edexcel
advancing learning, changing lives

Mark Scheme (Pre-Standardisation)
Summer 2008

IGCSE

IGCSE Mathematics (4400/1F)

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.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- 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.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Q	Working	Answer	Mark	Notes
1. (a)		7006	1	B1 cao
(b)		9000	1	B1 cao
(c)		hundreds	1	B1 Accept 500, 100
(d)		326	1	B1 cao
				Total 4 marks

2. (a)(i)		cuboid	1	B1 Accept rectangular box
(ii)		prism	1	B1 Condone omission of 'pentagonal'
(iii)		cone	1	B1
(b)		8	1	B1 cao
				Total 4 marks

3. (a)		Egypt and Malaysia	1	B1	
(b)(i)		20	3	B1	cao
(ii)	$\frac{20}{100}$			M1	for $\frac{"20"}{100}$
		$\frac{1}{5}$		A1	ft from "20"
(c)		14	1	B1	Accept 13 or 14
(d)(i)		Kenya	2	B1	
(ii)		0.43		B1	cao
(e)(i)		35 <bar<40	2	B1	
(ii)		61		B1	cao
					Total 9 marks

4. (a)			1	B1	
(b)	10 × 2 + 1		2	M1	
		21		A1	cao
(c)	$\frac{37-1}{2}$		2	M1	
		18		A1	cao
(d)	eg 60 is even, number of matchsticks is always odd, first number is odd and 2 is added each time, multiplying by 2 and adding 1 will always give an odd number of sticks		1	B1	May refer to number sequence of matchstick pattern – need not do both
(e)		$n = 2p + 1$	3	B3	B2 for $2p + 1$ B1 for n = linear function of p eg $n = p + 1$
					Total 9 marks

5. (a)	25 – 18		2	M1	for 25 – 18, 18-25, 18 to 25
		7		A1	cao
(b)	18 19 21 22 23 24 24 25 or $\frac{8}{2}$ or 4 or $\frac{9}{2}$ or 4½		2	M1	
		22.5		A1	cao
					Total 4 marks

6. (a)		24	2	B2	B2 for 23-25 inc B1 for 22 or 26
(b)	6 × 2 + "4.5" × 2		2	M1	Accept 4.5 ± 0.2
		20.6-21.4		A1	for 22.4-23.2 inc **SC** if M0, award B1 for 20
(c)		0	1	B1	cao
(d)		2	1	B1	cao
(e)(i)		115°-119°	2	B1	
(ii)		obtuse		B1	
(f)		4 , 3	2	B2	B1 for 4 B1 for 3
					Total 10 marks

7.	(a)		$2p$	1	B1	Accept $p2$, $2 \times p$ etc
	(b)		$4xy$	1	B1	Accept $xy4$, $4 \times xy$ etc
	(c)		$9g - 5h$	2	B2	B1 for $9g$ B1 for $-5h$ or $+ -5h$
						Total 4 marks

8.	(a)(i)		27	1	B1	cao
	(ii)		20	1	B1	cao
	(iii)		25	1	B1	cao
	(iv)		23	1	B1	cao
	(b)		$\frac{5}{9}$	2	M1 A1	fraction with denominator of 9 numerator of 5
						Total 6 marks

9.	(a)		$\frac{8}{18}, \frac{12}{27}$ etc	1	B1	
	(b)	65 ÷ 5 or 13 or 4 × 65 or 260		2	M1	
			52		A1	cao
	(c)	0.875 0.9 0.85 0.88		2	M1	2 fractions converted to decimals
			$\frac{17}{20}\ \frac{7}{8}\ \frac{22}{25}\ \frac{9}{10}$		A1	**SC** if M0, award B1 for 3 fractions in correct order
						Total 5 marks

10.	180 − 2 × 73 or 180 − 146		3	M2	M1 for unmarked base angle identified as 73°
		34		A1	cao
					Total 3 marks

11. (a)(i)		6859	2	B1	cao
(ii)		6860		B1	cao
(b)	$\frac{17.28}{2.4}$		2	M1	for 17.28 or 2.4 seen
		7.2		A1	cao
					Total 4 marks

12.	2 arcs, radius 6 cm, centres *A* and *B*		2	M1	
	triangle within guidelines			A1	
					Total 2 marks

13. (a)	$\frac{4.8}{100} \times 23500$ or 1128		3	M1	
	23 500 + "1128"			M1	(dep)
		24 628		A1	cao
(b)	29 832 − 28 250 or 1582		3	M1	or M1 for $\frac{29832}{28250}$ or 1.056 M1 for "1.056" − 1
	$\frac{1582}{28250} \times 100$ or $\frac{1582}{29832} \times 100$			M1 for $\frac{1582}{28250}$ or $\frac{1582}{29832}$ or 0.056 or 0.053…	
		5.6		A1	cao
					Total 6 marks

14.	$\frac{1-0.6}{2}$		2	M1	for 1 − 0.6 or 0.4 or division by 2
		0.2		A1	cao
					Total 2 marks

15. (a)	Enlargement scale factor 2 centre (1, 3)		3	B3	B1 for enlargement B1 for 2 B1 for (1, 3)
(b)	Reflection in the line $y = x$		2	B2	B1 for reflection B1 for $y = x$
					Total 5 marks

16.	3 + 1 or 4 seen		2	M1	
		210		A1	cao
					Total 2 marks

17. (a)(i)		1, 9, 17	2	B1	cao
(ii)		1, 5, 9, 13, 17, 25, 33		B1	cao
(b)		eg No members in common	1	B1	
					Total 3 marks

18. (a)	$\frac{8 \times 3}{2}$		2	M1	
		12		A1	cao
(b)	$\tan x^\circ = \frac{3}{8} = 0.375$		3	M1 A1	for tan for $\frac{3}{8}$ or 0.375
		20.6		A1	for 20.6 or better (20.5560…)
					Total 5 marks

19. (a)	$7x - 7 = 5 - 2x$ $9x = 12$		3	M1 M1	for $7x - 7$ seen for correct rearrangement into form $ax = b$ ft from "$7x - 7$"
		$1\frac{1}{3}$ oe		A1	
(b)(i)	$4x \leq 16$		4	M1	
		$x \leq 4$		A1	
(ii)		1 2 3 4		B2	B1 for3 correct and none wrong or for 4 correct and 1 wrong
					Total 7 marks

20. (i)		57.5	2	B1 cao
(ii)		56.5		B1 cao
				Total 2marks

21.	55 × 7 + 65 × 21 + 75 × 15 + 85 × 14 + 95 × 3 or 385 + 1365 + 1125 + 490 + 285 or 4350		4	M1 for finding products $f \times x$ consistently within intervals (inc end points) and summing them
				M1 (dep) for use of halfway values
	$\frac{"4350"}{60}$			M1 (dep on 1st M1) for division by 60
		72.5		A1 for 72.5 Accept 73 if all M marks awarded
				Total 4 marks