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

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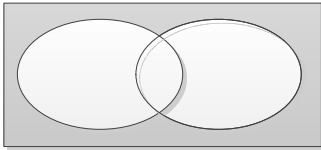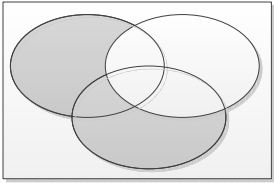
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Abbreviations

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	$\dfrac{18}{25}$	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)	$\dfrac{1}{27}$	1	
(b)	8	1	
(c)	$\dfrac{\sqrt{3}}{2}$	1	

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Page 3	Mark Scheme	Syllabus	Paper
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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 $= \dfrac{2-0}{0--2}$ or better or **M1** for substituting co-ordinates of one point into *their* $y = mx + c$
17		$3(\sqrt{5} - 2)$ oe	2	**M1** for $\times \dfrac{\sqrt{5}-2}{\sqrt{5}-2}$
18	(a)	$y(3 - y)$	1	
	(b)	$\dfrac{y}{3+y}$ final answer	2FT	**FT** only if $(3 - y)$ or $(3 + y)$ is cancelled **B1** for $[9 - y^2 =] (3-y)(3+y)$
19	(a)	$\dfrac{2}{3}$	2	**M1** for $\dfrac{2\log 2}{3\log 2}$ or $\log_8 4$
	(b)	1.5 oe	1	
20		5	1	

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