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# Free-Standing Mathematics Qualification **Mathematics**

4981 Money Management  
Mark scheme

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June 2016

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Version: 1.0 Final

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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](http://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	Mark	Total	Comment
1	Balance is £250 – £148.27	M1	2	M1A0 for -101.73
	= £101.73	A1		
	<b>Total</b>		<b>2</b>	

Question	Solution	Mark	Total	Comment
2(a)	Reduction is $\frac{21}{100} \times £39.95$	M1	3	Or M1 $\frac{79}{100} \times 39.95$
	= £8.3895	A1		= 31.5605 A1
	= £8.39			M1A0 for 8.38
	Simon pays £31.56	A1		Final A mark for 31.56 CAO SC2 for £31.57 T & I No marks if not 31.56 [3 marks] or 31.57 [2 marks]
2(b)(i)	£2400	B1	1	Accept 2400.00
2(b)(ii)	£2000	B1	1	Accept 2000.00
2(c)	Usual price [for 4] is £33.96	B1	4	Or offer price each is £6.25
	Discount is £33.96 – 25			
	= £8.96	M1		Or $8.49 - 6.25 = £2.24$
	Percentage reduction is $\frac{8.96}{33.96} \times 100$	M1		Or $\frac{2.24}{8.49} \times 100$
	= 26.38 %	A1		
	= 26.4 %			Condone 26 26.3 is awarded B1 M1M1A0
				Or £33.96 B1
				$\frac{25}{33.96} \times 100$ M1 = 73.6[16...] or 74
				Percentage reduction is 100 - 73.6[16..] M1 = 26.4% A1
	<b>Total</b>		<b>9</b>	

Question	Solution	Mark	Total	Comment
3(a)	5.00 – 8.45	M1	2	Accept any attempt [needs an answer] at counting or subtracting using 5 pm or 17[00] Or any number between 6 and 10 for M1
	$= 7 \frac{1}{4}$ hours [or 7.25]	A1		Do not accept 7 hours 15 minutes for M1A1 SC1 for 7 hours 15 minutes  8.25 or $8\frac{1}{4}$ without working M1A0 7hrs 25 min or 7.15 M1A0
3(b)(i)	Number of hours per week is $7 \frac{1}{4} \times 5$ or $36 \frac{1}{4}$	B1 ft	3	from (a) must be non integer but must be the answer to part a Integer hours used will not obtain this B mark
	Alice is paid $\text{£}8.40 \times 7 \frac{1}{4} \times 5$	M1		Or Daily pay is $\text{£}8.40 \times 7 \frac{1}{4}$ M1 = $\text{£}60.90$ A1
	= $\text{£}304.50$	A1		Alice is paid $\text{£}304.50$ A1 CAO
				Eg 7 [hours used] marks for part b are $7 \times 5 \times 8.40 = 294$ is SC1 only [8 hours gives 336 SC1] [6 hours gives 252 SC1]
3(b)(ii)	Hourly pay on Saturday is $\text{£}8.40 \times 1 \frac{1}{2}$	M1	3	Or usual pay for $2\frac{1}{2}$ hours is $\text{£}21$ B1
	= $\text{£}12.60$	A1		Pay on Saturday is $\text{£}21 \times 1 \frac{1}{2}$ M1
	Total pay for Saturday is $\text{£}12.60 \times 2 \frac{1}{2}$			
	= $\text{£}31.50$	A1		= $\text{£}31.50$ A1  NB Answer of $[\text{£}]31.5$ loses this last mark
				If build up need to see 21, 31.50 or 12.60 unless $8.4 + \frac{1}{2} \times 8.4$ for M1
	<b>Total</b>		<b>8</b>	

Question	Solution	Mark	Total	Comment
4(a)	Change is £60 – £42.71	<b>M1</b>	2	
	= £17.29	<b>A1</b>		
4(b)	Notes: £10, £5	<b>B1</b>	2	Ft if needs > 1 note
	Coins: £2, 20p, 5p, 2p, 2p	<b>B1</b>		Ft if needs > 3 coins If £5 or £2 is in wrong place B1 max possible Accept 2 implying £2 Do not need p or £
<b>Total</b>			<b>4</b>	

Question	Solution	Mark	Total	Comment	
5(a)					
		Weight of strawberries (grams)	Cost of strawberries (pence)	Cost per 100 grams (pence)	
		Small punnet	200	115	57.5
		Standard punnet	300	155	51.7
		Large punnet	454	200	44.1
		Tray	1000	450	45.0
		Weight column	<b>B1</b>	6	Accept any of 57 or 58 or 57.5, 52, 44, 45 as correct  Accept all of 57 or 58 or 57.5, 52, 44, 45 for this mark  Also accept for this mark 57.5, 51.66..[51.67], 44.05, 45.0  Note 51 6 is not accepted for this mark  Accept 45 for 45.0
		Cost column	<b>B1</b>		
		Any cost per 100 grams correct	<b>M1A1</b>		
		All in cost column correct	<b>A1</b>		
	All correct and answers correct to 1 dp	<b>B1</b>			
				Consistent dp error SC2 ,could gain B1 B1 in addition	
(b)	Best value is Large punnet	<b>B1</b>	1		
<b>Total</b>			<b>7</b>		

Question	Solution	Mark	Total	Comment
6	Cost is $\pounds \frac{1200}{1.27}$	M1	3	SC2 £944 or £945 944.9 or 944.90 is M1A1 Full marks for 944 or 945 only if 944.88 seen [not 944.8818]
	= £944.8818...	A1		
	= £944.88	A1		
				Or $\frac{1}{1.27} = 0.7874..$ $0.7874 \times 1200 = 944.88$ gains all marks But $0.79 \times 1200 = 948$ gains M1 only $0.78 \times 1200 = 936$ gains M1 only
	<b>Total</b>		<b>3</b>	

Question	Solution	Mark	Total	Comment
7	12 parts	B1	3	Not needed to be used correctly
	Number of punnets is $\frac{7}{12} \times 204$	M1		Or $\frac{1428}{12}$ or $7 \times 17$
	= 119	A1		Or 34, 51, 119 all given SC2 No marks for 34 or 51 without working
	<b>Total</b>		<b>3</b>	

Question	Solution	Mark	Total	Comment																
8	<table border="1"> <thead> <tr> <th></th> <th>Starting value (£)</th> <th>Interest (£)</th> <th>Final value (£)</th> </tr> </thead> <tbody> <tr> <td>First 3 months</td> <td>2100.00</td> <td>12.39</td> <td>2112.39</td> </tr> <tr> <td>Second 3 months</td> <td>2112.39</td> <td>12.46</td> <td>2124.85</td> </tr> <tr> <td>Third 3 months</td> <td>2124.85</td> <td>12.54</td> <td>2137.39</td> </tr> </tbody> </table>		Starting value (£)	Interest (£)	Final value (£)	First 3 months	2100.00	12.39	2112.39	Second 3 months	2112.39	12.46	2124.85	Third 3 months	2124.85	12.54	2137.39			
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	Second 3 months $\text{£}2112.39 \times \frac{0.59}{100}$	<b>M1</b>	4	Accept £12.46																
	Final value is $\text{£}2124.85$	<b>A1</b>																		
	Third 3 months $\text{£}2124.85 \times \frac{0.59}{100}$	<b>M1</b>		Accept £12.54																
Final value is $\text{£}2137.39$	<b>A1</b>	SC3 for 1p out; SC2 for 2p out Ft their 2124.85																		
			If keep more figures in table lose 2 marks If keep more figures in table and give final answer to 2dp SC3																	
	<b>Total</b>		<b>4</b>																	