GCSE 2004
November Series

ASSESSMENT and QUALIFICATIONS ALLIANCE

Mark Scheme

Mathematics B (3302)
Module 3 Tier F

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

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The following abbreviations are used on the mark scheme:

M	Method marks awarded for a correct method.
A	Accuracy marks awarded when following on from a correct method. It is not necessary always to see the method. This can be implied.
B	Marks awarded independent of method.
M dep	A method mark which is dependent on a previous method mark being awarded.
ft	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
SC	Special Case. Marks awarded for a common misinterpretation which has some mathematical worth.
oe	Or equivalent.
eeoo	Each error or omission.

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1(a)	2760	B1	Accept words
(b)	2800	B1	Accept words

2(a)	18	B1	
(b)	6	B1	
(c)	3	B1	

3(a)	876 ÷ 2	M1	
	438	A1	
(b)	28.5 × 2	M1	
	57	A1	Accept 57.0 57.00
(c)	–3 or 2	B1	For identification of either warmest or coldest temperature
	5 or –5	B1	Ans 5 or –5 scores B2
(d)	18 ÷ 1.6	M1	1.6 ÷ 18 is M0 unless correct answer is obtained
	11.25	A1	Digits 1125 with incorrect position of decimal point is M1A0 11.40 scores M0

4	1 pack of 20 and 4 single plants	M1	24 × 40(p) (= £9.60) or £5 ÷ 20 (= 25p) or 20 × 40(p) (= £8)
	£5 + 4 × 40p	M1	
	6.60	A1	

5(a)	144 ÷ 3 × 2	M1	oe must do both
	96	A1	
(b)	155 ÷ 100 × 20	M1	oe 10% = 15.5 gets M1
	31	A1	
(c)	4 ÷ 0.72 or 6 × 0.72 or 6 × 0.70 or 4 ÷ 6	M1	400 ÷ 72 or 6 × 72 or 6 × 70 or 400 ÷ 6
	5(.555…) or 4.32 or 4.20 or 0.66(6666…) and NO stated	A1	5(.555...) or 432 or 420 or 66(.6666...) and NO stated
(d)	2	B1	

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6	3.95 – 1.35 (= 2.60)	M1	395 – 135 (= 260)
	(their 2.60) ÷ 0.65	M1 dep	(their 260) ÷ 65 or build up method seen At least 3 × 65p + £1.35 or £3.95 − £1.35 and at least 3 of 65p M2
	4	A1	

7(a)	15 ÷ 6	M1	or attempt at build up method 6, 6, 3 with 2h in answer
	2.5	A1	
	2 hours 30 minutes	B1 ft	$2\frac{1}{2}$ hours is M1A1B0 SC1 2h 50m or 2h 5m
(b)	$18 \div 2\frac{1}{4}$	M1	Allow 18 ÷ 2.15 (= 8.37…) for M1 but if followed by 8 on the answer line award A0
	= 8	A1	
	mph	B1	Check for this independent mark
	ALTERNATIVE		
	18 ÷ 135	M1	
	0.13(333...)	A1	
	miles per minute	B1	

8	6 × 5p + 4 × 10p + 50p or 120p	M1	
	1.20	A1	1.2 is A0 SC1 30(p) and 40(p) seen and answer incorrect

9(a)	1, 4, 9	B2	All three correct and one incorrect or two correct and no more than one incorrect B1
(b)	4 and 10 or 5 and 8	B1	If incorrect answers as well B0
(c)	9	B1	

10(a)	0.2	B1	
(b)	$\frac{7}{10}$	B1	Accept equivalent fractions
(c)	$\frac{1}{2}$	B1	Accept equivalent fractions

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11(a)	Ten past eight (am/pm)	B1	Accept 8:10, 2010 oe
(b)	2 hours 35 minutes	B1	1h 95 min B0

12(a)	i) 2	B1	
	ii) 8 or 16	B1	
(b)	20 divided by any odd number	M1	eg 20 ÷ 3 (= 6)
	Shows a correct even remainder	A1	If remainder is 0 this must be stated

13(a)	i) 35	B1	
	ii) 140	B1 ft	follow through their (a)(i) × 4
(b)	Multiplies by 5 (= 1205) Allow 1 digit to be wrong	M1	Accept any correct method Grid method
	Answer ends in 0 and multiplies by 3 (= 7230) **and** added up Allow 1 digit to be wrong	M1	
	8435	A1	
(c)	125	B1	

	200	40	1	
M1 30 inner values Need 4 correct	6000	1200	30	7230
M1 5 Attempt to sum all 6 values	1000	200	5	1205
	7000	1400	35	8435

14(a)	$\frac{24}{30} \times 100$	M1	$\frac{6}{30} \times 100$ 100 – (their value from above)
	80	A1	Answer 20 → M1A0
(b)	20×2 or 18×2	M1	Accept 20×2.1, 20×2.2, 20×2.15
	40 or 36	A1	Accept 42, 44, 43 If exact value calculated (38.7) M0

15(a)	0.08	B1	oe
(b)	$\frac{4}{15}$	B1	oe fraction

16	500	B1	
	125	B1	SC1 their tomatoes (> 200) ÷ 4 = their water

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17	3 × 5000 (= 15 000)	M1	5000 ÷ 100 (= 50)
	their 15 000 ÷ 100	M1	their 50 × 3
	150	A1	Do not accept ratio answer unless 3 cm:150 m SC1 digits 15 on answer line (but not 150 and not in a ratio)