CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/22 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

1	**(a)**	0.09	**1**	
	(b)	20	**1**	
2	**(a) (i)**	1	**1**	
	(ii)	1000	**1**	
	(b)	5^7	**1**	
3		$2\sqrt{13}$	**3**	**M1** for $\sqrt{(-6)^2+4^2}$ oe **A1** for $\sqrt{52}$
4	**(a)**	0.23, 0.3, 0.15, 0.2	**2**	**M1** for at least 2 of $\frac{46}{200}, \frac{12}{40}, \frac{15}{100}, \frac{100}{500}$ soi
	(b)	Dieter, More throws oe	**1**	
	(c)	246	**1**	
5	**(a)**	(4, 4)	**1**	
	(b)	–2	**2**	**M1** for clear evidence of $\frac{\text{rise}}{\text{run}}$
6		$28+10\sqrt{3}$ or $2\left(14+5\sqrt{3}\right)$ final answer	**2**	**M1** for $25+5\sqrt{3}+5\sqrt{3}+\sqrt{3}\times\sqrt{3}$ or better
7		$x \geq 5.5$ or $5\frac{1}{2}$ or $\frac{11}{2}$ final answer	**3**	**M1** for $2x + 3 \leq 4x - 8$ oe **M1 FT** for $3 + 8 \leq 4x - 2x$ oe
8		396π	**3**	**M1** for $\pi \times 6^2 \times 10$ or better **M1** for $\frac{1}{3} \times \pi \times 6^2 \times 3$ or better

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9	$x = 3, \quad y = -2$	**4**	**M1** for correctly equating one set of coefficients **M1FT** for correct method to eliminate one variable **A1** for $x = 3$ or $y = -2$ If zero scored **SC1** for correct substitution into one of the original equations and correct evaluation, to find the other variable
10 (a)	4	**1**	
(b)	1000	**1**	
(c)	10	**3**	**M1** for correct use of a $a\log x = \log a^x$ **M1** for correct use of $\log a + \log b = \log ab$ or $\log a - \log b = \log \frac{a}{b}$
11 (a)	110	**2**	**M1** for angle $DCO = 90 - 55$
(b)	55	**1FT**	**FT** $\frac{1}{2}$ *their* **(a)**
(c)	105	**1**	
12	F E D A	**1** **1** **1** **1**	

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