

Mark Scheme

Mock paper

GCSE

GCSE in Mathematics Specification A Foundation Tier

Paper 2 (Calculator) Updated March 2012

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:

i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear.

Comprehension and meaning is clear by using correct notation and labelling conventions.

ii) select and use a form and style of writing appropriate to purpose and to complex subject matter.

Reasoning, explanation or argument is correct and appropriately structured to convey mathematical reasoning.

iii) organise information clearly and coherently, using specialist vocabulary when appropriate.

The mathematical methods and processes used are coherently and clearly organised and the appropriate mathematical vocabulary used.

Guidance on the use of codes within this mark scheme

M1 - method mark

A1 - accuracy mark

B1 - working mark

C1 - communication mark

QWC - quality of written communication

oe - or equivalent

cao - correct answer only

ft - follow through

sc - special case

Specification A: Paper 2 Foundation Tier

1MA0/2F					
Question		Working	Answer	Mark	Additional Guidance
1.	(a)		32	1	B1 cao
	(b)		Arrow by 480	1	B1 cao
Total for Question 1: 2 marks					
2.	(a)		9	1	B1 cao
FE	(b)		Wednesday	1	B1 cao
	(c)		5	2	M1 for attempt to add up all of bicycles or motorbikes or 45 or 40 seen A1 cao
Total for Question 2: 4 marks					
3.	(i)		7 or 9 or 15	1	B1 for 7 or 9 or 15
	(ii)		9	1	B1 cao
	(iii)		12	1	B1 cao
	(iv)		2 or 15	1	B1 for 2 or 15
Total for Question 3: 4 marks					
4.		9 + 15 (=24) "24" ÷ 4	6	2	M1 for clear attempt to reverse at least one operation or 24 seen A1 cao
Total for Question 4: 2 marks					
5.			(p , t) (h , t) (s, t) (p, c) (h, c) (s, c) (p, j) (h, j) (s, j)	2	M1 for any 3 combinations A1 for all 9
Total for Question 5: 2 marks					

1MA0/2F					
Question	Working	Answer	Mark	Additional Guidance	
6.	(a)		2	1	B1 cao
	(b)		5	2	M1 for 7 - 2 A1 cao
	(c)		4	2	M1 for complete method eg. $28 \div 4$ A1 cao
Total for Question 6: 5 marks					
7.	(a)		18	1	B1 cao
	(b)		14	1	B1 cao
	(c)		Reflection	1	B1 cao
Total for Question 7: 3 marks					
8. FE	(i)	240 + 90 (=330) 1000 - 330 (=670) 670 \div 110	6	4	M1 for $1000 - (240 + 90) (=670)$ M1 for "670" \div 110 A1 cao
	(ii)		10p		B1 ft for 10p or £0.10
Total for Question 8: 4 marks					
9.	(a)		Feet, litres	2	B1 for feet B1 for litres
	(b)		3.5	1	B1 cao
Total for Question 9: 3 marks					

1MA0/2F					
Question	Working	Answer	Mark	Additional Guidance	
10. FE	(a)		13, 23	2	B1 for 13 B1 for 23
	(b)		15	1	B1 cao
	(c)		Canada	1	B1 cao
	(d)		15 : 8	2	M1 for 30 : 16 A1 cao (SC: B1 for 8 : 15)
Total for Question 10: 6 marks					
11.	(a)		B and C	1	B1 cao
	(b)		E	1	B1 cao
	(c)		2	1	B1 cao
Total for Question 11: 3 marks					
12. FE		80305 - 79721 = 584 584 - 70 = 514 514 × 10.2 + 70 × 21.3 = 5242.8 + 1491	£67.34	4	M1 for 80305 - 79721 (= 584) M1 for "584" - 70 (= 514) M1 for "514" × 10.2 + 70 × 21.3 A1 for £67.34 or 6734p
Total for Question 12: 4 marks					
13.	(a)(i)		5	2	B1 cao
	(ii)		9		B1 cao
	(b)		12	2	M1 for 6 or 4 A1 cao
Total for Question 13: 4 marks					

