



Mark Scheme (Results)

January 2019

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If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.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

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.

Section A

PAPER: ANM20/2A				
Question	Working	Answer	Mark	Notes
1 (a)		16.7	1	B1 cao
(b)		23.4	1	B1 cao
2 (a)		784	1	B1 cao
(b)		16	1	B1 cao
(c)		6	2	M1 for 100 or 64 or $\sqrt{36}$ A1 cao
3		15	2	M1 for $30 - 15$ or $\frac{1}{4} \times 60$ oe or states red = 15 or blue = 15 A1 cao
4		63	2	M1 for 15×4.2 A1 cao
5		168.64	2	M1 for 124×1.36 or 168 or 169 or 168.6 A1 cao
6 (a)		-4	1	B1 cao
(b)		3	1	B1 cao

PAPER: ANM20/2A				
Question	Working	Answer	Mark	Notes
7 (a)		22.892	1	B1 cao
(b)		21.43	2	M1 for 21.42 (857...) or 21.4 or 21.40 A1 cao
8		240	2	M1 for 4000×0.06 oe or for 4240 or 3760 A1 cao
9		140	3	M1 for $7 \times 4 \div 2$ (=14) or $7 \times 4 \times 10$ (=280) M1 for $7 \times 4 \times 10 \div 2$ A1 cao
10		253.35	4	M1 for 8.50×28 (=238) or or 8.50×36 (=306) or 1.5×8.50 (=12.75) or $12 + 28$ (=40 h) M1 for $(36-28) \times 8.50 \times 1.5$ (=102) or $(36-28) \times 8.50 \times 0.5$ (=34) or "40" $\times 8.50$ (=340) M1 for "total pay" – 64.50 – 22.15 A1 cao
11	18=2,3,3 60=2,2,3,5 LCM= $18 \times 60 \div (2 \times 3)$	180	3	M1 for listing at least 3 multiples of one number (eg (18), 36, 54, ... or (60), 120, 180) or for factor trees showing at least two prime factors of both (eg 2,3,3 and 2,2,3,5) or one complete factor tree or all prime factors shown as products for just one (eg $2 \times 3 \times 3$ or $2 \times 2 \times 3 \times 5$) M1 for listing at least 3 multiples of each or for factor trees showing all prime factors of both or all factors shown as products for both A1 cao

PAPER: ANM20/2A				
Question	Working	Answer	Mark	Notes
12		63	4	M1 for division of the shape (or completes to give a rectangle) M1 for finding the area of a rectangle eg $5 \times 3 (=15)$ or $6 \times 7 (=42)$ or $3 \times 2 (=6)$ or $9 \times 10 (=90)$ etc. M1 for a complete method to find the area of the shape using correct dimensions of rectangles A1 cao
13		45	3	M1 for $600 \times 2.5 \div 100 (=15)$ oe or $600 \times 3 \div 100 (=18)$ oe or 615 or 618 M1 for $600 \times 0.25 \times 3$ oe or 645 or 555 A1 cao
14		20 – 21	3	M1 for $2\pi r$ or πd or $2 \times \pi \times 4$ or $\pi \times 8 (=25.1 \text{ to } 25.2)$ or $\pi \times 4 (=12.5 \text{ to } 12.6)$ A1 for 12.5 to 12.6 A1 ft for 20 to 21 or “12.5” to “12.6” + 8
15		100	2	M1 for $160 \div 8 (=20)$ or $160 \times 5 (=800)$ A1 cao
16		$1\frac{1}{4}$	2	M1 for correctly writing fractions as improper fractions eg $\frac{31}{4} \div \frac{31}{5}$ or $\frac{31}{4} \times \frac{5}{31}$ or correct conversion into decimals with correct operation shown eg $7.75 \div 6.2$ A1 $\frac{155}{124}$ or $1\frac{31}{124}$ or $\frac{5}{4}$ or $1\frac{1}{4}$ or 1.25 oe
17		24	3	M1 for $2150 - 1634 (=516)$ or $\frac{516}{2150}$ or $\frac{1634}{2150}$ oe or 0.76 or 76 M1 for $\frac{516}{2150} \times 100$ or sight of 0.24 or $1 - \frac{1634}{2150}$ oe or $1 - 0.76$ or $100 - 76$ A1 cao

