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

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/13   Paper 1 (Core), maximum raw mark 40

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.

1	(a)	0.08	1	
	(b)	0.745, 0.85, 89%, 0.9	1	
2		24	2	**M1** for 160×0.15 oe or $10\% = 16$ and $5\% = 8$ **[2]**
3	(a)	0.00758	1	
	(b)	0.45	1	**[2]**
4		$6\frac{5}{12}$	3	**M2** for $5 + \frac{9}{12} + \frac{8}{12}$ or $\frac{19}{12} + \frac{44}{12}$ Or **M1** for common denominator 12 **[3]**
5	(a)	1	1	
	(b)	$21x^7$	2	**B1** for kx^7 or $21x^k$ $k \neq 0$ **[3]**
6	(a)	$a(3 - a)$	1	
	(b)	$x^2 - 4x - 5$	2	**B1** for 3 terms correct in $x^2 + x - 5x - 5$ **[3]**
7		R L B N R L	3	**B2** for 4 or 5 correct Or **B1** for 2 or 3 correct **[3]**
8	(a)	17	1	
	(b)	4	2	**M1** for $3x = 12$ oe (e.g. $-3x = -12$) **[3]**
9		0 | 8 1 | 7 7 8 2 | 1 6 8 8 9 9 3 | 2 2 4 8 9 4 | 2 3 5 6 7 9 Key e.g. 1|7 = 17	2 1	–1 for up to 3 errors (1 misplaced is 1 error) **[3]**
10	(a)	$x < 3.5$	2	**M1** for $5x - 3x < 5 + 2$ oe or better
	(b)	$\dfrac{14}{3x^2}$	2	**M1** for $\dfrac{7}{xy} \times \dfrac{2y}{3x}$ or better soi **[4]**
11	(a)		3	**B2** if 1 or 2 elements misplaced **B1** if 3 or 4 elements misplaced
	(b) (i)	$\dfrac{2}{14}$ oe	1 ft	
	(ii)	$\dfrac{7}{14}$ oe	1 ft	**[5]**

12	(a)	(7, 2)	2	**B1** for each. If 0 scored **SC1** for (2, 7)
	(b)	$\frac{1}{2}$ oe	2	**M1** for either riser or run correct or 2 or $\frac{2}{1}$ or $\frac{1}{2}x$
	(c)	5	3	**M2** $\sqrt{3^2 + 4^2}$ **M1** for attempt to use $c^2 = a^2 + b^2$ **[7]**