	Question		Answer	Marks	AO	Guidance
7			$2\sin 4\theta\cos 4\theta\tan 4\theta+\cos 8\theta$	**M1**	**3.1a**	e.g. Use of $\sin 2A=2\sin A\cos A$ Use of means more than just quoting the formula - usually it will be part of an argument Small angle approximations score M0
			$2\sin 4\theta\cos 4\theta\dfrac{\sin 4\theta}{\cos 4\theta}+\cos 8\theta$	**M1**	**3.1a**	e.g. Use of $\tan A=\dfrac{\sin A}{\cos A}$ The 2 double angle formulas along with the tan identity may be applied in any order. If proof is sound award the 3 marks for equivalent steps.
			$2\sin^2 4\theta+1-2\sin^2 4\theta=1$	**A1**	**2.1**	e.g. Use of any correct identity for $\cos 2A$ and convincing completion to given result Working it through as an equation with the ‘ = 1 ‘ is not ‘convincing’ **Alternative incorrect approach**. If sin 8θ = 4sin2θ, and sin 2θ is then expanded then **SC1** can be awarded. A similar approach applies to cos 8θ. However the **SC1** can only be awarded once.
				[3]		

Q7. The first M1 can be awarded for *using* $\sin 8\theta = 2\sin 4\theta\cos 4\theta$ or for *using* $\cos 8\theta = 1 - 2\sin^2 4\theta$ (or equivalent form) or for *using* $\tan 4\theta = \sin 4\theta / \cos 4\theta$. The mark is not available for just writing the formula down.
The second M1 is for using another one.
The final A1 is for using the third one and completing the solution to show it equals 1. (We saw an incorrect factorisation of $\sin 8\theta = 4\sin 2\theta = 4 \times 2\sin\theta\cos\theta$ which qualifies for SC1. A similar approach can be used for $\cos 8\theta$ but the SC1 can only be awarded once).

Some candidates are using small angle approximations which does lead to an answer of 1, but is the incorrect method, so scores M0M0A0.