

MARK SCHEME for the May/June 2012 question paper
for the guidance of teachers

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/11

Paper 1 (Core), maximum raw mark 40

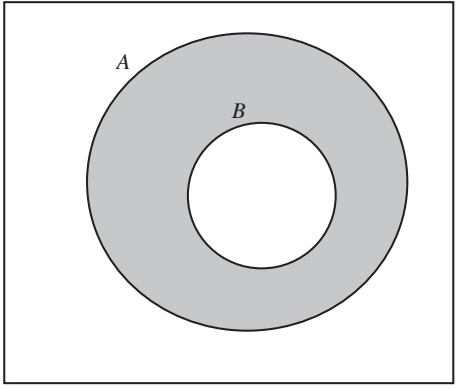
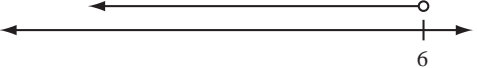
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, 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.

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

Cambridge is publishing the mark schemes for the May/June 2012 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
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1 (a)	9	1	
(b)	12	1	Accept -12 [2]
2 (a)	0.00725	1	
(b)	7.25×10^{-3}	1 ft	ft from (a) [2]
3 (a)	6, 12, 18	1	
(b)	30	2	B1 for $30k, k > 1$ [3]
4		1	[1]
5	$\frac{999}{1000}$ oe cao	2	M1 $\frac{1}{1000}$ oe seen or implied or 999:1000 [2]
6 (a)	$4x - 23$	2	If B0 award B1 for $4x - k$ or for $kx - 23$ ($k \neq 0$) or for $7x - 14 - 9 - 3x$
(b)	$x < 6$	2 ft	If B0 award M1 for adding their 23 to 1 or dividing by their 4, dependent on $ax + b$ in part (a) (a or b not equal to 0).
(c)		2 ft	B1 for line in correct position and direction. ft with their answer to (b). B1 for empty circle. [6]
7 (a)	$\frac{13x}{12}$	2	If B0 award M1 for common denominator of 12
(b)	$3x^2$	2	If B0 award B1 for $3x^k$ or kx^2 (allow $\frac{3}{1}$ for 3) in a single term [4]
8 (a)	37	1	
(b)	$n^2 + 1$	3	M1 for reaching second differences same M1 for $an^2 + bn + c$ (implies first M) $a \neq 0$ After 0 M1 for at least 2 trials involving square numbers [4]
9 (a)	All probabilities correct	2	M1 for one pair of branches correct
(b)	0.12 oe	2 ft	M1 for their $0.3 \times$ their 0.4 oe soi [4]
10 (a)	12	1	
(b)	9	2	M1 for (their total)/10 seen
(c)	8	1	[4]

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
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11	240 km/h	3	M2 for $\frac{5200}{1.3} \times \frac{60}{1000}$ oe M1 for $\frac{5200}{1.3}$	[3]
12 (a)	(2, -2) (6, -2) (6, -8)	1		[5]
(b)	(-4, -8) (0, -8) (0, -2)	2	M1 for 2 points correct or correct horizontal or correct vertical translation	
(c)	(2, 2) (2, 6) (-4, 6)	2	M1 for 2 points correct. SC1 correct 90° clockwise rotation or correct 90° anticlockwise rotation through incorrect centre.	