

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2014 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/23

Paper 2 (Extended), 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.

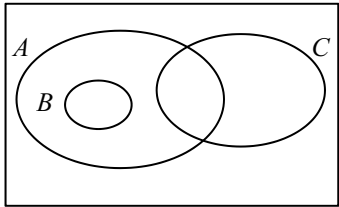
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Page 2	Mark Scheme	Syllabus	Paper
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1	(a) 23 (b) $4n - 1$	1 2	B1 for $4n$ seen
2	(a) -20 (b) $-\frac{3}{5}$	2 3	M1 for $\frac{x}{5} = 3 - 7$ or $x + 35 = 15$ B2 for $5x + 13 = 10$ M1 for $7x + 21 - 2x \pm 8$
3	$\frac{9 \times 60}{8 + 10 \text{ (or 12)}}$ $\frac{540}{18 \text{ or } 20}$ 30 or 27	M1 A1 A1	
4	(a) $\frac{1}{125}$ (b) (i) x^{12} (ii) x^3	2 1 2	B1 for 5 soi by 125 or 15625 seen or sight of inversion at any stage B1 for x^6 or $\frac{x^5}{x^2}$
5	U 	3	B1 for each of $A \cup B = A$ $B \cap C = \emptyset$ $A \cap C \neq \emptyset$ satisfied
6	(a) $\frac{12}{5}$ (b) $-\frac{12}{13}$	1 3	M1 for $5^2 + 12^2$ + SC1 for negative fraction
7	(a) $3(x + 5y)(x - 5y)$ (b) $(5p - 3)(3a + 2b)$	2 2	B1 for $3(x^2 - 25y^2)$ or $(3x + 15y)(x - 5y)$ or $(x + 5y)(3x - 15y)$ M1 for $5p(3a + 2b) - 3(3a \pm 2b)$ oe

Page 3	Mark Scheme	Syllabus	Paper
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8	(a)	$p = 4$ $q = -6$	1 1	
	(b)	$2\sqrt{13}$	3	M1 for $\sqrt{4^2 + (-6)^2}$ A1 for $\sqrt{52}$
9		20°	2	M1 for 70 seen
10	(a)	-7	2	B1 for $x = 4$
	(b)	$13 - 6x$	2	M1 for $2(5 - 3x) + 3$
	(c)	$\frac{5-x}{3}$ oe	2	M1 for $y + 3x = 5$ or $x = 5 - 3y$ or fully correct reversed flow chart.