MNN. Xiremedabers.com

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2012 question paper for the guidance of teachers

0580 MATHEMATICS

0580/13

Paper 1 (Core), maximum raw mark 56

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

• Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2012 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – May/June 2012	0580	13

Abbreviations

cao correct answer only cso correct solution only

dep dependent

ft follow through after error isw ignore subsequent working

oe or equivalent SC Special Case

www without wrong working

soi seen or implied

Qu		Answers	Mark	Part Marks
1		40	1	
2		52 000	1	
3		11 109	1	
4	(a)	53	1	
	(b)	64	1	
5	(a)	<	1	
	(b)	=	1	
6		120	2	M1 for $\frac{750 \times 2 \times 8}{100}$ oe seen or SC1 870 as final answer
7		95	2	B1 for 85 seen or M1 $x = 180$ – 'their angle <i>ADC</i> ', if it is clearly seen
8	(a)	$\begin{pmatrix} -1 \\ 5 \end{pmatrix}$	1	
	(b)	$\begin{pmatrix} 15 \\ -20 \end{pmatrix}$	1	
9	(a)	1	1	
	(b)	b^{-2}	1	accept $\frac{1}{b^2}$
10		7 cao	3	B1 for 39.5(0) or 31.5(0) or 42 M1 for (their 39.5 – 8) ÷ 4.5 or (their 42 – 10.5) ÷ 4.5
11	(a)	isosceles	1	
	(b)	64	1	
	(c)	alternate (angle)	1	accept z angle

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – May/June 2012	0580	13

12		[x=] 5, [y=] -2	3	M1 for consistent multiply and add/subtract as appropriate. Allow computational errors. Other methods allowed. A1 for correct x or y.
13	(a)	6.4×10^{-4}	1	
	(b)	1.4×10^3	2	M1 for 1400 or answer rounding to 1401 or 1.4×10^k
14	(a)	3	1	
	(b)	3.5	2	M1 for at least 7 numbers in order and an attempt to find the middle number
	(c)	7	1	Tind the initidie number
15	(a)	$\frac{11}{12} - \frac{4}{12}$ oe	2	M1 correct use of a common denominator
		$\frac{7}{12}$ cao ww 0		A1
	(b)	$\frac{1}{4} \times \frac{13}{11}$ oe	2	M1 inversion and operation change
		$\frac{13}{44} \mathbf{cao} \mathbf{ww} \ 0$		A1
16	(a)	7.2 oe	2	M1 for $5x - 15 = 21$ or $x - 3 = \frac{21}{5}$
	(b)	$[x=] \frac{y+2}{3}$	2	M1 for $3x = y + 2$ or $-3x = -2 - y$
17	(a)	112	2	M1 Attempt to add 6 given and their 2 sides
	(b)	564	2	M1 for $18 \times 34 - 12 \times 4$: $(612 - 48)$ or $(18 \times 12) + (14 \times 12) + (10 \times 18)$ or $(4 \times 12) + (10 \times 4) + (34 \times 14)$
18	(a)	71	2	M1 for 7×8 – 3×–5 or B1 56 and –15
	(b)	3v(u+3w) final answer	2	B1 for $3(uv + 3vw)$ or $v(3u + 9w)$ As final answer
19	(a)	332	2	M1 for $BCA = 28$. Or $360 - 28$ or 152 marked correctly at C or $180 + 152$
	(b)	78.4	2	M1 for $AB^2 = 74^2 + 26^2$ or better
20	(a)	[0].15 oe	1	
	(b)	(i) 0.12, 0.28, 0.44 oe	2	M1 for division of 15, 35 or 55 by their 125 Or B1 for 1 correct
		(ii) 128	2	M1 for 800 × [0].16