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.

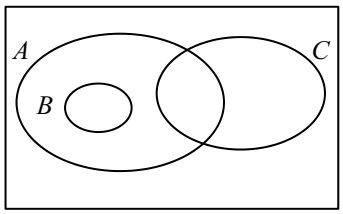
Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2014 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

® IGCSE is the registered trademark of Cambridge International Examinations.

CAMBRIDGE
International Examinations

1	**(a)**	23	**1**	
	(b)	$4n - 1$	**2**	**B1** for $4n$ seen
2	**(a)**	–20	**2**	**M1** for $\frac{x}{5} = 3 - 7$ or $x + 35 = 15$
	(b)	$-\frac{3}{5}$	**3**	**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)**	$\frac{1}{125}$	**2**	**B1** for 5 soi by 125 or 15625 seen or sight of inversion at any stage
	(b) (i)	x^{12}	**1**	
	(ii)	x^3	**2**	**B1** for x^6 or $\frac{x^5}{x^2}$
5		U  	**3**	**B1** for each of $A \cup B = A$ $B \cap C = \varnothing$ $A \cap C \neq \varnothing$ satisfied
6	**(a)**	$\frac{12}{5}$	**1**	
	(b)	$-\frac{12}{13}$	**3**	**M1** for $5^2 + 12^2$ + **SC1** for negative fraction
7	**(a)**	$3(x + 5y)(x - 5y)$	**2**	**B1** for $3\left(x^2 - 25y^2\right)$ or $(3x + 15y)(x - 5y)$ or $(x + 5y)(3x - 15y)$
	(b)	$(5p - 3)(3a + 2b)$	**2**	**M1** for $5p(3a + 2b) - 3(3a \pm 2b)$ oe

© Cambridge International Examinations 2014

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.

© Cambridge International Examinations 2014