



**General Certificate of Secondary Education
March 2011**

**Mathematics
Foundation
Unit 1**

43601F

Final

Mark Scheme

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 to download from the AQA Website: www.aqa.org.uk

Copyright © 2011 AQA and its licensors. All rights reserved.

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 following abbreviations are used on the mark scheme:

M	Method marks awarded for a correct method.
M dep	A method mark which is dependent on a previous method mark being awarded.
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.
Q	Marks awarded for quality of written communication.
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.

UNIT 1 FOUNDATION TIER

43601F

1ai	40	B1	
1aai	their 40 + 80 + 60 (= 180)	M1	Allow one error or omission
	250 – their 180	M1	Must subtract all three months
	Bar drawn to 70	A1	SC1 bar drawn to their 70
1b	80 – 30 or 5 × 10	M1	Condone 80 – 25 for M1
	50	A1	Must show working SC1 50 no working SC1 8 – 3 = 5
1ci	80 + 50 + 30 + 70 (= 230) or 4 × 50 (= 200)	M1	Condone 8 × 50 (= 400)
	250 + their 230 + their 200 or their 400 + their 230 (= 630)	M1	
	680	A1	430 ⇒ M1 M0 A0 630 seen ⇒ M1 M1 A0
1cii	0.5 × their 680	M1	oe
	340	A1 ft	

2ai	White or W	B1	
2aai	$\frac{1}{4}$ or (0).25 or 25%	B2	B1 sight of $\frac{2}{8}$ or $\frac{25}{100}$ B1 1 out of 4 or 1 in 4
2b	All labelled red or R	B1	
2c	1 white, 1 green, 4 red, 4 blue	B2	B1 all four colours used and 2 of other 3 criteria met eg 2W 2G 3R 3B

3a	(MS) ML, MK, DS, DL, DK, WS, WL, WK	B3	B2 at least five more of the eight possible options seen B1 2 - 4 more of the eight possible options seen
3b	their $\frac{1}{9}$	B1 ft	oe

4	11p, 22p, 55p, £1.10 or 110p	B3	B2 two or three correct totals B2 four correct pairs B1 one correct total B1 one, two or three correct pairs Condone money notation errors for up to B2
---	------------------------------	----	---

5ai	20	B1	
5aia	As 115 divided by 4 does not give a whole number	B1	oe
5bi	75	B1	
5bii	80 + 115 + 75 (= 270) or 5 + 25 + 40 (= 70)	M1	115 – 25 (= 90) or 75 – 40 (= 35)
	their 270 – their 70	M1 dep	their 75 + their 90 + their 35
	200	A1	SC1 340 or 165 or 125
5ci	White or W	B1	
5cii	Silver or S or “black or white” or “white or black” or “B or W” or “W or B”	B1	
5d	Ticks Cannot Tell and explains that they may be in the ‘other’ category	B1	oe

6	Ticks either box with clear supporting reason for choice	B1	discrete and explains that money takes exact values (eg 1p, 2p ... or eg cannot have half a penny) Condone ‘whole numbers’ or continuous and explains that situations exist where money can take any value (eg exchange rates \$1 = £0.612599 or eg petrol costs 138.99p per litre)
---	--	----	--

7a	Attempts to calculate fx (at least one attempt) or 424 seen	M1	$8 \times 10 (= 80)$ $10 \times 18 (= 180)$ $12 \times 7 (= 84)$ $15 \times 4 (= 60)$ $20 \times 1 (= 20)$
	their $424 \div$ their 40	M1 dep	10.6
	10.60	Q1	Strand (i) Correct notation required Do not accept 10.6 SC2 404.5
7b	Mode = 10 as it is the value occurring most often	B1	oe
	Median is the 20th (or 20.5th) unless contradicts with conclusion	B1	oe SC1 both definitions only without 'Yes' or '£10'
7c	One similarity	B1	eg same range, same mode, same values for data, same frequency for £15 oe
	One difference	B1	Different mean, different median, Shelley 50 visits/fees, Paul 40 oe Calculations/working not required

8	3 : 5	B2	B1 equivalent of 3 : 5 eg 45 : 75 B1 5 : 3 B1 3 : 8
---	-------	----	---

9a	$\frac{19}{147} \times 100$	M1	oe
	12.92(...) or 12.93	A1	Accept 13 with M1 working seen
	12.9	B1 ft	ft any value > 1 dp correctly rounded to 1 dp or their calculation given to 1 dp SC1 13 (answer only)
9bi	Stem (0), 1, 2, 3 and 4 and suitable key	B1	Accept 4, 3, 2, 1, (0)
	Leaves 1 2 3 4 6 7 8 8 0 1 6 7 9 1 2 3 8 5 1	B2	B1 4 rows correct B1 complete but unordered leaves
	Stem, leaves and aligned correctly	Q1	Strand (ii) Logical, organised order of working
9bii	8	B1	
9biii	0	B1	Accept 'none' or 'zero'
9c	Ticks the 19 late trains only	B1	
	States mode should now be 7	B1 dep	oe eg one minute less SC1 wrong or no box ticked and states new mode is 7