Question	Answer	Marks	Partial Marks
3	$C(10, -4)$	**B1**	
	$[m_{AC} =]\frac{6-1}{2-6}$ oe or $\frac{-5}{4}$ oe	**M1**	
	$m_{\perp} = \frac{4}{5}$	**M1**	**FT** $\frac{-1}{their\frac{-5}{4}}$
	$y - (-4) = \frac{4}{5}(x - 10)$ oe	**A1**	**FT** *their* coordinates of *C* providing that one coordinate is correct and *their* perpendicular gradient
	$4x - 5y = 60$ oe	**A1**	
4(a)	CVs $\frac{1}{5}$, 6	**M1**	
	$x < \frac{1}{5}$, $x > 6$	**A1**	mark final answer
4(b)	$(-4k)^2 - 4(2k + 1)(2k - 1)$	**M1**	
	$16k^2 - 4(4k^2 - 1)$ or $16k^2 - 16k^2 - 8k + 8k + 4$ or better	**A1**	
	$4 > 0$	**A1**	
5(a)	8π	**B1**	
5(b)	$c = 3$	**B1**	
	$\left[\frac{\pi}{b} = 8\pi\right]\ b = \frac{1}{8}$	**B1**	
	$7 = a\tan\left(\frac{\pi}{4}\right) + 3$ oe	**M1**	
	$a = 4$	**A1**	

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