Q	Marking Instructions	AO	Marks	Typical Solution
6 (a)(i)	Uses identity to replace $\sin^2\theta$ with $(1-\cos^2\theta)$ or uses $\sin\theta = \frac{\sqrt{3}}{2}$	1.2	M1	$6(1-\cos^2\theta)+5\cos\theta = 7$ $6\cos^2\theta - 5\cos\theta + 1 = 0$ $(2\cos\theta - 1)(3\cos\theta - 1) = 0$ $\cos\theta = \frac{1}{2}$
	Solves quadratic equation to get one solution $\cos\theta = \frac{1}{2}$. Or verifying using $\cos\theta = \frac{1}{2}$	1.1a	A1	
6 (a)(ii)	States any two correct solutions	1.1b	B1	$\theta = 60°, 300°,$ Or $\cos\theta = \frac{1}{3}$ $\theta = 71°, 289°$
	States two additional correct solutions. Condone answers of 70.5 and 289.5 or greater accuracy. Ignore any additional answers outside the range but any additional answers inside range lose second B1	1.1b	B1	
6(b)	Writes down a set that is half the values given as their solutions in part (a) Accept 36° or 144°	2.2a	M1	$\theta = 30°, 150°, 35°, 145°$ $210°, 330°, 215°, 325°$
	Writes down an additional set that is 180° more than the first set. Condone AWRT integer values	1.1b	A1F	
	Total		**6**	