



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

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 2016 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2016	0607	23

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
nfw	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 $0.000\,75 + 0.000\,004$ or 750×10^{-6} or 0.04×10^{-4} or figs 754
(b)	3×10^{-9}	2	B1 for 30×10^{-10} or answer 0.000 000 003
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 $kx + 1$

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2016	0607	23

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