UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 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.

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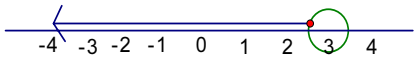
UNIVERSITY of CAMBRIDGE
International Examinations

- **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.

- ft follow through
- oe or equivalent
- soi seen or implied
- www without wrong working

1	**(a)**	8	B1	
	(b)	1	B1	[2]
2		$\frac{3}{8}$	B2	Final answer B1 for $\frac{12}{32}$ or any correct fraction not in lowest terms seen [2]
3		1.2×10^6	B2	After B0, B1 for 1.2 seen or SC1 for 12×10^5 or 1200000 [2]
4	**(a)**	Continuous	B1	
	(b)	0 | 8 9 1 | 0 1 2 3 4 5 6 7 8 9 2 | 0 1 1 2 2 3 5 6 Key 1| 2 means 12(m) oe	B3	B1 for Key B2 for correct numbers in the correct order. After B0 award B1 for at most two errors or omissions or M1 for correct unordered stem-and-leaf.
	(c)	18	B1	[5]
5	**(a)**	$15p^5$	B2	B1 for 15 seen or for p^5 seen
	(b)	$2x(x + 3y)$	B2 [4]	B1 for $2x$ identified as a factor or for $2(x^2 + 3xy)$ or for $x(2x + 6y)$ [4]
6	**(a)**	Points plotted correctly	P1P1	
	(b)	(1, 6)	B1ft	[3]
7	**(a)**	18	B2	After B0 award M1 for finding the area of any appropriate rectangle.
	(b)	$\frac{24}{2} = \frac{x}{6}$ oe or for scale factor 12 soi	M1	
		$x = 72$	A1	[4]

8 (a)	0.7	B1	Accept equivalent fractions or percentages in all parts. Do not accept ratios or words.
(b) (i)	0.7, 0.2, 0.9	B2ft	B1 if 2 correct ft from their **(a)**
(ii)	0.24	B2	B1 for 0.3 × 0.8 seen [5]
9 (a)	$3x - 3 < 6$ or $x - 1 < \frac{6}{3}$	M1	For correct multiplication of brackets or dividing by 3.
	$x < 3$	A1	
(b)		B2ft	After B0 B1 for an appropriate arrow from their 3 *or* B1 for appropriate circle. Follow through from their inequality. [4]
10 (a)	4	B1	
(b)	{ 1 , 2 }	B1	
(c)	{ 5, 7, 9 }	B1	Correct answer or ft from their **(a)**.
(d)	$\frac{4}{9}$	B1ft	Accept 0.44 or 44% or better but not a ratio or word(s). [4]
11 (a)	13	B1	Ignore extra terms.
(b)	$3n - 5$ *oe* as final answer	B2	Award B1 for $3n$ soi.
(c)	Their $3n - 5 = 296$	M1	Alternative Method A correct method leading to consecutive terms in the sequence and which includes either 295 or 298 earns M1. An appropriate correct conclusion indicating that 296 is not a term earns A1.
	$n = \frac{301}{3}$ which is not a whole number oe and indicating that 296 is not a term.	A1	[5]