

Question		Answer	Marks	AO	Guidance
6		$2\cos\theta = x + 3$ or $\cos\theta = \frac{x+3}{2}$	B1	2.1	allow sign errors in their expressions for $\sin\theta$ and $\cos\theta$ ; allow if just see brackets expanded, but must be 3 terms in each case
		$2\sin\theta = y - 1$ or $\sin\theta = \frac{y-1}{2}$	B1	1.1	
		$\left(\frac{x\pm 3}{2}\right)^2 + \left(\frac{y\pm 1}{2}\right)^2 = \cos^2\theta + \sin^2\theta$ or $(x \pm 3)^2 + (y \pm 1)^2 = 4\cos^2\theta + 4\sin^2\theta$ oe	M1	1.1	
		$(x + 3)^2 + (y - 1)^2 = 4$	A1	1.1	
			[4]		
		<i>Alternatively</i> centre of circle is $(-3, 1)$  radius is 2  $(x + 3)^2 + (y - 1)^2 = 2^2$  $(x + 3)^2 + (y - 1)^2 = 4$	B1  B1  M1  A1		allow one sign error in bracket;