CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/23 Paper 2 (Extended), maximum raw mark 40

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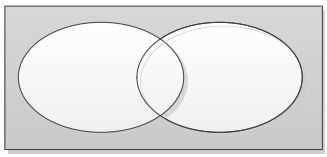
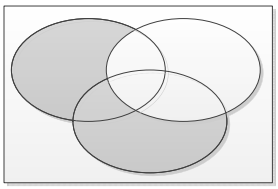
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Abbreviations

cao correct answer only
dep dependent
FT follow through after error
isw ignore subsequent working
oe or equivalent
SC Special Case
nfww not from wrong working
soi seen or implied

Question	Answer	Mark	Part Marks
1	30	**1**	
2	$5 – (2 + 3) \times 2 = –5$	**1**	
3	$\begin{pmatrix} 1 \\ -12 \end{pmatrix}$	**2**	**B1** for each component
4	$\frac{18}{25}$	**1**	
5	1	**2**	**M1** for $10 \times 5.5 – 9 \times 6$
6	3	**2**	**M1** for $\sqrt{\left(\sqrt{3}\right)^2 + \left(\sqrt{6}\right)^2}$
7	7 –2	**1** **1**	If 0 scored **SC1** for correct substitution and evaluation to find the other variable
8	105	**2**	**M1** for 42×2.5 oe or **SC1** for figs 105
9	–3	**1**	
10 (a)	–8	**1**	
(b)	$–7n + 27$ oe	**2**	**SC1** for $–7n + k$ or $27 + kn$, $k \neq 0$
11	$\sqrt{v^2 – 2as}$	**2**	**M1** for correct rearrangement for u term **M1** for correct square root
12	$(2a – b)(1 + x)$	**2**	**M1** for $2a – b + x(2a – b)$ or $2a(1 + x) – b(1 + x)$
13 (a)	$\frac{1}{27}$	**1**	
(b)	8	**1**	
(c)	$\frac{\sqrt{3}}{2}$	**1**	

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14	$2x^2$	**2**	**SC1** for kx^2 or $2x^k$, $k \neq 0$
15		**1**	
		**1**	
16	$y = x - 2$ oe	**3**	**B2** for $y = x + k$ oe or $y = kx - 2$ oe or **M1** for gradient = $\frac{2-0}{0--2}$ or better or **M1** for substituting co-ordinates of one point into *their* $y = mx + c$
17	$3\left(\sqrt{5}-2\right)$ oe	**2**	**M1** for $\times \frac{\sqrt{5}-2}{\sqrt{5}-2}$
18 **(a)**	$y(3 - y)$	**1**	
(b)	$\frac{y}{3+y}$ final answer	**2FT**	**FT** only if $(3 - y)$ or $(3 + y)$ is cancelled **B1** for $[9 - y^2 =] (3 - y)(3 + y)$
19 **(a)**	$\frac{2}{3}$	**2**	**M1** for $\frac{2\log 2}{3\log 2}$ or $\log_8 4$
(b)	1.5 oe	**1**	
20	5	**1**	

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