1MA0/2F					
Question	Working	Answer	Mark	Additional Guidance	
14. QWC FE	$15 \times 1.80 (= 27)$ $10 \times 2.50 (=25)$ $10 \times 2.60 (=26)$ or $180 \div 18 (=10)$ $500 \div 54 (=9)$ $260 \div 27 (=9.62..)$	Shop B	4	M1 for correct method to find total cost of 270 biscuits at one of the shops M1 for finding cost in same way at other shops A1 for £27 and £25 and £26 C1 for conclusion following correctly from candidate's working QWC : Working must be clearly set out with conclusion referring back to working or M1 for correct method to find cost of 1 biscuit at one of the shops M1 for finding cost in same way at other shops A1 for 10p and 9p and 9.6p C1 for conclusion following correctly from candidate's working QWC : Working must be clearly set out with conclusion referring back to working	
Total for Question 14: 4 marks					
15.	(a)		$\frac{7}{30}$	2	B2 cao (B1 for $\frac{7}{a}$ ($a > 7$) or $\frac{b}{30}$ ($b < 30$))
	(b)	$360 \div 30 = 12$ $12 \times 5 = 60$ $12 \times 12 = 144$ $12 \times 7 = 84$ $12 \times 6 = 72$	Angles of $60^\circ, 144^\circ,$ $84^\circ, 72^\circ$	4	M1 for $360 \div 30$ (or implied by one correct angle sector) A2 for all four sectors correct (A1 for any two correct sectors) B1 for correct labelling
Total for Question 15: 6 marks					
16.	(a)	$35 \times 4 + 40$	180	2	M1 for 35×4 A1 cao
	(b)	$355 - 40 (=315)$ $315 \div 35$	9	2	M1 for $355 - 40$ or 315 or $35d + 40 = 315$ A1 cao
Total for Question 16: 4 marks					

1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
17.	20% + 50% (=70%) 100% - 70% = 30% $18 \div 3 \times 10$	60	4	M1 for 100% - (50% + 20%) M1 for equating 18 with "30%" M1 for $18 \div 3 \times 10$ oe A1 cao
Total for Question 17: 4 marks				
18.	(a)	479.826087	2	B2 for 479.826... (B1 for 110.36 or $\frac{2759}{25}$ or $\frac{11036}{25}$)
	(b)	500	1	B1 ft
Total for Question 18: 3 marks				
19.	(a)	22	1	B1 cao
FE	(b)	16	1	B1 16 - 16.2
	(c)	11	3	M1 for method to convert 44 pounds to kg (ft from (a)) (=20 kg) M1 for ("20" - 15) A1 accept 10.5 - 11.5
Total for Question 19: 5 marks				
20.	(a)	09 10	1	B1 cao
	(b)	10	1	B1 cao
	(c)	Line from (10 10, 5) to (10 40, 5) to (11 20, 0)	3	B1 for line from (10 10, 5) to (10 40, 5) M1 for $10 \div 15$ or 40 minutes A1 for line from (10 40, 5) to (11 20, 0)
Total for Question 20: 5 marks				

1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
21.		25	3	M1 for angle BAH or angle $ABH = 180 - 53 (=127)$ M1 for $180 - "127" - 28$ A1 cao
Total for Question 21: 3 marks				
22. FE	$2 \times 3.50 + 2.50 + 2.20 =$ £11.70 $10 \div 1.25 = 8$ $11.70 - 8$	3.70	4	M1 for $2 \times 3.50 + 2.50 + 2.20 (= £11.70)$ M1 for $10 \div 1.25 (= 8)$ M1 for " 11.70 " - " 8 " A1 cao or M1 for $2 \times 3.50 + 2.50 + 2.20 (= £11.70)$ M1 for " 11.70 " \times $1.25 = (14.625)$ M1 for " 14.625 " - 10 A1 cao
Total for Question 22: 4 marks				
23.	(a)	$2(x + 5)$	1	B1 cao
	(b)	$6y(y + 2)$	2	M1 for any common factor placed outside bracket A1 cao
	(c)	$x > \frac{7}{6}$	2	M1 for $6x + 3 > 10$ A1 cao
Total for Question 23: 5 marks				
24.	(a)	Triangle at (1,2) (1, -1) (3, -1)	1	B1 cao
	(b)	Rotation; 180° ; centre (0,0)	3	B1 for rotation B1 for 180° B1 for centre (0,0)
Total for Question 24: 4 marks				

1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
25. QWC FE	$17 \times 6^2 \times 15 (= 1696..)$ $15 \times 1000 = 15000$ $15000 \div 1696$	8	4	M1 for $17 \times 6^2 \times 15 (= 1696..)$ B1 for 15000 M1 for "15000" \div "1696" C1 for reasoning how many bags for answer of 8 from 8.8... QWC : Working must be clearly set out with conclusion referring back to working
				Total for Question 25: 4 marks
26. FE	$6^2 = x^2 + 1.5^2$ $\sqrt{33.75} (=5.809...)$	5.8	3	M1 for $6^2 = x^2 + 1.5^2$ M1 for $\sqrt{36 - 2.25}$ A1 cao
				Total for Question 26: 3 marks

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