

FSMQ

MATHEMATICS

4981 – Money Management
Mark scheme

4981
June 2014

Version/Stage:v1.0 Final

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

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' 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 aqa.org.uk

Key to mark scheme abbreviations

M	mark is for method
m or dM	mark is dependent on one or more M marks and is for method
A	mark is dependent on M or m marks and is for accuracy
B	mark is independent of M or m marks and is for method and accuracy
E	mark is for explanation
✓ or ft or F	follow through from previous incorrect result
CAO	correct answer only
CSO	correct solution only
AWFW	anything which falls within
AWRT	anything which rounds to
ACF	any correct form
AG	answer given
SC	special case
OE	or equivalent
A2,1	2 or 1 (or 0) accuracy marks
-x EE	deduct x marks for each error
NMS	no method shown
PI	possibly implied
SCA	substantially correct approach
c	candidate
sf	significant figure(s)
dp	decimal place(s)

No Method Shown

Where the question specifically requires a particular method to be used, we must usually see evidence of use of this method for any marks to be awarded.

Where the answer can be reasonably obtained without showing working and it is very unlikely that the correct answer can be obtained by using an incorrect method, we must award **full marks**. However, the obvious penalty to candidates showing no working is that incorrect answers, however close, earn **no marks**.

Where a question asks the candidate to state or write down a result, no method need be shown for full marks.

Where the permitted calculator has functions which reasonably allow the solution of the question directly, the correct answer without working earns **full marks**, unless it is given to less than the degree of accuracy accepted in the mark scheme, when it gains **no marks**.

Otherwise we require evidence of a correct method for any marks to be awarded.

Question	Solution	Marks	Total	Comments
	BUILD UP METHOD NO MARKS UNLESS REQUIRED ANSWER OBTAINED			
1(a)	reduction is $\frac{1}{3} \times \text{£}25.80$ = £8.60 Jasmine pays £17.20	M1 A1 A1	3	Or $\frac{2}{3} \times \text{£}25.80$ M1 only If £8.6 given as final answer M1 only SC2 17.2 If bunnies etc used no marks
(b)	second roll costs £1.99 pays £1.99 + £3.98 = £5.97	M1 A1	2	$(3.98 \div 2) + 3.98$ M1 for a sensible attempt at $\frac{1}{2}$ plus 3.98
(c)	discount is $\frac{17}{100} \times \text{£}256$ = £43.52 Liam pays £212.48	M1 A1 A1	3	or $\frac{83}{100} \times \text{£}256$ do not accept 17%
	Total		8	
2(a)	change is £40 – £22.47 = £17.53	M1 A1	2	
(b)	notes: £10, £5 coins: £2, 50p, 2p, 1p	B1 B1	2	ft if needs ≥ 2 notes ft if needs ≥ 2 coins If £2 in notes but otherwise correct B1 condone 50 for 50p etc £2 needs £
	Total		4	
3(a)	£350	B1		
(b)	£300	B1	2	
	Total		2	

4	cost is £ $\frac{47}{1.62}$ = £29.012345 = £29.01	M1 A1 A1	3	SC2 £29 or £29.02 For all 3 marks, need £29.01 in answer line or as last line in their working with nothing in the answer line
Total			3	

