

Question	Answer	Marks	Guidance
	Use correct double-angle formula to obtain an equation in $\cos \theta$	M1	e.g. $3(2\cos^2 \theta - 1) = 3\cos \theta + 2$
	Obtain $6\cos^2 \theta - 3\cos \theta - 5 = 0$, or 3-term equivalent	A1	M1 A0 is scored if they use any correct formula for $\cos 2\theta$ and make a subsequent error.
	Solve a 3-term quadratic in $\cos \theta$ for θ	M1	As far as $\theta = \cos^{-1}\left(\frac{3-\sqrt{129}}{12}\right)$ if quadratic correct.
	Obtain a correct answer, e.g. 134.1°	A1	Accept greater accuracy e.g. 134.1456, 225.8544.
	Obtain a second answer, e.g. 225.9° and no other in $[0^\circ, 360^\circ]$	A1 FT	Treat answers in radians (2.34 and 3.94) as a misread. Ignore answers outside $[0^\circ, 360^\circ]$. The FT is for 360° minus the first answer.
			Special Ruling: If they have an incorrect quadratic that leads legitimately to 4 solutions for θ , allow FT for 360° minus an answer in $(0^\circ, 180^\circ)$. More than 4 solutions is maximum M1 A0 M1 A0 A0. If <i>their</i> equation should have 4 solutions and the candidate only gives 3 solutions then M1 A0 M1 A0 A0. Mis-read leading to a quadratic with 4 solutions could score maximum M1 A0 M1 A1 A1 or M1 A0 M1 A1 A0 if extra/missing solution.
		5	