Question	Answer	Marks	Guidance
(a)	$\dfrac{(\sin\theta+2\cos\theta)(\cos\theta+2\sin\theta)-(\sin\theta-2\cos\theta)(\cos\theta-2\sin\theta)}{(\cos\theta-2\sin\theta)(\cos\theta+2\sin\theta)}$	***M1**	Obtain an expression with a common denominator
	$\dfrac{5\sin\theta\cos\theta+2\cos^2\theta+2\sin^2\theta-\left(5\sin\theta\cos\theta-2\sin^2\theta-2\cos^2\theta\right)}{\cos^2\theta-4\sin^2\theta}$ $= \dfrac{4\left(\cos^2\theta+\sin^2\theta\right)}{\cos^2\theta-4\sin^2\theta}$	**A1**	
	$\dfrac{4}{\cos^2\theta-4\left(1-\cos^2\theta\right)}$	**DM1**	Use $\cos^2\theta+\sin^2\theta=1$ twice
	$\dfrac{4}{5\cos^2\theta-4}$	**A1**	**AG**
		4	
(b)	$\dfrac{4}{5\cos^2\theta-4}=5$ leading to $25\cos^2\theta=24$ leading to $\cos\theta=\sqrt{\dfrac{24}{25}}\left[=(\pm)0.9798\right]$	**M1**	Make $\cos\theta$ the subject
	$\theta=11.5°$ or $168.5°$	**A1** **A1 FT**	FT on 180º – 1st solution
		3	