Mark Scheme (Results)

Summer 2012

Edexcel Level 1 Award (ANM10)
Proficiency in Number and Measure
Paper 1A + 1B

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If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.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

Probability answers must be given a fractions, percentages or decimals. If a candidate gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths).

Incorrect notation should lose the accuracy marks, but be awarded any implied method marks.

If a probability answer is given on the answer line using both incorrect and correct notation, award the marks.

If a probability fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.

10 Linear equations

Full marks can be gained if the solution alone is given on the answer line, or otherwise unambiguously indicated in working (without contradiction elsewhere). Where the correct solution only is shown substituted, but not identified as the solution, the accuracy mark is lost but any method marks can be awarded.

11 Parts of questions

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

12 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

ANM10_1A					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		14	2	M1 for attempting to find the perimeter or sight of 2 lengths from 4 added A1 cao
	(b)		20 cm²	2	B1 for 20 B1 for cm²
2	(a)		1	1	B1 cao
	(b)		–2	1	B1 cao
3		3 .20 4 .30 <u>0 .80 +</u>	8m 30 cm	2	M1 for attempt to add 3, 4 and 20, 30, 50 separately or sight of 7 m 30 cm or 7 m 130 cm A1 for 8 m 30 cm or 830 cm or 8.3 m oe
4	(a)		3, 8, 15, 27, 72	1	B1 cao
	(b)		0.93, 2.6, 6.0, 6.2, 6.6	1	B1 cao
5			Bar chart	3	B1 for labels for vehicle types B2 for correct bar height for all 5 bars (B1 for correct bar height for 3 or 4 bars) NB for full marks to be the bars need to be of equal widths
6		$2 \times 2.95 =$ 5.90 $2 \times 2.75 =$ 5.50 $1 \times 0.95 =$ <u>0.95</u> 12.35	12.35	3	M1 for one of 2×2.95 or 2×2.75 or £0.95 M1 for all of 2×2.95 and 2×2.75 and £0.95 A1 cao SC B2 for £6.65

ANM10_1A					
Question		**Working**	**Answer**	**Mark**	**Notes**
7		$10 \times 5 \times 2$	100	2	M1 for $10 \times 5 \times 2$ A1 for 100 cao
8		Brist 40 Swin 84 Rea 125 85 41 Lond		3	B3 for all 5 distances inserted correctly in the table (B2 for 3or 4 distances inserted correctly in the table) (B1 for 1 or 2 distances inserted correctly in the table)
9	(a)		9.5	1	B1 tolerance ± 2mm
	(b)		35	1	B1 tolerance ±2º
10	(a)		12or 24	1	B1 for 12 or 24
	(b)		7 and 24	1	B1 for 7 and 24
	(c)		3 or 12 or 18	1	B1 for 3 or 12 or 18
11	(a)		18th July	2	B2 for 18th July (2012) cao (B1 for 18th or Wednesday)
	(b)		Wednesday	2	M1 for counting on to 31st July and establishing 1st is Weds A1 for Wednesday

ANM10_1A					
Question		Working	Answer	Mark	Notes
12	(a)		2.88	1	B1 (accept $\dfrac{72}{25}$
	(b)		4.6	1	B1 cao
13		$\dfrac{15}{100} \times 96 = 14.4$	£14.40	3	M1 for $\dfrac{15}{100} \times 96$ oe or sight of 9.6 + 4.8 or digits 144 A1 for 14.4 A1 for £14.40 cao SC B2 for £81.60
14	(a)		Pounds or kg	1	B1 for pounds or kilograms accept grams, kilos or stones accept abbreviations
	(b)		Miles or Km	1	B1 for miles or kilometres accept abbreviations but not m
15	(a)		London	1	B1 accept 5ºC
	(b)		Edinburgh	1	B1 accept –4ºC
16	(a)		3	1	B1 oe
	(b)		26	1	B1 cao

ANM10_1A					
Question		**Working**	**Answer**	**Mark**	**Notes**
17		1066 0250 – 816 816 × £0.15	122.40	4	M1 for 1066 – 250 A1 for identifying units used as 816 M1 for "816" × 0.15 or 15 A1 for 122.4(0) **Alternative** M1 for 1066 × 0.15 or15 or 250 × 0.15 or15 A1 for 159.9 or 37.5 M1 for "159.9" – "37.5" A1 for 122.4(0) SC: B2 for £197.4(0)
18		7 × 2.5	17.50	1	B1 cao
19	(a)		8.05	1	B1 cao
	(b)		6	1	B1 cao
	(c)	300 × 1.15 30 × 11.50 3 × 115	345	2	M1 for 1.15 × 300 or 11.50 × 30 or 3 × 115 A1 for 345

ANM10_1B					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		260	1	B1 cao
	(b)		12	1	B1 cao
	(c)	23 1750 209 +	1982	2	M1 for one correct addition or sight of 2 in units column A1 cao
	(d)	405 23 −	382	2	M1 for one correct subtraction or sight of 2 in units column A1 cao
2	(a)		Six hundred and seventy five	1	B1 ignore spelling as long as meaning is clear
	(b)		700	1	B1 cao
3	(a)	204 6 × 	×	200	4
6	1200	24		1224	2	M1 for 6×4 or sight of 24 or correct multiplications for box method condoning one multiplication error or attempt to add 6 lots of 204 A1 cao
	(b)	55 5)27²5	55	2	M1 for $27 \div 5$ or sight of 5 in quotient with 2 carried or attempt to subtract 5 or 50 from 275 at least twice A1 for 55 cao

ANM10_1B					
Question		**Working**	**Answer**	**Mark**	**Notes**
4		$\dfrac{20}{100} \times 60$	12	2	M1 for $\dfrac{20}{100} \times 60$ oe or $60 \div 10 \times 2$ or $6 + 6$ A1 cao
5	(a)		$\dfrac{4}{8}$ or $\dfrac{1}{2}$	1	B1 cao
	(b)		$\dfrac{3}{5}$	1	B1 cao
	(c)	$12 \div 4$	3	2	M1 for $12 \div 4$ A1 cao
6			2 or 3 or 5 or 7	1	B1 for 2 or 3 or 5 or 7
7	(a)		0.5	1	B1 cao
	(b)		75	1	B1 cao
	(c)		$\dfrac{1}{5}$	2	M1 for $\dfrac{20}{100}$ oe A1 for $\dfrac{1}{5}$ cao
8		$4 \times £1.95$ Or $4 \times £2 - 4 \times 5p$	7.80	2	M1 for or $4 \times £1.95$ or $4 \times £2 - 4 \times 5p$ or attempt to add £1.95 four times A1 for 7.8(0)

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ANM10_1B					
Question		**Working**	**Answer**	**Mark**	**Notes**
9		10 – 3.75	6.25	2	M1 for 10 – 3.75 in columns or for counting on from 3.75 or sight of 25p A1 cao
10	(a)		9 10 oe	1	B1 for 9 10 oe eg 2110, 910am, 910pm, ten past nine
	(b)	11 05 <u>10 20</u> 0 45 **Alternative** 10 20 – 10 30 10 mins 10 30 – 11 00 30 mins 11 00 – 11 05 5 min	45	2	M1 for 11 05 – 10 20 or attempt to count on from 10 20 to 11 05 or sight of 10 + 30 + 5 A1 cao