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# Mark Scheme (Results)

January 2017

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

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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If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.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 canceling 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

**Section A**

<b>PAPER ANM20/2A</b>				
<b>Question</b>	<b>Working</b>	<b>Answer</b>	<b>Mark</b>	<b>Notes</b>
1 (i)		4.7	2	B2 both answers correct  (B1 one answer correct)
(ii)		12.8		
2 (a)		729	1	B1 cao
(b)		15	1	B1 cao
(c)		1125	2	M1 for 9 or 125 shown in working unambiguously A1 cao
3 (a)		- 3	1	B1 cao
(b)		5	1	B1 cao accept +5
4 (a)		66.304	1	B1 cao
(b)		116.67	2	M1 for 116.66(6666...) or 116.66 but consider other recurring notation A1 cao
5		192	2	M1 for $360 \div 45$ or $1/8$ or 8 or equivalent method eg using other angles unambiguously A1 cao
6		574.75	4	M1 for $25 \times 16.5 (=412.5)$ or $12 \times 25.5 (=306)$ M1 for $25 \times 16.5 (=412.5)$ and $12 \times 25.5 (=306) (=718.5)$ M1 for deduction of 143.75 tax eg "718.5" - 143.75 A1 cao

PAPER ANM20/2A				
Question	Working	Answer	Mark	Notes
7		183.15	2	M1 for $7.4 \times 4.5 \times 5.5$ oe A1 cao
8		410, 492	2	M1 for a first step eg $902 \div 11$ (=82) oe A1 both numbers in either order
9		840	2	M1 for $14000 \times 0.06$ oe A1 cao or isw SC: B1 for 14840 or 13160 without working
10		198	3	M1 for $9 \times 4 \div 2$ (=18) or $9 \times 4 \times 11$ only (=396) M1 for $9 \times 4 \times 11 \div 2$ A1 cao
11		$1\frac{1}{4}$	2	M1 for correctly writing both fractions as improper fractions eg $\frac{27}{4} \div \frac{27}{5}$ or $\frac{27}{4} \times \frac{5}{27}$ or correct conversion into decimals with correct operation shown eg $6.75 \div 5.4$ A1 $\frac{135}{108}$ oe or $\frac{5}{4}$ or $1\frac{1}{4}$ or 1.25
12		84	3	M1 for $600 \times 3.5 \div 100$ (=21) oe or $600 \times 0.04$ (=24) oe M1 for $600 \times 3.5 \times 4$ oe or "21" $\times 4$ or digits 84 or "24" $\times 3.5$ A1 cao
13		56.5	3	M1 for $2 \times \pi \times r$ oe or $\pi \times r$ M1 for $2 \times \pi \times 9$ oe or $\frac{1}{2} \times 2 \times \pi \times 18$ or $\pi \times 18$ or $\pi \times 9$ (=28.27...) oe A1 for 56 – 57

PAPER ANM20/2A				
Question	Working	Answer	Mark	Notes
14		69	4	M1 for any division of the shape into rectangles and triangle (s) (or completes to give a rectangle) M1 for finding the area of a rectangle or triangle M1 for a complete method to find the area of the shape (eg $6 \times 4 + 10 \times 3 + \frac{1}{2} \times 3 \times 10$ or $6 \times 14 - \frac{1}{2} \times 3 \times 10$ ) A1 cao
15		65	2	M1 for $143 \div 2.2$ A1 cao
16		264	3	M1 for listing at least 3 multiples of 24 or 2 multiples of 132 (eg 24, 48, 72, ... or 132, 264) or for factor trees showing at least two prime factors of both (eg 2,2,3 and 2,2,3,11) or one complete factor tree or all prime factors shown as products for just one. M1 for listing at least 3 multiples of 24 and 2 multiples of 132 or for factor trees showing all prime factors of both or all factors shown as products for both A1 cao
17		35	3	M1 for $120 - 78 (=42)$ or sight of 42 or $\frac{78}{120}$ oe M1 for $\frac{42}{120} \times 100$ or sight of 0.35 or $1 - \frac{78}{120}$ or 0.65 or 65% A1 cao
18		35.7...	4	M1 for $8 \times 8 (=64)$ M1 for $\pi \times 3^2 (=28.27\dots)$ M1 for "64" - $\pi \times 3^2$ A1 for 35.6 - 35.8

**Section B**

<b>PAPER ANM20/2B</b>				
<b>Question</b>	<b>Working</b>	<b>Answer</b>	<b>Mark</b>	<b>Notes</b>
1		-8, -7, -2, 3,4,5,9	1	B1 cao
2 (a)		99.08	2	M1 for correct alignment of digits ready for calculation or at least two operations performed correctly eg $117+24.58+17.5 (=159.08)$ A1 cao
(b)		335.02	2	M1 for evidence of correctly set up method eg carry 4 from $7 \times 6$ and digits correctly aligned, or 33502 A1 cao
3		90	3	M1 for $\div 6$ or $\times 10$ or $\times 4$ or 9 or 216 or 540 oe M1 for $\div 6$ and $\times 10$ <b>or</b> $\div 6$ and $\times 4$ with +54 oe A1 cao
4		$\frac{1}{5}$	2	M1 for $\frac{40 \text{ cm}}{2 \text{ m}}$ or $\frac{40}{200}$ A1 cao
5		$\frac{3}{4}$ of 80	3	M1 for $80 \div 4 \times 3 (=60)$ oe or $280 \div 5 (=56)$ oe A1 for 60 and 56 A1 ft for conclusion: “ $\frac{3}{4}$ of 80” with two figures shown for comparison
6		3 : 5	2	M1 for 21 : 35 or 5 : 3 or 3 and 5 shown unambiguously in working A1 cao
7		285	2	M1 for $190 \times 1.5$ oe A1 cao



PAPER ANM20/2B				
Question	Working	Answer	Mark	Notes
8		350 or 420	2	M1 for rounding at least two figures eg two of 70, 60, 12 or 10 (which could be evidenced through partial calculation) A1 for 350 or 420
9		680	3	M1 for 15% of 800 eg $800 \times 0.15$ oe (=120) or sight of (100 – 15)% or 85% or 920 M1 for decreasing 800 by 15% eg $800 - "120"$ or $800 \times 0.85$ A1 cao
10	(a)	$\frac{1}{12}$	2	M1 for use of a common denominator with at least one correct numerator eg $\frac{11}{12} - \frac{5}{6} = \frac{11}{12} - \frac{10}{12}$  $\frac{66}{72} - \frac{60}{72}$ oe
	(b)	$\frac{6}{35}$	1	A1 oe B1 for $\frac{6}{35}$ oe
11		70	2	M1 for $\frac{560}{800}$ (=0.7) oe A1 cao
12		$4\frac{1}{5}$	3	M1 for writing both fractions as improper fractions eg $\frac{6}{5} \times \frac{7}{2}$ , $\frac{12}{10} \times \frac{35}{10}$  M1 for multiplying eg $\frac{42}{10}$ or $4\frac{2}{10}$ or 4.2 A1 cao





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