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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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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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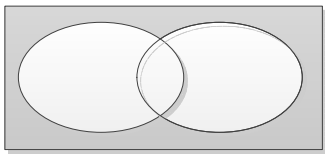
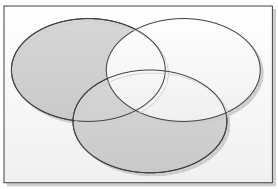
14	$2x^2$	**2**	**SC1** for kx^2 or $2x^k$, $k \neq 0$
15	 	**1** **1**	
16	$y = x - 2$ oe	**3**	**B2** for $y = x + k$ oe or $y = kx - 2$ oe or **M1** for gradient = $\frac{2-0}{0--2}$ or better or **M1** for substituting co-ordinates of one point into *their* $y = mx + c$
17	$3\left(\sqrt{5}-2\right)$ 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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