

Mark Scheme (Results)

November 2008

IGCSE

IGCSE Mathematics (4400) Paper 2F

November 2008 IGCSE 4400 Maths Mark Scheme - Paper 2F

Q	Working	Answer	Mark	Notes
1. (a)		3099, 3909, 3990, 3999	1	B1
(b)		5	1	B1
(c)		8, 12	1	B1
(d)		1, 3, 9, 27	2	B2 B1 for any two. -B1 each extra
(e)		19, 29	2	B2 B1 each one ignore extras
				Total 7 marks

2. (i)		Unlikely	1	B1
(ii)		Impossible	1	B1
(iii)		Certain	1	B1
				Total 3 marks

3. (a)		Hundredths	1	B1
(b)		43.7	1	B1
				Total 2 marks

4. (a)	-5 - 2		2	M1 A1
(b)(i)		-7	1	B1
(ii)		2	1	B1
		-48	1	B1
				Total 4 marks

Q	Working	Answer	Mark	Notes
5. (a)(i)		radius	1	B1
(ii)		chord	1	B1
(b)(i)		cube	1	B1
(ii)		6	1	B1
				Total 4 marks

6. (a)		8	1	B1
(b)		6	2	B2 2, 8 or 2-8 or 8-2 or 2 to 8: B1
(c)	2 4 4 5 8 8 8	5	2	M1 Attempt arrange in order A1
(d)	39/7	5.57..... oe eg 5 ⁴ /7	2	M1 Attempt total / no of scores A1 allow 5.6 with working
(e)		³ /7	1	B1 or 0.428 to 0.429 or 0.43
				Total 8 marks

7.	30 + 45 (= 1 h 15m or 75m)	1415 - 0730 (= 6h 45m) "6h45m- 1h15m"	1415- "1h15m" (= 1300) "1300" - 0730	0730 + 30 + 45 (=845) 1415 - "845"	5h 30m	4	M1 or implied by eg 6h 45 m - 30 - 45 M1 Attempt M1 A1	Total 4 marks
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Q	Working	Answer	Mark	Notes
8. (a)	$\frac{3}{8} \times 432$	162	2	M1 A1 0.375 × 432; not just 43.75% × 432
(b)(i)	$\frac{5}{8}$	$\frac{5}{8}$	1	B1 or equiv frac eg $\frac{270}{432}$
(ii)	“ $\frac{5}{8}$ ” × 100 oe	62.5 or 63	2	M1 ft (i) A1 ft (i) if unrounded ans not integer
(c)	$1500 \times \frac{4}{100}$ (= 60) “60” + 1500	1560	3	M1 M1 A1 1500 × 1.04 oe M1M1
				Total 8 marks

9 (i)	26, 37		2	B1B1
(ii)	Add 2 more each time Add odd numbers Diff goes up by 2		1	B1 Goes up oddly Add diff between terms + 2 not “Add 2 each time”
				Total 3 marks

10. (a)	6.5 ± 0.2		1	B1
(b)	“6.5” ÷ 2	3.25 ± 0.1	2	M1 A1f ft (a)
				Total 3 marks

Q	Working	Answer	Mark	Notes
11. (a)		(2,4)	1	B1 or $x=2$, $y=4$ or x^2 , y^4 or $2x$, $4y$
(b)(i)		(3,1) plotted	1	B1
(ii)		parallelogram	1	B1
(iii)	2×3	6 to 7 incl cm^2	3	M1 evidence of counting sqs A1 B1
(c)		(2,2)(2,6)(4,2)(4,6)(3,3)(3,5)	1	B1
(d)		$y = x$	1	B1
				Total 8 marks

12. (a)		5,6,7, 3,4,5, (1),2,3	2	B2 B1 for six correct, not including "1"
(b)		$\frac{2}{9}$ oe	2	B2f B1f num B1 denom; dep <1. 2:9 B1
				Total 4 marks

13. (a)		$-x + 6y$	2	B2 B1 each term
(b)(i)		$3a + b$	1	B1 oe
(ii)		$2a + 3b$	2	B2 B1 each term or if unsimplified: $3a+2b - a + b$ or $3a+2b - (a - b)$: B2 $3a+2b - a - b$: B1 not ISW
				Total 5 marks

Q	Working	Answer	Mark	Notes
14. (a)	$\frac{9}{12}, \frac{2}{12}$	$\frac{9}{12} + \frac{2}{12}$	2	B1 both denoms 12 or mult of 12 B1 or $\frac{22}{24}$ or eq fr decimals: B0B0
				Total 2 marks

15 (a)	$24 \div 4 \times 3$ oe	18	2	M1 M1 for $24 \div 4$ or $24 \div 3$ or $3 \div 4$ A1
(b)	$40 \div 8 \times 5$ oe	25	2	M1 M1 8 (3+5 or used in $40/8$) A1
				Total 4 marks

16. (a)	$0.5 \times 1.5 \times 1.2$ triangle + 2×1.5	3.9	3	M1 or 0.9 M1 $2 \times 1.5 + \dots$ or $3.2 \times 1.5 - \dots$ A1
(b)	$\frac{3.9}{20} \times 1000$	195	3	M1 or $1000 \div 20$ M1dep x "3.9" 50 x "3.9" or $1000 \div (20 / "3.9")$ M2 SC: $100 \div (20 / "3.9")$ M1
				Total 6 marks

Q	Working	Answer	Mark	Notes
17. (a)	$165 \div 60$ $= 2.75$	2 h 45 m	3	M1 A1 A1 1 km/min 165 mins
				Total 3 marks

18. (a)	$1 - (0.2 + 0.1)$	0.7	2	M1 A1 oe
(b)	0.2×20	4	2	M1 A1 or $^4/_{20}$ oe or 4 out of 20
				Total 4 marks

19. (a)		$5x - 10$	2	B2 B1 for $5x$ or $5 \times x$; B1 for $- 10$ or $+ - 10$ ignore " $x = 2$ " but subseq incorrect wking: - B1
(b)	$x + 12 = 40$ or $x/4 = 7$			M1 oe
(c)	$5x > 8$	28	2	A1
		$x > 1.6$	2	M1 condone " $=$ " only if ans " $x > 1.6$ " A1 " $x > 1.6$ " but just " > 1.6 " on line: M1A1 " $x > 1.6$ " but " 1.6 " or " $x=1.6$ " on line: M1A0 allow $>$
				Total 6 marks

Q	Working	Answer	Mark	Notes
20.	$4^2 + 6^2 (= 52)$ √“52”	7.21... or 2.√13	3	M1 M1 dep A1 $\sin(\tan^{-1}(4/6)) = 4/h$ $h = 4 / \sin(\tan^{-1}(4/6))$
				Total 3 marks

21	A: travelling at a steady speed B: not moving C: speed is increasing		3	B1 B1 B1
				Total 3 marks

22 (a)(i)	3, 6, 9		1	B1
(ii)	2, 3, 4, 6, 8, 9, 10		2	B2 Any order One omission or extra: B1
In (b)(i) & (ii), answers must refer to context, not just sets				
(b)(i)	(Students who study) maths and history in 12Y		2	B1 or “study both” allow maths + history B1 indep
(ii)	They don’t study maths		1	B1 or No students in R study maths No students who study maths are in R Not: They don’t study maths or history
				Total 6 marks