CAMBRIDGE INTERNATIONAL MATHEMATICS   **0607/12**

Paper 1 (Core)   **October/November 2016**

MARK SCHEME

Maximum Mark: 40

Published

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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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This document consists of **3** printed pages.

Abbreviations

awrt	answers which round to
cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
nfww	not from wrong working
soi	seen or implied

Question		Answer	Mark	Part marks
1	(a)	2, 3, 6	1	
	(b)	4 cao	1	
	(c)	2 **or** 3 **or** 5	1	
2		$\dfrac{3}{100}$	1	
3		13 20 **or** 1 20 pm	1	
4	(a)	4	1	
	(b)	32	1	
5	(a)	Tuesday	1	
	(b)	1000	1	
6		–10	1	
7	(a)	0.082	1	
	(b)	61 000	1	
8		– 1, – 6	2	**B1 FT** (*their* –1) – 5
9		80	1	
		24	1	
10		324	1	
11		$y = 3x + c$, $c \neq 5$	1	
12		36π	2	**M1** for $6 \times 6 \times \pi$ oe
13		No [because] $25 \text{ m}^2 = 25 \times 10\,000 \text{ cm}^2$ oe	1	Must say no to score;
14		9	2	**M1** $360 \div 40$ oe

Question			Answer	Mark	Part marks
15			60	**2**	**B1** for 90° seen for angle *ACB* soi
16	**(a)**	**(i)**	6	**1**	
		(ii)	$\dfrac{1}{27}$	**1**	
	(b)		3	**1**	
17	**(a)**		1, 3, 5, 7, 9	**1**	
	(b)		5 nfww	**3**	**M1** for 'f*x*' seen as $(1 \times 1) + (3 \times 6) \ldots$ (**FT** *their* midpoints), at least 3 seen **and M1 dep** for *their* total for 'f*x*' / 20.
18	**(a)**		>	**1**	
	(b)	**(i)**	–3	**1**	
		(ii)	5	**1**	
19			Translation	**1**	
			$\begin{pmatrix} 0 \\ -2 \end{pmatrix}$	**1**	
20	**(a)**		5 points correct	**2**	**B1** for 3 or 4 points correct
	(b)		Positive	**1**	