UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2009 question paper for the guidance of teachers

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

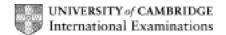
0607/01 Paper 1 (Core), maximum raw mark 40

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 must be read in conjunction with the question papers and the report on the examination.

CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the May/June 2009 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – May/June 2009	0607	01

M marks are given for a correct method.

A marks are given for an accurate answer following a correct method.

B marks are given for a correct statement or step.

D marks are given for a clear and appropriately accurate drawing.

P marks are given for accurate plotting of points.

E marks are given for correctly explaining or establishing a given result.

Abbreviations

cao correct answer only
cso correct solution only
ft follow through
oe or equivalent
soi seen or implied
ww without working
www without wrong working

-		1 2 2 6 0 10	D4	
1	(a)	1, 2, 3, 6, 9, 18	B1	
	(b)	6	B2	If B0 then award B1 for evidence of at least three factors of 24
2	(a)	14	B1	[3]
-	(4)		Di	
	(b)	35°C	B 1	
	(a)	100	B1	
	(c)	180	ы	[3]
3	(a)	5 ⁴	B1	[3]
				_
	(b)	$6x^7$	B2	B1 for 6 B1 for x^7
		1		[3]
4		$\frac{1}{2}$	B2	B1 for $\frac{25}{50}$ or equivalent
		2		[2]
5	(a)	AE	B2	Deduct one for each error
	(b)	NS	B2	Deduct one for each error
6	(a)	3p(p-4)	B2	B1 for $p(3p-12)$ or $3(p^2-4p)$
U	(4)		D2	B1 for p(3p = 12) or 3(p = 1p)
	(b)	6x + 3y - 2x + 6y	M1	Dependent on 4 terms. Not spoiled.
		4x + 9y	M1ft	[4]
7		2x - 2y = 8 oe or $x = y + 4$ oe	N/I 1	NAT Comments
		$\begin{array}{c} 3x + 2y = 17 \\ 5x = 25 \end{array} \qquad 3(y+4) + 2y = 17$	M1	M1 for equating coefficients or correct substitution
		x = 5, y = 1 $x = 5, y = 1$	A1A1	If M0 award SC1 for evidence of
			_	elimination or substitution.
				[3]
8	(a)	22, 27	B 1	
	(b)	5n-3	B2	Award B1 for 5 <i>n</i> B1 for – 3
	(0)	Jin J	D2	$\begin{bmatrix} \mathbf{A} & \mathbf{B} & \mathbf{B} & \mathbf{B} & \mathbf{B} \\ \mathbf{A} & \mathbf{B} & \mathbf{B} & \mathbf{B} \end{bmatrix}$

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – May/June 2009	0607	01

		(4)		T
9	(a)	Translation, $\binom{4}{3}$	B2	Award B1 for translation
		(3)		B1 for $\binom{4}{3}$ or equivalent words
	(b)	Reflection in $x = 1$	B2	Award B1 for reflection B1 for $x = 1$ or line indicated
10	(a)	100	B1	[4]
	(4)		Di	
	(b)	20	B1	Accept 19
	(c)	90kg	B 1	
				[3]
11	(a)	30	B1	
	(b)	40	B2	B1 for $180 - (2 \times 70)$ seen or implied
	(c)	150	B2	B1 for 720 or 330 seen [5]
12		$\frac{x}{50} = \frac{10}{25}$ oe	M1	
		25x = 500	M 1	Dependent for correctly removing
		$x = 20 \mathrm{m}$	A1	fractions.
				OR
				M1 for 2.5 or 0.4 or equivalent seen. M1 for multiplying
				OR
				M1 for finding angle invtan $\frac{50}{25}$
				M1 for multiplying 10× tan (angle) www 3
				[3]