

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the May/June 2014 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/23

Paper 2 (Extended), 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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2014 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – May/June 2014	0607	23
1	5.6[0]	2	M1 for 7×0.8 oe
2 (a)	6.3×10^{-3}	1	
(b)	5.94	2	B1 for 0.24×10^9 or 57×10^8 or figures 594 seen
3 (a)	23	1	
(b)	35	1	
(c)	972	1	
4 (a)	$36x^2 - 4y^2$ oe	2	B1 for $36x^2$ or $4y^2$
(b)	$\sqrt{\frac{A+4y^2}{36}}$ or $\frac{1}{6}\sqrt{A+(2y)^2}$ oe	3	M1 for correct division by 36 or 6 M1 for correct re-arrangement M1 for correct square root
5 (a)	1	1	
(b)	$3y^9$	2	B1 for ky^9 or $3y^k$, $k \neq 0$
6 (a)	[x=] 32 [y=] 32	1 1FT	FT <i>their x</i>
(b)	[v=] 25 [w=] 65	1 1	FT (90 – <i>their v</i>)
7	90	3	B2 for $\frac{5}{8} \times x^2$ oe or $\frac{y}{40} = \left(\frac{12}{8}\right)^2$ or M1 for $y = kx^2$, $k \neq 0, 1$
8 (a)	$10 - \sqrt{2}$	3	B2 for $12 - 4\sqrt{2} + 3\sqrt{2} - 2$ or better or B1 if three of these terms correct
(b)	$2\sqrt{5}$	2	M1 for $\times \frac{\sqrt{5}}{\sqrt{5}}$ or $\frac{2 \times 5}{\sqrt{5}}$
9 (a)	Good sketch of stretch factor 2, x -axis invariant	1	
(b)	Good sketch of translation $\begin{pmatrix} -1 \\ 0 \end{pmatrix}$	1	

Page 3	Mark Scheme	Syllabus	Paper
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10	$\frac{2\sqrt{2}}{3}$ or $\frac{\sqrt{8}}{3}$	3	B2 for $\sqrt{3^2 - 1^2}$ or better or B1 for $k^2 + 1^2 = 3^2$ or better
11 (a)	\cup	1	
(b)	\cap	1	
(c)	\in or $\{e\} \subset$	1	
(d)	\cup	1	
12 (a)	3	2	B1 for $[f(1) =]4$
(b)	$\frac{12}{x}$	1	