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Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/21 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)**	4700	**1**	
	(b)	[0].010	**1**	
2	**(a)**	$-6x+7$	**2**	**B1** for $-6x+3x^2$ or $-3x^2+7$
	(b)	$25xy-25x^2-6y^2$	**3**	**B2** for $10xy-25x^2-6y^2+15xy$ or **B1** for 1 error in above
3		$\frac{1}{3}$	**2**	**B1** for 3 seen or for $\frac{1}{\sqrt[3]{27}}$
4		$4x^4y$	**2**	**B1** for kx^4y or $4x^ky$ or $4x^4y^k$
5	**(a)**	$10\sqrt{3}$	**2**	**M1** for $3\sqrt{3}$ or $7\sqrt{3}$
	(b)	$\frac{7-3\sqrt{5}}{2}$ or $\frac{14-6\sqrt{5}}{4}$	**3**	**M1** for $\times\frac{3-\sqrt{5}}{3-\sqrt{5}}$ **M1** for $\frac{a-b\sqrt{5}}{4}$ $a,b\neq 0$ oe
6		50	**3**	**M2** for $[\log]\left(\frac{5x}{25}\right)=[\log]10$ oe or **M1** for a correct use of logs
7			**4**	**B1** for 240 **B1** for 72 **M1** for $\frac{2}{3}\times$ *their* 72

	Boys	Girls	Total
Can	112	168	280
Cannot	48	72	120
Total	160	240	

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8	**(a)**	1	**1**	
	(b)	45°	**2**	**M1** for $\tan 45 = 1$ or **M1** for $\tan y = \textit{their}$**(a)** or **M1** for $\frac{(180-90)}{2}$
9	**(a)**	$\frac{1}{10}$ oe	**1**	
	(b)	2	**2**	**M1** for $3x - 2 = 4$
	(c)	$\frac{1}{3}\left(\frac{1}{x}+2\right)$ oe	**3**	**M1** for one correct step **M1** for 'swapping' x and y
10	**(a)**	$\frac{1}{6}$ **p**	**2**	**B1** for $DC = \frac{1}{2}$**p** soi
	(b)	$\frac{5}{12}$**p** – **q**	**2**	**M1** for $-$**q** $+ \frac{3}{4}$**p** seen
11		$y = 2x - 1$ oe	**4**	**B1** for [mid-point =] (4, 7) **B1** for [gradient =] –0.5 **M1** for grad of perp = $\frac{-1}{\textit{their}(-0.5)}$

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