



General Certificate of Secondary Education

Mathematics 4307

Specification B

Module 3 Tier F 43053F

Mark Scheme

2007 examination - November series

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.

MODULE 3 FOUNDATION TIER

43053F

1(a)	2007	B1	
1(b)	Thirty	B1	oe eg (three) 10(s) or 30 or 10

2(a)(i)	4×1.35	M1	4×135
	5.40 or 540p	A1	Do not allow 5.4 or 540 but either implies M1
2(a)(ii)	4.60 or 460p	B1 ft	Allow 4.6 if penalised 5.4 above
2(b)	£2, £2, £2, 50p, 20p, 10p	B2	B1 right total wrong number of coins B1 any units missing
2(c)	$\frac{45}{135}$	M1	oe fraction
	$\frac{1}{3}$	A1	

3(a)	0.8	B1	oe decimal
3(b)	$85 \div 5 \times 4$	M1	oe Allow $\frac{4}{5} \times 85$ or their (a) $\times 85$
	68	A1	
3(c)	80	B1	
3(d)	Because 5 does not go into 16 (exactly)	B1	oe

4(a)	2.75	B1	
4(b)	2.8	B1 ft	ft if decimal seen to 2 or more places in part (a)

5(a)	64	B1	
5(b)	500	B2	Sight of 0.008 oe B1

6(a)	64 or 81	B1	
6(b)	11 or 13 or 17 or 19	B1	
6(c)	Two correct values	B2	B1 one correct value (allow one incorrect for B1) 9, 25, 49, 64, 81 ...

7	$0.39 \times 800 (= 312)$	M1	oe or sight of 0.61 or 61%
	$800 - (\text{their } 312)$	M1 dep	oe 800×0.61
	488	A1	

8	60×1.65 or $100 \div 1.65$	M1	
	99 or 60.60...	A1	Allow 60.6, 60.60, 60.61, 60.606 or better
	100 – their 99 or their 60.60... – 60	M1 dep	May be implied
	England by €1 or by 60p/61p	A1 ft	Must have correct unit ft to nearest cent or penny rounded or truncated

9(a)	Actual increase is $1900 - 600$	M1	$1.9 - 0.6$ $\frac{1900}{600} \times 100$
	their $\frac{1300}{600} \times 100$	M1 dep	their $\frac{1.3}{0.6} \times 100$ their 316.(6)-100
	216.(6...)	A1	Accept 217, 220
	200	B1 ft	ft any number ≥ 2 sf
9(b)	845	B1	

10(a)	8	B1	
10(b)	42	B1	
10(c)	23	B1	
10(d)	3 in units position	M1	Build-up seen eg $520 - 200 + 13$
	333	A1	

11(a) (i)	$2 + 3 + 4$	B1	oe Nos can be in any order
11(a) (ii)	$2 \times 3 \times 4$	B1	oe Nos can be in any order
11(a) (iii)	$2 \times 3 + 4$ or $3 \times 4 - 2$	B1	
11(b) (i)	5	B1	
11(b) (ii)	14	B1	

12(a)	$\frac{6}{10}$	B1	oe fraction eg $\frac{3}{5}$, $\frac{60}{100}$
12(b)	(0).9(0...)	B1	
12(c)	1	B1	

13(a)	40×15	M1	
	600	A1	
13(b)	$15 \div 2 (= 7.5(0))$	M1	
	$4 \times 15 + 3 \times$ their 7.50	M1	their 7.50 must be < 15
	82.50	A1	82.5 gets M2

14	$2.5 < \text{answer} < 2.6$	B1	
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15(a) (i)	-6	B1	
15(a) (ii)	-12	B1	
15(a) (iii)	2	B1	
15(b)	$\frac{3}{20} \times 100$	M1	Accept $\frac{1}{20} = 5\%$
	15	A1	

16(a)	$\frac{6}{10}$	B2	oe fraction $\frac{4}{10}$ B1
	3×50 or 6×50	M1	Also allow 4×50 for M1 if $\frac{4}{10}$ above
	Men = 150	A1	
	Children = 300	A1	
16(b)	3 : 1	B1	oe eg 150 : 50 or $\frac{3}{10} : \frac{1}{10}$

17(a)	$1\frac{2}{3} \times 2$	M1	$3\frac{1}{3}$ or $\frac{10}{3}$ or $2\frac{4}{3}$ oe Allow decimals ≥ 2 dp rounded or truncated $2 + 2 = 4$ or $2 \times 2 = 4$ M0A0
	4	A1	
17(b)	$1\frac{2}{3} + 1\frac{1}{4}$	M1	
	$(1)\frac{8}{12}$ (+) $(1)\frac{3}{12}$	M1	oe Valid denominator, at least one correct numerator $(1).66$ (+) $(1).25$
	$2\frac{11}{12}$ and some indication of yes	A1	2.91 or 2.92 and Yes oe