



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/23

Paper 2 (Extended)

May/June 2016

MARK SCHEME

Maximum Mark: 40

Published

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

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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	[0]8 33	3	M2 for $\frac{40}{50} \times 60$ oe or M1 for $\frac{40}{50}$ soi
2	60	2	M1 for $\frac{36}{3}$
3	11.5	2	M1 for re-ordering list of at least 6
4 (a)	1800	2	M1 for $180 - \frac{360}{12}$ or for $(12 - 2) \times 180$ soi
(b)	24	2	B1 for $\frac{360}{180 - 165}$
5	3	3	M2 for $\frac{9.7 - 2 \times 2.6}{1.5}$ or M1 for $9.70 - 2 \times 2.6$
6 (a)	51	1	
(b)	-96	1	
(c)	0.5 oe	1	
7 (a)	7.54×10^{-4}	2	M1 for $0.00075 + 0.000004$ or 750×10^{-6} or 0.04×10^{-4} or figs 754
(b)	3×10^{-9}	2	B1 for 30×10^{-10} or answer 0.000000003
8	$x^5 - 7x^2$ final answer	2	B1 for each
9	0.069 0.6 ² 65% $\frac{2}{3}$ $\sqrt{0.7}$	2	B1 for one in wrong place
10	1	2	B1 for $6x - 8$ or $-6x + 9$ If 0 scored SC1 for $kx + 1$

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Question	Answer	Mark	Part Marks
11 (a)	3	2	B1 for $4\sqrt{36}$ oe or $7\sqrt{9}$ oe soi
(b)	$3 + \sqrt{2}$ final answer	2	M1 for $\times \frac{3 + \sqrt{2}}{3 + \sqrt{2}}$
12	Correctly equating one set of coefficients Correct method to eliminate one variable $x = -1$ $y = -1$	M1 M1 B1 B1	Equation $x =$ or $y =$ from one equation Correct substitution into other equation If 0 scored SC1 for correct substitution into one of original equations and evaluation to find other variable
13 (a)	Correct graph	2	B1 for $y = x^3$ shape B1 for cubic graph through $(0, 2)$, with 2 marked or $(0, 2)$ on answer line
(b)	Correct graph	3	B1 for cos graph, max at $(0, k)$ approx B1 for graph through $(0, 2)$, with 2 marked or $(0, 2)$ on answer line B1 for range as 2 to -2 approx