Question	Answer	Marks	Guidance
8(a)(i)	$\sin x \dfrac{\sin x}{\cos x} + \cos x$	**B1**	
	$\dfrac{\sin^2 x + \cos^2 x}{\cos x}$ oe	**B1**	
	$\dfrac{1}{\cos x} = \sec x$	**B1**	Poor notation is B0
8(a)(ii)	$\sec\dfrac{\theta}{2} = 4$ $\cos\dfrac{\theta}{2} = \dfrac{1}{4}$	**M1**	For use of (i) and dealing with sec to obtain $\cos\dfrac{\theta}{2} = \dfrac{1}{4}$
	$\dfrac{\theta}{2} = 1.3181,\ 4.9651$ $\theta = 2.64$ or 0.839π $\theta = 9.93$ or 3.16π	**3**	**Dep M1** for a correct attempt to solve to obtain at least one solution for θ **A1** for one correct solution **A1** for a second correct solution and no extra solutions
8(b)	$\tan\left(y + 38^\circ\right) = \dfrac{1}{\sqrt{3}}$ $y = 172^\circ$ $y = 352^\circ$	**3**	**M1** for dealing with cot and a correct attempt to obtain at least one correct solution, allow for -8° **A1** for one correct solution **A1** for a second correct solution and no extra solutions
9(a)	$(2x-1)\left(x^2 - x - 1\right)$	**M1**	For attempt at factorisation by observation or by algebraic long division
	$(2x-1)\left(x^2 - x - 1\right)$	**A1**	cao
9(b)	At A $x = \dfrac{1}{2}$	**B1**	
	$x^2 - x - 1 = 0$	**M1**	For a valid attempt to solve *their* quadratic equation, allow for decimal solutions
	$x = \dfrac{1 \pm \sqrt{5}}{2}$ soi	**A1**	
	At B $x = \dfrac{1 + \sqrt{5}}{2}$	**A1**	