

Mark Scheme (Results) Summer 2010

IGCSE

IGCSE Mathematics (4400)
Paper 2F Foundation Tier

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Summer 2010 IGCSE Mathematics (4400) Mark Scheme - Paper 2F

The following questions require a seen valid method before the accuracy mark can be awarded; Q13b & c, Q20
For other questions a correct answer implies a correct method.

Q	Working	Answer	Mark	B1	Notes	
1.	(a)		12	1	B1	
	(b)		6	1	B1	
	(c)		Homestead	1	B1	
	(d)		$2\frac{1}{2}$ houses drawn	1	B1	allow if intention clear eg allow or or for $\frac{1}{2}$ house
Total 4 marks						

2.	(ai)		12	1	B1	
	(aii)		19	1	B1	
	(aiii)		36	1	B1	
	(aiv)		19	1	B1	
	(b)		19, 21	1	B1	Any order
	(c)		12	1	B1	
	Total 6 marks					

3.	(a)	$30 \div 6.70 (=4.47\dots)$	4	2	M1 A1	cao
	(b)	$30 - (4 \times 6.70) (=30-26.80)$	3.20	2	M1 A1	"4" = 1,2,3,4 only allow 3.2
Total 4 marks						

4.	(i)		A labelled at 1	1	B1	
	(ii)		B labelled at 0.5	1	B1	
	(iii)		C within 0.05 - 0.25	1	B1	Between 0.7cm and 3.5cm in from 0
Total 3 marks						

Q	Working	Answer	Mark	Notes	
5.	(a)	(3, 7)	1	B1	
	(b)	(-3, 1)	1	B1	
	(c)	Parallelogram	1	B1	
	(d)	0	1	B1	allow "zero", "none" etc
	(e)	54 to 58 inclusive	1	B1	
					Total 5 marks

6.	(a)		142	1	B1	
	(b)	Arrange in order			M1 A1	i.e. 142, 142, 145, 147, 159 or reverse
	(c)	159 - 142			M1 A1	159 to 142, 142 - 159, 142, 159 etc cao
	(d)	$(142 + 147 + \dots) / 5 (= 735/5)$			M1 A1	cao
	(e)		A	1	B1	
					Total 8 marks	

7.	(ai)		E	1	B1	
	(aii)		D	1	B1	
	(bi)		3	1	B1	Accept x 3, 3 times etc
	(bii)		X marked at correct point "1,1"	1	B1	at top right corner of bottom left square of grid
					Total 4 marks	

8.	(i)		m or metres	1	B1	
	(ii)		g or grams	1	B1	allow N or Newtons
	(iii)		cm ² or sq cm or mm ² or sq mm	1	B1	cm squared or square centimetres etc mm squared or square millimetres etc
					Total 3 marks	

Q		Working	Answer	Mark	Notes	
9.	(a)		5.6169	1	B1	cao
	(b)		hundredths or $\frac{1}{100}$	1	B1	7 hundredths or $\frac{7}{100}$ not (0).07
	(ci)		2.8089.....	1	B1	at least 4 sf
	(cii)		2.81	1	B1ft	ft (ci) if > 2 dps
						Total 4 marks

10.	(a)	$180 - (110 + 30)$ (=180-140)	40	2	M1 A1	cao
	(b)		40	1	B1ft	ft (a)
	(c)	$360 - 30$	330	2	M1 A1	cao
						Total 5 marks

11.	(i)		$y = x$ oe	1	B1	i.e. $x + y = 0$
	(ii)		$y = -2$ oe	1	B1	i.e. $y + 2 = 0$
						Total 2 marks

12.		50×2.50 (= 125) 30×4.00 (= 120) $(50 - 8 - 30) \times 3.00$ (=12 x 3.00) (=36) $(30 \times 4.00) + ("12" \times 3.00) - (50 \times 2.50)$	31(.00)	5	M1 M1 M1 M1dep A1	Amount paid Sales on Sunday Sales on Monday Sales - Cost (i.e. "120" + "36" - "125") dep on all M1's Ignore trailing zeros throughout
						Total 5 marks

Q		Working	Answer	Mark	Notes	
13.	(a)		4	1	B1	accept answer only
	(b)	$4x = 17 - 5$	3	2	M1 A1	(dep on M1) ANS only = M0A0
(H1)	(c)	$6y - 3y = 7 + 9$ $3y = 16$	$5\frac{1}{3}$ oe or 5.33(...)	3	M1 M1 A1	or better; correctly collect ys & constants 2dp at least for decimal ans if $16/3$ not seen (A1 dep on at least 1 M1)
						Total 6 marks

