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Mark Scheme (Results)
Summer 2010

IGCSE

IGCSE Mathematics (4400)
Paper 2F Foundation Tier

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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	Notes	
1.	(a)		12	1	B1	
	(b)		6	1	B1	
	(c)		Homestead	1	B1	
	(d)		$2^1/_2$ houses drawn	1	B1	allow if intention clear eg allow or or for ½ 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 ÷ 6.70 (=4.47..)	4	2	M1 A1	cao
	(b)	30 – (“4” × 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	145	2	M1 A1	i.e. 142, 142, 145, 147, 159 or reverse
	(c)	159 - 142	17	2	M1 A1	159 to 142, 142 – 159, 142 , 159 etc cao
	(d)	(142 + 147 + ...) / 5 (= 735/5)	147	2	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 $^{1}/_{100}$	1	B1	7 hundredths or $^{7}/_{100}$ 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) x 3.00 (=12 x 3.00) (=36) (30 × 4.00) + (“12” × 3.00) – (50×2.50)	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)	$4x = 17 - 5$		M1		
			3	2	A1	(dep on M1) ANS only = M0A0
(H1)	(c)	$6y - 3y = 7 + 9$		M1		or better; correctly collect *y*s & constants
		$3y = 16$		M1		
			$5^1/_3$ oe or 5.33(...)	3	A1	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 to 112) or 180 + (68 to 72)	248 to 252 inclusive	M1 2 A1		
(H2b)	(b)	360 – (180 – 50) (= 360 – 130) or 180 + 50 or 50 + 50 + 130	230	M1 2 A1		cao
	(c)	6.5±0.2 seen (6.5±0.2) × 5		M1 M1		measure *AB*
			31.5 – 33.5 inclusive	3	A1	
						Total 7 marks

15.	(a)	(3 × -4) + (2 × 7)			M1	3 × -4 and 2 × 7 or -12 and 14 seen (allow without bracket)
			2	2	A1	cao
	(b)	5×3^2 or 5 × 3 × 3			M1	
			45	2	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 × 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) √"14.13"	3.76	3	M1 M1 A1	 dep awrt 3.76 isw for 3.758 or better in body
						Total 3 marks

19.	(ai)		4, 5	1	B1	
(H6)	(aii)		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	 allow $\frac{"1.75"}{15.75} \times 100$ (=11.1) cao	14/15.75 x 100(=88.9) 100 – 88.9 (=11.1)
								Total 3 marks

Total 100 marks

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