



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/32

Paper 3 (Core)

May/June 2016

MARK SCHEME

Maximum Mark: 96

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	32

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	Marks	Part Marks
1 (a)	(i) Nine thousand four hundred and twenty seven	1	
	(ii) 9430	1	
	(b) (i) $2 + 7 = 9$ or $9 + 7 = 16$	1	
	(ii) $4 + 2 = 6$ or $7 + 9 = 16$	1	
	(iii) $4 + 9 = 13$ or $9 + 2 = 11$ or $4 + 7 = 11$	1	
2 (a)	(i) 24	1	B1 for 3 heights correct Within tolerance B1 for $\frac{1}{4}$ soi
	(ii) All heights correct and approximately equal width	2	
	(b) (i) 2	1	
	(ii) More than 2 [children in a house] oe	1	
	(iii) 54	1	
	(iv) 60	2	
3 (a)	36	1	M1 for 10×8 M2 for $\frac{12}{their(b)} \times 100$ soi or M1 for $\frac{12}{their(b)}$ soi
	(b) 80	2	
	m^2	1	
	(c) 15	3	
	(d) 16 25	1 1	

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2016	0607	32

Question	Answer	Marks	Part Marks
4 (a)	1380	2	B1 for 62×15 soi by 930
	(b) Disco : 36.6... rounded or truncated	2	M1 for $\frac{1000 - 450}{15}$ soi
	Ballroom : 38.6... rounded or truncated	2	M1 for $\frac{1000 - 575}{11}$ soi
	38	1	Final answer. Dependent on 4 scored.
5 (a)	(3, 1)	1	Accept 3 right, 1 down oe
	(b) (0, 4)	1	
	(c) (-3, -2) correctly plotted	1	
	(d) (1.5, 2.5) oe	1	
	(e) Correct reflection in y -axis line joining (0, 4) and (-3, 1)	1	
	(f) Translation $\begin{pmatrix} 3 \\ -1 \end{pmatrix}$	1	
6 (a) (i)	Correct 2 by 4 pattern	1	B1 for $-4n$ soi or $25 - kn$ $k \geq 1$
	(ii) 30	1	
	(b) (i) 1	1	
	-3	1	
	(ii) $-4n + 25$ oe	2	
7 (a)	Obtuse	1	Dep. on $ABC = 55$
	(b) (i) 70	1	
	(ii) $ABC = 55$ soi	1	
	10 [because triangle ABC is] isosceles	1	

Page 4	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2016	0607	32

Question	Answer	Marks	Part Marks
8 (a)	$6a$ final answer	1	
(b)	$3x^3 - 5x$ final answer	2	B1 for $3x^3$ or $-5x$ seen
(c)	9	2	M1 for $x - 5 = 4$ or for $2x = 8 + 10$
(d) (i)	t^7 final answer	1	
(ii)	$5t^3$ final answer	2	B1 for $\frac{20t^3}{4}$ or $\frac{5t^5}{t^2}$ seen
9 (a)	5 : 2	2	B1 for 60 : 24 oe
(b)	2.5 hours or $2\frac{1}{2}$ hours or 2 hours 30 minutes or 150 minutes	2	M1 for $\frac{5}{12}$ or $\frac{6}{12}$ soi
(c) (i)	$6\frac{1}{2}$ or 6.5 or 6 hours 30 minutes	1	
(ii)	$5\frac{1}{2}$ or 5.5 or 5 hours 30 minutes	1	
10 (a)	3 points correctly plotted	2	B1 for 2 correctly plotted points
(b)	Positive	1	
(c)	Line of best fit	1	Within tolerance
(d)	3.4 to 4	1	
11 (a)	$63 \times \pi$ 197.9...	M1 A1	
(b)	28.4 or 28.36 to 28.38	4	M3 for $\frac{172 \times 198}{100 \times 12}$ oe soi or M2 for $\frac{172 \times 198}{12}$ or $\frac{198}{100 \times 12}$ oe soi or M1 for 172×198 or $\frac{198}{12}$ oe soi

Page 5	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2016	0607	32

Question	Answer	Marks	Part Marks
12 (a)	13 500	3	M2 for $5850 + 0.05 \times 153000$ oe or M1 for 0.05×153000 oe
(b)	12.4 or 12.41 to 12.42	3	M2 for $\frac{172000 - 153000}{153000} [\times 100]$ oe or M1 for $\frac{172000}{153000} [\times 100]$ oe
13 (a)	29	1	
(b) (i)	17	1	
(ii)	26	1	
(c) (i)	$\frac{11}{29}$ isw oe	1FT	Accept $\frac{11}{their(a)}$
(ii)	$\frac{3}{29}$ isw oe	1FT	Accept $\frac{3}{their(a)}$
(iii)	$\frac{14}{29}$ isw oe	1FT	Accept $\frac{14}{their(a)}$
14 (a)	56.6 or 56.56 to 56.57	3	M2 for $90^2 - 70^2$ oe soi or M1 for $90^2 = x^2 + 70^2$
(b)	51.1 or 51.05 to 51.06	2	M1 for $[\sin \dots =] \frac{70}{90}$ oe
15 (a)	Correct graph	2	B1 for correct shape B1 for correct position
(b)	(2, 3)	1	
(c)	Correct line	2	B1 for approximately correct gradient B1 for approximately correct y-intercept
(d)	5.24	1	
	0.764	1	