UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2011 question paper

for the guidance of teachers

0580 MATHEMATICS

0580/13 Paper 1 (Core), maximum raw mark 56

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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

Qu.	Answers	Mark	Part Marks
1 (a)	10 073	**1**	
(b)	13 + 20 – 2 = 31	**1**	Accept 20 seen with answer 31
2 (a)	32	**1**	
(b)	3	**1**	
3	14 30 or (0) 2:30 pm	**1**	
	June 4th oe	**1**	
4	$2y(x - 2z)$	**2**	**B1** for $y(2x - 4z)$ or $2(xy - 2yz)$
5 (a)	<	**1**	
(b)	<	**1**	
6	(x =) $3(y - 5)$ oe final answer	**2**	**M1** for correct first move $y - 5 = \frac{x}{3}$ or $3y = x + 15$ **M1** for their correct second move
7 (a)	0	**1**	
(b)	2	**1**	
8 (a)	$\begin{pmatrix} -2 \\ 1 \end{pmatrix}$	**1**	
(b)	Point marked at (1, –1)	**1**	
9 (a)	21	**1**	
(b)	27	**1**	
10	10.7 or 10.69(……) www	**2**	**M1** for $\frac{AC}{12} = \cos 27$ or better
11	7.94 or 7.937(…..) www	**3**	**M2** for $\sqrt{(12^2 - 9^2)}$ or **M1** for $12^2 = x^2 + 9^2$ oe or better

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12 (a)	1.646×10^7	**1**	
(b)	3.32×10^{-2}	**2**	**B1** for 0.0332 seen or 3.3×10^{-2} as answer or **B1** for 3.32×10^k
13 (a)	36	**1**	
(b)	Correct working	**2**	**M1** for $\frac{7}{6}$ oe improper fraction **M1** for $\frac{12}{21} = \frac{4}{7}$ oe or visible cancelling
14 (a)	(0).55	**1**	
(b)	250	**2**	**M1** for 35 000 ÷ 140 or SC1 for figs 25
15 (a)	67	**1**	
(b)	0.00304	**1**	
(c)	56.35	**1**	
16	(x =) 5 (y =) –1	**3**	**M1** for consistent multiplication and add/subtract as appropriate. **A1** for 1 correct answer.
17 (a)	Reflex	**1**	
(b) (i)	Drawing of a trapezium	**1**	Ignore labels and no arrows as long as a reasonable sketch.
(ii)	Trapezium	**1**	
18	127.31 cao	**3**	**M1** for 120×1.03^2 **A1** for 127.308 If **M0** award **SC2** for 7.31 or 247.31
19 (a)	17	**1**	Allow –17
(b) (i)	–5.5	**2**	**M1** for (–12 + –13 + –10 + 4 + 4 + –6) soi ÷ 6
(ii)	–8	**2**	**M1** for method of finding mid-value
(iii)	4	**1**	
20 (a)	Straight ruled line from (08 10, 200) to (08 30, 900)	**1**	
(b)	5	**1**	
(c)	1.8	**4**	**M1** for total distance ÷ total time **M1** for converting time to hours **M1** for converting metres to km

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