Question	Answer	Marks	Guidance
10(b)(i)	$\dfrac{(\sin\theta+1)-(\sin\theta-1)}{\sin^2\theta-1}$	**M1**	For dealing with fractions
	$\dfrac{2}{-\cos^2\theta}$	**M1**	For simplification of numerator and use of the correct identity
	$-2\sec^2\theta$ $a=-2$	**A1**	Must see previous line for A1
10(b)(ii)	$-2\sec^2 3\phi=-8$ oe $\sec 3\phi=\pm 2$	**M1**	For making use of (i) and attempt to simplify in terms of 3ϕ
	$\cos 3\phi=\pm\dfrac{1}{2}$	**A1**	
	$3\phi=-\dfrac{2\pi}{3},\ -\dfrac{\pi}{3},\ \dfrac{\pi}{3},\ \dfrac{2\pi}{3}$ $\phi=-\dfrac{2\pi}{9},\ -\dfrac{\pi}{9},\ \dfrac{\pi}{9},\ \dfrac{2\pi}{9}$ or $\pm 0.349,\ \pm 0.698,$	**3**	Dep **M1** for attempt to solve, may be implied by one correct solution **A1** for each pair of correct solutions
11	$\left[\ln(2x+3)+\ln(3x-1)-\ln x\right]_1^a$	**2**	**B1** for 1 term correct **B1** all correct
	$\left(\ln(2a+3)+\ln(3a-1)-\ln a\right)$ $-(\ln 5+\ln 2)$	**M1**	Correct substitution of limits, dep on first B1, ignore equality Must have 3 terms involving x
	$\ln\dfrac{(2a+3)(3a-1)}{10a}=\ln 2.4$	**M1**	For use of both addition and subtraction rules, ignore equality Or for use of addition rule on each side of an equation.
	$6a^2-17a-3=0$	**A1**	
	$a=3$	**2**	**M1** for solution of their quadratic **A1** for $a=3$ only