Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CAMBRIDGE INTERNATIONAL MATHEMATICS 0607/12

Paper 1 (Core) 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.

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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		$\dfrac{3}{4}$	2	**B1** for 45 seen or $\dfrac{45}{60}$ or $\dfrac{15}{20}$ oe
2		One line only, horizontally through centre of shape	1	
3		Parallelogram	1	**B0** for rhombus
		Trapezium	1	
		Equilateral triangle	1	**B0** for triangle
4	(a)	9	1	Accept -9 or ± 9
	(b)	2	1	
5	(a)	$\dfrac{30}{100}$ or equivalent fraction	1	
	(b)	90	1	
	(c)	51	2	**M1** for $34 + 17$ oe seen or 0.15×340
6	(a)	55	2	**M1** for $90 + 35$ soi by 125
	(b)	70	2	**M1** for $180 - 40$ or better
7		$\dfrac{6}{35}$ or equivalent fraction	2	**B1** for either correct denominator or correct numerator
8	(a)	3	1	
	(b)	8	2	**M1** for $\dfrac{9}{3} + \dfrac{30}{6}$
	(c)	Lower and correct reason	1	

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Question	Answer	Mark	Part marks
9 (a)	$\dfrac{1}{6}$ oe	1	
(b)	$\dfrac{5}{6}$ oe	1 FT	**FT** $1 - their$ (a), if $0 < their$ (a) < 1
10 (a)	$x(1 - 5x)$ final answer	1	
(b)	$-\dfrac{4}{5}$ oe	3	**B2** for $4 \div -5$ or **M1** for $\dfrac{2 \times 5 - 3 \times 2}{-5}$
11	$[x =]$ 5	1	If zero scored, **SCI** for correct substitution **and** evaluation to find the other variable
	$[y =]$ 1	1	
12	1 2 3 4	2	**B1** for 3 correct with only 1 incorrect or **M1** for $1 \leqslant n < 5$
13 (a)	$\begin{pmatrix} 4 \\ -3 \end{pmatrix}$	2	**B1** for each component If zero scored, **SCI** for $\begin{pmatrix} -4 \\ 3 \end{pmatrix}$
(b)	Plot at (4, 3)	1	
14	$x = 0$	1	Accept y-axis
	$y = -1$	1	If zero, SC1 for asymptotes indicated on graph
15 (a)	30	1	
(b)	24	2	**B1** for frequencies of 20 or 44 seen