

GCSE 2004

June Series



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.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available from:

Publications Department, Aldon House, 39, Heald Grove, Rusholme, Manchester, M14 4NA
Tel: 0161 953 1170

or

download from the AQA website: www.aqa.org.uk

Copyright © 2004 AQA and its licensors

COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

The Assessment and Qualifications Alliance (AQA) is a company limited by guarantee registered in England and Wales 3644723 and a registered charity number 1073334. Registered address AQA, Devas Street, Manchester. M15 6EX.

Dr Michael Cresswell Director General

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**33003F**

1	Costs are £4.76	B1	
	£2.20	B1	Condone no '0'
	£2.07	B1	Condone no '0'
	Total: £13.50	B1 ft	(at least 2 correct) do not accept 13.5

2(a)	1479	B1	
(b)	9714	B2	(9741 B1) B1 for 4 digit number using 1, 7, 9, 4; ending in 4 eg 1794
(c)	9700	B1 ft	ft from 4 digit number

3	$£5.10 \times 7.5 \times 5$	M1 M1	$\times 7.5$ (or £38.25) $\times 5$ M1 $7.5 \times 5 = 37.5$
	$= £191.25$	A1	

4	$£ \frac{1.76}{2.2}$	M1	
	$= 80$	A1	Accept 0.8
	$= 80$ pence or £0.80	B1	Unit mark (8 can be either unit)

5(a)	$\frac{25}{100} \times 1200$	M1	or $\frac{1}{2}$ is 600 25% is $\frac{1}{2}$ of 600
	$= 300$	A1	
(b)	$\frac{2}{5} \times 1200$	M1	SC1 240 SC1 720
	$= 480$	A1	
(c)	$\frac{96}{1200} \times 100$	M1	
	$= 8\%$	A1	

6(a)	3.1	B1	
(b)	11.51	B1	ft (a) + 8.41

33003F

7	36 pack is 3 times size of 12 pack	M1	or 12 pack is $\frac{1}{3}$ of 36 pack
	$\pounds 1.42 \times 3 = \pounds 4.26$ [or 4.2...]		or $\pounds \frac{4.74}{3} = \pounds 1.58$ (or 1.5...)
	\therefore Standard is cheaper	A1	
			or price per finger Standard $\pounds \frac{1.42}{12} = 11.(83\dots)p$ Economy $\pounds \frac{4.74}{36} = 13.(16\dots)p$ Consistent division M1
			\therefore Standard is cheaper A1
			11... and 13... or 8... and 7... Ignore dp but must be consistent M1
8(a)	1.125	B1	
(b)	1.09, 1.112, $1\frac{1}{8}$, 1.08^2 , 1.18	B3 ft	Allow B2 if one is out of position or in reverse order
			or B1 (1.08^2) = 1.1664
9	Number sold at 50p is $400 - 310 - 24 (= 66)$	M1	
	Receives $310 \times 80p = \pounds 248$	B1	
	'66' $\times 50p (= \pounds 33)$	M1	M1 for any ($\leq 90 \times 50p$)
	Total = $\pounds 281$	A1 ft	(one correct)
10(a)	i) Seven thousand four hundred and eighty three	B1	
	ii) 7000	B1	
(b)	i) 2 and 58	B1	
	ii) 39 and 29	B1	
11(a)	$\pounds \frac{10}{2.19}$	M1	or count on at least 3 times and $\pounds 4.38$
	= 4	A1	Accept $\pounds 8.76$
(b)	$4 \times \pounds 2.19 = \pounds 8.76$	M1	
	Change is $\pounds 1.24$	A1	
(c)	Coins: $\pounds 1$, 20p, 2p, 2p	B1 ft	Must involve both \pounds and p

33003F

12	a) Lake Victoria (3720 feet above)	B1	
	b) Dead Sea (1200 feet below)	B1	
13	8.35 + 2.40	M1	Needs a clear attempt, could be counting on to 10.35 + 40 minutes
	11.15 am	A1	Accept 1115, 11.15 oe
14	1 melon costs $\frac{4.28}{4}$ (= £1.07)	M1	$\frac{2.14}{2}$
	5 melons cost $5 \times \text{£}1.07$	M1	or $\text{£}4.28 + \text{£}1.07$
	= $\text{£}5.35$	A1	
15(a)	394×62		
	23640 788	M1 A1	One row correct Other row correct
	24428	A1	Accept Napier's bones etc All multiples correct M1 Last three digits correct A1 Total A1 Box method 1 total correct M1 Other totals correct A1 Total A1 62×394 gives 248 5580 18600
(b)	i) 34.2	B1	
	ii) 34.250	B1	
(c)	$\frac{9}{15} - \frac{5}{15}$	M1	Either
	= $\frac{4}{15}$	A1	SC1 $\frac{14}{15}$
16(a)	Cost = $\text{£} \frac{30}{1.50}$	M1	Accept complete build up
	= $\text{£}20$	A1	
(b)	Tax = $\frac{6}{100} \times \$25$	M1	or $1.06 \times \$25$ M1
	= \$1.50	A1	= \$26.50 A2
	Cost is \$26.50	A1	Accept \$26.5

33003F

17(a)	Estimate is $70 \times 20\text{p}$	M1	Either 70 or 20
	= £14	A1	ft from one used
			Accept $70 \times 19 = \text{£}13.30$ M1A1
			Accept $71 \times 20 = \text{£}14.20$ M1A1
			NB $71 \times 19 = 1349$ no marks
(b)	$\frac{4}{5} \times 40$	M1	
	= 32	A1	SC1 8 and 32 or 8

/