



Mark Scheme (Results)

January 2021

Pearson Edexcel Level 2 Award
In Number and Measure (ANM20)
Paper 2A

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NOTES ON MARKING PRINCIPLES

- 1** All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- 2** Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- 3** All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- 4** Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- 5** Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
- 6** **With working**
If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.
If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.
If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks. Send the response to review, and discuss each of these situations with your Team Leader.
If there is no answer on the answer line then check the working for an obvious answer.
Any case of suspected misread loses A (and B) marks on that part, but can gain the M marks. Discuss each of these situations with your Team Leader.
If there is a choice of methods shown, then no marks should be awarded, unless the answer on the answer line makes clear the method that has been used.
- 7** **Follow through marks**
Follow through marks which involve a single stage calculation can be awarded without working since you can check the answer yourself, but if ambiguous do not award.
Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

8 Ignoring subsequent work

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: e.g. incorrect cancelling of a fraction that would otherwise be correct

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect e.g. algebra.

Transcription errors occur when candidates present a correct answer in working, and write it incorrectly on the answer line; mark the correct answer.

9 Parts of questions

Unless allowed by the mark scheme, the marks allocated to one part of the question CANNOT be awarded in another.

10 Range of answers

Unless otherwise stated, when an answer is given as a range (e.g 3.5 – 4.2) then this is inclusive of the end points (e.g 3.5, 4.2) and includes all numbers within the range (e.g 4, 4.1)

Guidance on the use of codes within this mark scheme

M1 – method mark

A1 – accuracy mark

B1 – Working mark

oe – or equivalent

cao – correct answer only

ft – follow through

sc – special case

dep – dependent (on a previous mark or conclusion)

indep – independent

isw – ignore subsequent working

PAPER: ANM20_2A				
Question	Working	Answer	Mark	Notes
1 i		22.7	1	B1 cao
ii		83.4	1	B1 cao
2 (a)		32 768	1	B1 cao
(b)		18	1	B1 cao
(c)		12	2	M1 for 400 or 256 or $\sqrt{144}$ A1 cao
3		12.5	2	M1 for $75 \div 6$ A1 cao
4 (a)		-28	1	B1 cao
(b)		-8	1	B1 cao
5		5750	2	M1 for 250×23 A1 cao
6 (a)		87.74	1	B1 cao
(b)		34.026	1	B1 cao

PAPER: ANM20 2A				
Question	Working	Answer	Mark	Notes
7 (a)		40	2	M1 for $17 + 15 + 8$ oe A1 cao
(b)		60	2	M1 for $15 \times 8 \div 2$ oe A1 cao SC: award the M1A0 in (a) and M1A0 in (b) if the answers are reversed, eg answers (a) 60 with (b) 40
8		5	2	M1 for $150 \div 30$ A1 cao
9		1.7	2	M1 for correctly writing fractions as improper fractions eg $\frac{17}{4} \div \frac{5}{2}$ or $\frac{17}{4} \times \frac{2}{5}$ or correct conversion into decimals with correct operation shown eg $4.25 \div 2.5$ A1 $\frac{34}{20}$ or $\frac{17}{10}$ or $1\frac{7}{10}$ or 1.7 oe
10		168	2	M1 for a method to calculate 12% either directly or by partitioning eg 1400×0.12 oe or 10% as 140 and 2% as 28 and $140+28$ or 10% as 140 and 1% as 14 and $140+14+14$ or any equivalent method or 168 seen, then used as part of an extended method eg 1568 or 1232 A1 cao

PAPER: ANM20 2A				
Question	Working	Answer	Mark	Notes
11		516.35	4	<p>M1 for $25 \times 12.5 (=312.5)$ or $18 \times 18.5 (=333)$ oe; could work in pence</p> <p>M1 for $25 \times 12.5 (=312.5)$ and $18 \times 18.5 (=333)$ oe; could work in pence</p> <p>M1 for complete method of “312.5” + “333” – 129.15 with consistent units</p> <p>A1 cao</p>
12		28.2 to 28.3	3	<p>M1 for $2\pi r$ or πd or $2 \times \pi \times 5.5 (=34.5-34.6)$ or $\pi \times 11 (=34.5-34.6)$ or $\pi \times 5.5 (=17.2-17.3)$</p> <p>A1 for 17.2 to 17.3</p> <p>A1 ft for 28.2 to 28.3 or “17.2 to 17.3” + 11</p> <p>SC B2 for answer in the range 45.5 to 45.6</p>
13		104	3	<p>M1 for evidence of weight times frequency eg $1 \times 18, 2 \times 15, 3 \times 12, 4 \times 5$</p> <p>M1 for evidence of summing weight times frequency (at least two) eg “18” + “30” + “36” + “20”</p> <p>A1 cao</p>
14		60	3	<p>M1 for $2000 \times 1.5 \div 100 (= 30)$ or $2000 \times 2 \div 100 (=40)$ oe</p> <p>M1 for $2000 \times 1.5 \times 2 \div 100 (= 60)$ or 2060 or 1940</p> <p>A1 cao</p>

PAPER: ANM20 2A				
Question	Working	Answer	Mark	Notes
15		180	3	<p>M1 for listing at least 3 multiples of one number (eg 36, 72, 108, 144, 180... or 45, 90, 135, 180,...)</p> <p>M1 for listing at least 3 multiples of each number</p> <p>A1 cao</p>
16		328	4	<p>M1 for finding an area of a rectangle eg 7×16 (=112) or 22×20 (=440) or 3×20 (=60)</p> <p>M1 for finding both areas eg 7×16 (=112) and 22×20 (=440) or divides the shaded area into four rectangles eg 3×20, 3×20, 6.5×16, 6.5×16 or 2×60 and 2×104</p> <p>M1 for complete method eg “440” – “112” or “120” + “208”</p> <p>A1 cao</p>
17		12	3	<p>M1 for $1075 - 946$ (=129) or $\frac{946}{1075}$ (=0.88) oe</p> <p>M1 for $\frac{129}{1075} \times 100$ or $1 - “0.88”$ or sight of 0.12</p> <p>A1 cao</p>

PAPER: ANM20_2A				
Question	Working	Answer	Mark	Notes
18		2000 to 2002	3	<p>M1 $\pi \times 7^2$ (=153.9 to 154) or $\pi \times r^2 \times h$</p> <p>M1 for $\pi \times 7^2 \times 13$</p> <p>A1 for 2000 to 2002 or 637π</p>

