcel Award in Number and Measure (ANM20) Principal Examiner Feedback – Level 2**

### **General Comments**

Section A is designed to be completed with the aid of a calculator, but the sight of a significant number of non-calculator methods would suggest that not all candidates had a calculator. For example, this was apparent in question 8 where long multiplication methods were seen.

There were far fewer attempts that resembled trial and improvement approaches, but the inclusion of any working out to support answers remains an issue for some. Candidates also need to be reminded about how they write their numbers. There were examples where numbers were written ambiguously (eg 1s and 7s, 2s and 5s) or numbers overwritten, leaving them illegible. But a significant issue in this series was the misreading and miswriting of numbers. On too many occasions candidates miscopied numbers from the question, or even their own figures.

There were some instances in this paper where working out was set out in such a disorganised way that it was almost impossible to identify a chosen route of solution by the candidate, in order to award method marks. In particular, questions 9, 17 and 18 in Section A required several different stages or working. Also in Section A some candidates used a number of stages to answer Questions 14 and 16, with question 11 in Section B frequently done using partitioning methods. That said, there was an improvement this series in the way that candidates set out their work, even when compared with 2019.

There were a few occasions where several methods were shown by a candidate; unless made clear by the candidate which is to be accepted for marking, no marks can be given.

It was encouraging to find that most candidates attempted nearly every question, in both sections.

## Report on Individual Questions.

### SECTION B

Question 1.

This was a well-answered question.

Question 2.

Most showed 21 : 35 in working to gain the first mark. Some then failed to simplify correctly. Some gave the answer the wrong way around (5 : 3) but overall this was quite well answered.

Question 3.

Evidence of some understanding was shown by those who added the 2 and the 7 to give 9. Division into 54 usually followed onto the correct answer. A significant minority of weaker candidates merely attempted to divide 54 by 2, and to divide 54 by 7.

Question 4.

There were many correct answers given, but also many rounding errors. Some rounded incorrectly by giving 114.56, 114.6, or even 115. Some gave their answer in the wrong format by stating 114.5700, or just moved the decimal point to give 11456.67

Question 5.

In this question the common errors were related to poor arithmetical processing, but there were fewer examples of poor place value than in previous series, for this type of question.

In part (a) it was disappointing to see a significant number of candidates using operations incorrectly. For example, by just adding all four numbers or by just adding the first three numbers. The weakest candidates confused place value, for example adding 118 to 35.68 to give 36.86

In part (b) there were many different methods shown, including Napier's bones, grid methods and partitioning methods, even though this was multiplication by just a single digit. Place value was again an issue here, particularly with grid or partitioning methods, but so was poor recall of time tables. Those who ignored the decimal point during processing either forgot to put it back, or did so in the incorrect place.

#### Question 6.

Many candidates started by writing  $60/300$ , but were then unable to convert this into a percentage.

#### Question 7.

In answering part (a) it is important that candidates realise that in these types of question their final answer needs to be supported by working. Credit was sometimes given for an incorrect conclusion linked to their two answers given, as long as a correct method was shown for at least one of these two answers. Whilst many candidates realised that a division of 5 or 3 was needed, this was not always done accurately. Candidates who tried to do the calculation by replacing  $2/3$  by 0.6, 0.66 etc. could not be credited as this resulted in an inaccurate method. Part (b) was well answered, though some attempts were spoilt when candidates used  $10\text{cm} = 1\text{m}$  or  $1000\text{cm} = 1\text{m}$ .

#### Question 8.

A well answered question. Most candidates realised that a division by 5 was needed, and most then went on to multiply their answer by 9, arriving at the correct answer. There were many other different methods in evidence, such as finding the cost of 10 tins, before taking away the cost of 1 tin.

#### Question 9.

Candidates who attempted to work this out accurately gained no marks; the question asked for an estimate, and there must therefore be evidence of estimation before any marks are awarded. Those who chose appropriate numbers to use as estimates gained some credit, though this did not include those who just truncated to 0.51 to 1. Some used the rounded numbers 19 and 29; whilst credit could be given for rounding, it was not appropriate to use these numbers in calculation since a long multiplication was necessary: the purpose of estimation was to make easier calculation. A common error was in assuming division of 0.5 was performed by halving the numerator. Some calculations were again spoilt by poor arithmetic.

#### Question 10.

This was a well answered question.

#### Question 11.

Those who knew how to work out a percentage usually gained some credit. Many found 10% then halved to give 5%, but of course these then had to be added. Some just left their answer as the percentage figure (39) and some spoil their answer by adding to 260. Overall a question that proved to be a good discriminator and provided a good range of marks.

#### Question 12.

The key to this question was of course finding a common denominator. Those who merely showed  $3 + \frac{2}{4}$  or  $3 + \frac{4}{4}$  or equivalent gained no marks. But it was encouraging to see many who wrote  $3\frac{2}{4}$  or equivalent. Some decided to write their fractions as improper fractions, which could still lead to the correct answer, but then involved more work and larger numbers to deal with. Some ignored the whole numbers completely. It was disappointing to see a significant minority failing to write their answers as a mixed number as requested, which meant they lost the final mark. Overall this question was better done than in previous sessions.

### **Concluding guidance notes for centres:**

1. Candidates need to ensure they arrive to take the examination with all necessary equipment, which includes a calculator for Section A.
2. Figures need to be written clearly, and not over-written.
3. Candidates need to ensure they copy figures accurately, either from the question, from their calculator, or from their own working.
4. Working needs to be presented legibly and in an organised way on the page, sufficient that the order of the process of solution is clear.
5. Basic numeracy such as addition/subtraction needs practice.
6. Times tables need to be learned.
7. Candidates need to spend more time ensuring they read the fine detail of the question to avoid giving answers that do not answer the question, and to give answers in the form required, such as simplified if asked for.

