Question			Answer	Marks	AOs	Guidance	
7	(i)		$2\sin x\left(\dfrac{\sin x}{\cos x}\right)=\cos x+5$	M1	3.1a	Uses $\tan x=\sin x/\cos x$	
			$2\sin^2 x=\cos^2 x+5\cos x$				
			$2\left(1-\cos^2 x\right)=\cos^2 x+5\cos x$	M1	3.1a	Uses $\sin^2 x=1-\cos^2 x$	
			$2-2\cos^2 x=\cos^2 x+5\cos x$				
			$3\cos^2 x+5\cos x-2=0$	A1	2.1	**AG –** correct working throughout	Must show sufficient working to justify the given answer
				[3]			
	(ii)		$\left(3\cos 2\theta-1\right)\left(\cos 2\theta+2\right)=0$	M1	1.1a	Attempt to solve 3-term quadratic	
			$\cos 2\theta=\dfrac{1}{3}\ \left(\text{and }\cos 2\theta=-2\right)$	A1	1.1	Condone $\cos x=\dfrac{1}{3}$	
			$\theta=\dfrac{1}{2}\arccos\left(\dfrac{1}{3}\right)$	M1	1.1	Correct order of operation to find one value of θ (or both values of 2θ correct)	$\left(2\theta=\right)70.52877...,$ $289.471...$
			$\theta=35.3^{\circ}$	A1	1.1	One correct value to the nearest integer or better	
			$\theta=144.7^{\circ}$	A1	1.1	Cao (35.3 and 144.7)	Any additional values in the range loses final A mark if earned
				[5]			