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Mark Scheme (Results)

Summer 2016

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

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NOTES ON MARKING PRINCIPLES

1 Types of mark

M marks: method marks
A marks: accuracy marks
B marks: unconditional accuracy marks (independent of M marks)

2 Abbreviations

cao – correct answer only
isw – ignore subsequent working
oe – or equivalent (and appropriate)
indep - independent
ft – follow through
SC: special case
dep – dependent

3 No working

If no working is shown then correct answers normally score full marks
If no working is shown then incorrect (even though nearly correct) answers score no marks.

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If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.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

5 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.

6 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.

7 Parts of questions

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

8 Use of ranges for answers

If an answer is within a range this is inclusive, unless otherwise stated

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

PAPER: ANM20_2A					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		10.4	1	B1 cao
	(b)		4.6	1	B1 cao
2	(a)		1225	1	B1 cao
	(b)		14	1	B1 cao
	(c)		648	2	M1 for 81 or 8 A1 cao
3	(a)		− 4	1	B1 cao
	(b)		7	1	B1 cao
4	(a)		18.785	1	B1 cao
	(b)		66.67	2	M1 for 66.66(6666…..) or 66.66 A1 cao
5			240	2	M1 for 3000 × 0.08 oe A1 cao
6			2	2	M1 for (fraction 60/360) × 12 oe A1 cao

PAPER ANM20/2A					
Question		**Working**	**Answer**	**Mark**	**Notes**
7			95.55	2	M1 for 6.5 × 3.5 × 4.2 A1 cao
8			40 080	2	M1 for 240 × 167 A1 cao
9			438.30	4	M1 for 28 × 14.5 (=406) or 15 × 8.8 (132) M1 for 28 × 14.5 (=406) and 15 × 8.8 (132) (=538) M1 for deduction of 99.7 tax eg 538 – 99.7 or 438.3 A1 cao
10			140	3	M1 for 7 × 5 ÷ 2 (=17.5) M1 for 7 × 5 × 8 (=280) or 7 × 5 × 8 ÷ 2 A1 cao
11			$1\frac{1}{4}$	2	M1 for correctly writing fractions as improper fractions eg $\frac{33}{4} \div \frac{33}{5}$ or $\frac{33}{4} \times \frac{5}{33}$ or correct conversion into decimals with correct operation shown eg 8.25 ÷ 6.6 A1 $\frac{165}{132}$ or $\frac{5}{4}$ or $1\frac{1}{4}$ or 1.25 oe

12			38	4	M1 for division of the shape (or completes to give a rectangle) M1 for finding the area of a triangle eg ½ × 5 × 4 (=10) M1 for a complete method to find the area of the shape (eg 6×8 – "area Δ" or 3×6 + 2×5 + area Δ) where area Δ could be (eg) ½ ×5×4 or just 5×4 A1 cao
PAPER: ANM20/2A					
Question		**Working**	**Answer**	**Mark**	**Notes**
13			120	3	M1 for 800 × 5 ÷ 100 (=40) oe M1 for 800 × 5 × 3 (=12000) or 800 ×5 × 3 ÷ 2 oe or 920 A1 cao
14			15 – 16	3	M1 for ½ × 2 × π × *r* oe or π × *r* M1 for ½ × 2 × π × 3 oe ½ × 2 × π × 6 or π × 3 or π × 6 (=9.4… or 18.8…) A1 for 15 − 16
15			256	2	M1 for ÷ 5 (=32) or × 8 (=1280) A1 cao
16			180	3	M1 for listing at least 3 multiples of 12 (eg 12, 24, 36, …) or 90, 180 or for factor trees showing at least two factors of both (eg 2,2,3 and 2,3,3,5) or one complete factor tree or all factors shown as products for just one. M1 for listing at least 3 multiples of 12 and 90,180 or for factor trees showing all factors of both or all factors shown as products for both. A1 cao
17			30	3	M1 for 180 – 126 (=54) or $\frac{54}{180}$ oe OR $\frac{126}{180}$ (=0.7 or 70) M1 for $\frac{"54"}{180}\times 100$ or sight of 0.3 OR 1 – "0.7" or 100− "70"

					A1 cao
18			12.2 – 12.3	4	M1 for 4×4 (=16) M1 for $\pi \times 3^2$ (=28.278…) M1 for $\pi \times 3^2$ – "16" A1 for 12.2 – 12.3

Section B

PAPER: ANM20_2B					
Question		**Working**	**Answer**	**Mark**	**Notes**
1			-7,-4,-2, -1,2,3,8	1	B1 cao
2	(b)		88.13	2	M1 for correct alignment of digits ready for calculation with two operations performed correctly eg 141.83−53.4 or 128.13−40 shown A1 cao
	(a)		208.74	2	M1 for evidence of correctly set up method eg carry 5 from 9×6 A1 cao
3			96	3	M1 for ÷7 (=8) or × 12 (=672) oe M1 for ÷7 and ×12 oe A1 cao
4			$\frac{1}{20}$	2	M1 for $\frac{30\text{p}}{£6}$ or $\frac{30}{600}$ A1 cao
5			$\frac{1}{5}$ of 60	3	M1 for 60÷5 (=12) oe or 66÷6 (=11) oe A1 for 12 and 11 A1 for conclusion: "1/5 of 60" with 12 and 11 shown

6			2 : 3	2	M1 for 16 : 24 or 3 : 2 A1 cao
7			240, 420	2	M1 for 660 ÷ 11 (=60) or at least three multiples of 4 : 7 A1 accept either order

PAPER ANM20/2B

Question		Working	Answer	Mark	Notes
8			400 or 480	2	M1 for rounding at least two figures eg two of 60, 80, 12 or 10 (which could be evidenced through partial calculation) A1 for 400 or 480
9			510	3	M1 for 15% of 600 eg 600 × 0.15 oe (=90) M1 for decreasing 600 by 15% eg 600 − "90" or 600 × 0.85 A1 cao
10	(a)		$\frac{1}{2}$	2	M1 for use of a common denominator with at least one correct numerator eg $\frac{5}{6}-\frac{1}{3}=\frac{5}{6}-\frac{2}{6}$ oe A1 oe
	(b)		$\frac{10}{63}$	1	B1 for $\frac{10}{63}$ oe
11			40	2	M1 for $\frac{280}{700}$ (=0.4) oe A1 cao

12			$5\frac{2}{5}$	3	M1 for writing fractions as improper fractions eg $\frac{12}{5}\times\frac{9}{4}$ M1 for multiplying eg $\frac{108}{20}$ or $5\frac{8}{20}$ A1 cao

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