



**General Certificate of Secondary Education  
June 2011**

**Mathematics  
Foundation  
Unit 2**

**43602F**

**Final**

***Mark Scheme***

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**The following abbreviations are used on the mark scheme:**

<b>M</b>	Method marks awarded for a correct method.
<b>M dep</b>	A method mark which is dependent on a previous method mark being awarded.
<b>A</b>	Accuracy marks awarded when following on from a correct method. It is not necessary always to see the method. This can be implied.
<b>B</b>	Marks awarded independent of method.
<b>Q</b>	Marks awarded for quality of written communication.
<b>ft</b>	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
<b>SC</b>	Special Case. Marks awarded for a common misinterpretation which has some mathematical worth.
<b>oe</b>	Or equivalent.
<b>[<i>a</i>, <i>b</i>]</b>	Accept values between <i>a</i> and <i>b</i> inclusive.

**UNIT 2 FOUNDATION TIER**

**43602F**

1a	14 and 15	B1	Either order
1b	31	B1	
1c	17	B1	
1d	42	B1	
1e	49	B1	

2a	(2, 5)	B1	
2b	Point (6, 1) plotted	B1	
2c	(6, 5)	B1 ft	ft if (6, 1) is wrongly plotted but their D completes a rectangle
2d	(4, 3)	B1 ft	ft for rectangle

3	5 + 9 or 14 or 10 + 18	M1	
	28	A1	

4	Valid mathematical statement for 21	B1	eg in the 7 times table Not a multiple of 5
	Valid mathematical statement for 25	B1	eg square number or factor of 50

5	$\begin{array}{ccccc} 3 & 6 & 9 & 12 & 18 \\ 8 & \text{or } 20 & \text{or } 12 & \text{or } 4 & \text{or } 8 \\ 20 & 5 & 10 & 15 & 5 \end{array}$	B3	B2 total 31 with 2 correct multiples B1 total 31 with 1 correct multiple or three correct multiples but total not 31 or listing multiples of 3, 4 and 5 (minimum of two multiples of each number)
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6	$40 \div 8$ or $5 \times 8 (= 40)$	M1	oe eg 8, 16, 24, 32 ... seen
	5	A1	

7a	D or (£)131 750	B1	
7b	A or (£)132 500	B1	
7c	132 500 – 131 750	M1	ft their answer to parts (a) and (b)
	750	A1 ft	ft their answer to parts (a) and (b)
7d	13 240	B1	Allow 13 240.0 or 13 240.00

8a	11 or -11 or both	B1	
8b	$45 \div 5 \times 3$ or $45 \times 3 \div 5$	M1	oe eg $\frac{60}{100} \times 45$
	27	A1	
8c	$\frac{8}{100} \times 150$ or $8 \times 1.5$ or $8 \div 2 \times 3$	M1	oe eg $10\% = 15$ ( $1\% = 1.5$ ) $2\% = 3$ so $8\% = 15 - 3$ or $8\% = 4 \times 3$
	12	A1	oe eg 12.0 or 12.00

9a	Shows that $5 \div 2$ must be done first so LHS = $17 - 2\frac{1}{2} + 4$	B1	$2\frac{1}{2}$ or 2.5 seen is enough
9b	$(17 - 5) \div 2 + 4 = 10$	B1	
9c	$(17 - 5) \div (2 + 1) \times 4 = 16$	B1	

10	Sight of 12p or 24p or 36p or (£)1.2(0) or (£)3.6(0)	M1	eg 0.12 or 0.24 or 0.36
	$7200 \div$ their 36 (= 200) or $72 \div$ their 3.60	M1 dep	oe
	20	A1	SC2 60
	All calculations and working clearly shown	Q1	Strand (iii) Must have both Ms awarded

11a	26	B1	
	80	B1 ft	
11b	$((6) - 4) \div 2$ or $(6) \div 2 - 2$	M1	Condone missing brackets
	1	A1	
	$(\text{their } 1 - 4) \div 2$ or $\text{their } 1 \div 2 - 2$	M1	
	$-\frac{3}{2}$	A1	oe

12	$5647 - 5345$ or 302	M1	
	$200 \times 24$ or 4800 or 48(.00)	M1	
	their $(302 - 200) \times 15$ or 1530 or 15.3(0)	M1	oe
	6330 or 63.3(0)	A1	
	their 63.30	Q1	Strand (i) Correct money notation in £ Do not accept 63.3

13	$51 = 3 \times 17$	B1	oe Multiplications <b>must</b> be shown any order
	$55 = 5 \times 11$	B1	
	$58 = 2 \times 29$	B1	

14	Any two of 800 or $2^2$ (or 4) or 10 seen	M1	
	$800 \div 40$ or $200 \div 10$ or $80 \div 4$	M1	oe
	20	A1	

15	(50 – 43) red or 7 red or 14 (red) or 36 (blue and yellow)	M1	$R + 3Y + Y = 43$ or $2R + 3Y + Y = 50$ oe or $R = 7$
	their $36 \div 4$	M1 dep	$4Y = 43 - 7$ oe
	9	A1	

16a	Plan A	B1	
	Valid reason	B1	eg cheaper (for 800 minutes)
16b	Attempt at any two readings from Plan B slope	M1	eg (600, 30), (700, 60), (800, 90), (900, 120), (1000, 150) need not be coordinates eg 600(min), (£)30 or (£)30, 600(min)
	Compares cost and time or $6000 (\div) 200$ or $60 (\div) 200$	M1 dep	oe eg (£)30 in 100 (minutes) (£)120 in 400 (minutes)
	30p or £0.30	A1	

17a	$(5x + 3 =) 3x + 6$	B1	
	$5x -$ their $3x =$ their $6 - 3$ or $2x = 3$	M1	oe
	1.5	A1 ft	oe ft for linear equation if B0 scored
17b	$2x + 32$ or $4x - 20$	M1	Accept $ax + ab$ for M1
	$6x + 12$ or $6(x + 2)$	A1	
	$a = 6$ and $b = 2$	A1 ft	ft from their $6x + 12$ if M1 earned SC2 $a = 6$ and $b = 12$ SC1 $a = 6$