5	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Pack size</th> <th>Cost (pence)</th> <th>Weight of chocolate (grams)</th> <th>Cost per 100 grams (pence)</th> </tr> </thead> <tbody> <tr> <td>Small</td> <td>599</td> <td>175</td> <td>342</td> </tr> <tr> <td>Standard</td> <td>999</td> <td>350</td> <td>285</td> </tr> <tr> <td>Large</td> <td>1499</td> <td>550</td> <td>273</td> </tr> <tr> <td>Special offer</td> <td>1000</td> <td>350</td> <td>286</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				Pack size	Cost (pence)	Weight of chocolate (grams)	Cost per 100 grams (pence)	Small	599	175	342	Standard	999	350	285	Large	1499	550	273	Special offer	1000	350	286				
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Small	599	175	342																									
Standard	999	350	285																									
Large	1499	550	273																									
Special offer	1000	350	286																									
(a)	columns Cost and Weight	B1		Delete 1 mark for consistent dp error; eg: 3,3,3,3 M1 A1 only 300, 300, 300, 300 M1 A1 or 3.42, 2.85, 2.73, 2.86 M1 A1 if 2.72 [not 2.73] M1A1 (similarly for 2.85 not 2.86 or both) All these could gain the B1 for columns If only rounding errors in 273, 286 hence 342, 285, 272, 285 or 340, 285, 270, 286 etc only loses this B mark [with/without working] Only for completely correct table																								
	any cost per 100 grams	M1 A1																										
	all correct	A1																										
	all to whole numbers of pence	B1	5																									
(b)	large	B1	1	no ft																								
(c)	too many chocolates cost is too great	B1	1	no ft																								
Total			7	accept on a diet do not accept not hungry if 2 reasons given; one correct and one not correct award B1																								

6

Product description	Code	Quantity	Unit price (£)	Total price (£)	
Math Dice	BAMDC	2	6.99	13.98	
Fraction Pie Puzzles	LRFPP	1	22.99	22.99	
Mathematical Curiosities	TBNTC	3	5.99	17.97	
				Sub-total	£54.94
				Postage & Packing	£-
				Total due	£54.94

Add £4.99 for Postage & Packing
Free Postage & Packing for orders over £40

item codes	B1		
total price column	B1		
sub-total	B1		
post and packing and total due	B1	4	<p>Must have unit price ft one incorrect ft [note: if total under £40 add p&p] Must not have 4.99 in space</p> <p>Ignore additional entries if not included in costs</p> <p>If additional items included in their costs, could gain B1 [codes], B1 [sub total if only one item added] +B1 for post & packing</p> <p>If only 2 different products bought, B0 B0 B0 + possibly B1 [for final p&p + total]</p> <p>If only 1 of each item is bought, could gain B1, B0, B0, B1</p>
Total		4	

Question	Solution	Marks	Total	Comments
7(a)	pay is $3.5 \times \pounds 5.03$	M1	2	SC1 for $\pounds 16.60$ No marks for $\pounds 16.59$
	= $\pounds 17.61$	A1		$\pounds 15.09$ plus their half [seen as $\frac{1}{2}$ of $\pounds 5.03$] gains this M1 accept $\pounds 17.60$ SC1 for $\pounds 17.6$ or $\pounds 17.605$ SC1 for $\pounds 13.02$; or $\pounds 22.08$ or $\pounds 22.09$
(b)	total is 12 shares	B1	3	Implied by $\pounds 11$
	Lily is paid $\frac{3}{12} \times \pounds 132$	M1 dep on B1		
	= $\pounds 33$	A1		
Total			5	
8(a)	fraction is $\frac{32}{80}$	M1	2	oe must be a proper fraction but not a decimal or a ratio or a percentage
	= $\frac{2}{5}$	A1		
(b)	40%	B1	1	ft [not from $\frac{1}{2}$ or $\frac{1}{4}$ or $\frac{3}{4}$]
Total			3	

9

	Starting value (£)	Interest (£)	Final value (£)
First 6 months	2455.00	31.67	2486.67
Second 6 months	2486.67	32.08	2518.75
Third 6 months	2518.75	32.49	2551.24

second 6 months, $\text{£}2486.67 \times \frac{1.29}{100}$
= £32.08

M1

for sight of £32.08 or £32.078...

total is £2518.75

A1

third 6 months, *their* $\text{£}2518.75 \times \frac{1.29}{100}$

M1

total is £2551.24

A1

SC3 for 1p out; SC2 for 2p out
watch for £2551.24 from
£32.07 & 32.50 SC2 [2 errors of 1 p]

If keep more than 2 dp could gain
M1,M1

Total

4

TOTAL

40