Cambridge IGCSE

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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This document consists of **3** printed pages.

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	

Question	Answer	Mark	Part marks
9 (a)	$\frac{1}{6}$ oe	1	
(b)	$\frac{5}{6}$ oe	1 FT	**FT** 1 – *their* (a), if 0 < *their* (a) < 1
10 (a)	$x(1 - 5x)$ final answer	1	
(b)	$-\frac{4}{5}$ oe	3	**B2** for $4 \div -5$ or **M1** for $\frac{2 \times 5 - 3 \times 2}{-5}$
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