14. (H2a)	(a)	$360 - (108 \text{ to } 112)$ or $180 + (68 \text{ to } 72)$	248 to 252 inclusive	2	M1 A1	
(H2b)	(b)	$360 - (180 - 50)$ (= $360 - 130$) or $180 + 50$ or $50 + 50 + 130$	230	2	M1 A1	cao
	(c)	6.5 ± 0.2 seen $(6.5 \pm 0.2) \times 5$	31.5 - 33.5 inclusive	3	M1 M1 A1	measure AB
						Total 7 marks

15.	(a)	$(3 \times -4) + (2 \times 7)$	2	2	M1 A1	3×-4 and 2×7 or -12 and 14 seen (allow without bracket) cao
	(b)	5×3^2 or $5 \times 3 \times 3$	45	2	M1 A1	cao
						225 with no wking: M0A0 Total 4 marks

Q		Working	Answer	Mark	Notes	
16. (H3a)	(a)	$1 - (0.5 + 0.2) (= 1 - 0.7)$	0.3 oe	2	M1 A1	decimals, fractions, % ok
(H3b)	(b)	30×0.2	6	2	M1 A1	cao $6/30 = M1 A0$
Total 4 marks						

17. (H4a)	(a)	$^{85}/_{1.25}$	68	2	M1 A1	or $^{85}/_{75}$ condone $^{85}/_{1.15}$ cao
(H4b)	(b)	$^{85}/_{136} \times 100$	62.5	2	M1 A1	cao
(H4c)	(c)	$12 \times 0.15 (= 1.8)$ or 180p or 180 pence 12 - "1.8"	10.20 oe	3	M1 M1 A1	$1 - 0.15 = 0.85$ "0.85" x 12 allow 10.2
Total 7 marks						

18. (H5)		$(x^2 =) 3.3^2 + 1.8^2 (= 14.13)$ f"14.13"	3.76	3	M1 M1 A1	dep awrt 3.76 isw for 3.758 or better in body
Total 3 marks						

19. (H6)	(ai)		4, 5	1	B1	
(H6)	(a ii)		6	1	B1	
(H6)	(bi)	sc B1 B0 for Q= 3,4,6 or 7 then R =3,4,6 or 7	Q = 3,4,6 or 3,4,7	1	B1	
(H6)	(bii)		R = 3,4,7 or 3,4,6	1	B1ft	R=3,4,7 if Q=3,4,6 // R=3,4,6, if Q=3,4,7
Total 4 marks						

Q		Working	Answer	Mark	Notes	
20. (H7a)	(a)	$7(x+1)$ or $3(5x-2)$ $7(x+1) + 3(5x-2)$	$7(x+1) + 3(5x-2) = 34$ oe	3	M1 M1 A1	or doubled or mult out correctly or doubled or mult out correctly (and stated intention to +) i.e. $14(x+1) + 6(5x-2) = 68$ can then isw
(H7b)	(b)	$7x+7$ or $14x+14$ or $15x-6$ or $30x-12$ $22x=33$ or $44x=66$	1.5oe	3	M1 M1 A1	can be awarded from (a) s.c. M1 for $22x=67$ cao dep on M2 scored
Total 6 marks						

21. (H8)		$\frac{3}{2}, \frac{5}{4}$ or $\frac{6}{4}, \frac{5}{4}$ $\frac{3}{2} \times \frac{4}{5}$ or $\frac{6}{4} \times \frac{4}{5}$ or $\frac{6}{4} \div \frac{5}{4}$ etc $\frac{6}{5}$ oe		3	B1 B1 B1	converting both correctly to improper fractions Stated intention to multiply if 2nd fraction inverted or divide if denominators are the same (correct fractions) Must be improper fraction from previous calculation Ignore all decimal treatments
Total 3 marks						

22. (H9)		$15.75 - 14 (= 1.75)$ $\frac{1.75}{14} \times 100$	$\frac{15.75}{14} \times 100$ (=112.5) "112.5" - 100	12.5	M1 M1 A1	$14/15.75 \times 100 (=88.9)$ $100 - 88.9 (=11.1)$ allow $\frac{1.75}{15.75} \times 100$ (=11.1) cao
Total 3 marks						

Total 100 marks						
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