

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.

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1 (a)	0.08	1											
(b)	0.745, 0.85, 89%, 0.9	1	[2]										
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	<table style="display: inline-table; border-collapse: collapse; vertical-align: middle;"> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">0</td><td style="padding: 2px 5px;">8</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">1</td><td style="padding: 2px 5px;">7 7 8</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">2</td><td style="padding: 2px 5px;">1 6 8 8 9 9</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">3</td><td style="padding: 2px 5px;">2 2 4 8 9</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">4</td><td style="padding: 2px 5px;">2 3 5 6 7 9</td></tr> </table> Key e.g. $1 7 = 17$	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	2	-1 for up to 3 errors (1 misplaced is 1 error)
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												
10 (a)	$x < 3.5$	2	M1 for $5x - 3x < 5 + 2$ oe or better										
(b)	$\frac{14}{3x^2}$	2	M1 for $\frac{7}{xy} \times \frac{2y}{3x}$ or better soi [4]										
11 (a)	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> </div>	3	B2 if 1 or 2 elements misplaced B1 if 3 or 4 elements misplaced										
(b) (i)	$\frac{2}{14}$ oe	1 ft											
(ii)	$\frac{7}{14}$ oe	1 ft	[5]										

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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]