PAPER: ANM20/2A				
Question	Working	Answer	Mark	Notes
18		51.7 – 51.8	4	M1 for $10 \times 8 (= 80)$ M1 for $\pi \times 3^2 (=28.274\dots)$ M1 for “80” – $\pi \times 3^2$ A1 for 51.7 – 51.8

Section B

PAPER: ANM20/2B				
Question	Working	Answer	Mark	Notes
1		-7, -5, -4, -1, 2, 4, 7	1	B1 cao
2 (a)		206.92	2	M1 for correct alignment of digits ready for calculation with two operations performed correctly eg $206+30.92=236.92$ or $249.62-42.7=206.92$ or $249.62-12.7=236.92$ A1 cao
(b)		263.34	2	M1 for evidence of correctly set up method eg carry 5 from 9×6 A1 cao
3		2 : 5	2	M1 for 12 : 30 oe or 6 : 15 or 5 : 2 or 2 and 5 shown with correct place value A1 cao
4		$\frac{2}{25}$	2	M1 for $\frac{40p}{£5}$ (with units) or $\frac{40}{500}$ oe A1 cao
5		210, 350	2	M1 for $560 \div (3+5)$ (=70) or at least three other ratios that are equivalent to 3 : 5 A1 cao accept either order
6		52	3	M1 for a attempt to work out 35% of 80 eg 80×0.35 or $8+8+8+4$ oe (=28) M1 for decreasing 80 by 35% eg $80 - "28"$ or 80×0.65 or for 108 A1 cao

PAPER: ANM20/2B				
Question	Working	Answer	Mark	Notes
7 (a)		$\frac{5}{8}$	2	M1 for use of a common denominator with at least one correct numerator eg $\frac{7}{8} - \frac{2}{8}$ or $\frac{28}{32} - \frac{8}{32}$ oe or $\frac{39}{8} - \frac{17}{4} = \frac{39}{8} - \frac{34}{8}$ or $\frac{156}{32} - \frac{134}{32}$ A1 oe eg $\frac{5}{8}, \frac{20}{32}$
(b)		$\frac{27}{55}$	1	B1 for $\frac{27}{55}$ oe
8		99	3	M1 for $54 \div 6 (=9)$ or $54 \times 11 (= 594)$ or $54 \times 5 (=270)$ M1 for $54 \div 6 \times 11$ oe or $54 + (54 \times 5 \div 6)$ oe or $(54 \times 2) - (54 \div 6)$ or $108 - 9$ A1 cao
9		$\frac{3}{4}$ of 48	3	M1 for $175 \div 5 (=35)$ oe or $48 \div 4 \times 3 (=36)$ oe A1 for 35 and 36 A1 ft (dep on M1 and on two values shown) for conclusion eg “3/4 of 48”
10		280 or 288 or 300 or 350	2	M1 for rounding at least two figures eg two of 48, 50, 70, 72, 10 or 12 (which could be evidenced through partial calculation) A1 for 280 or 288 or 300 or 350
11		45	2	M1 for $\frac{405}{900} (=0.45)$ oe A1 cao

PAPER: ANM20/2B				
Question	Working	Answer	Mark	Notes
12		$5\frac{13}{20}$	3	<p>M1 for use of a common denominator with at least one correct numerator eg $\frac{8}{20} + \frac{5}{20}$ or</p> $\frac{12}{5} + \frac{13}{4} = \frac{48}{20} + \frac{65}{20}$ <p>M1 for adding eg $\frac{113}{20}$ or $\frac{13}{20}$ oe</p> <p>A1 cao</p>

