Q	Marking instructions	AO	Marks	Typical solution
6(a)	Uses $\cos^2 x = 1 - \sin^2 x$	1.1a	M1	$2\sin x - 1 = 2\cos^2 x$ $2\sin x - 1 = 2(1 - \sin^2 x)$ $2\sin x - 1 = 2 - 2\sin^2 x$ $2\sin^2 x + 2\sin x - 3 = 0$
	Completes reasoned argument to obtain $2\sin^2 x + 2\sin x - 3 = 0$ Must see one intermediate line of working AG	2.1	R1	
	Subtotal		**2**	

Q	Marking instructions	AO	Marks	Typical solution
6(b)	Obtains $\frac{-1-\sqrt{7}}{2}$ or $\frac{-1+\sqrt{7}}{2}$ AWRT -1.82 or 0.82	1.1b	B1	$\sin x = \frac{-1-\sqrt{7}}{2}$ or $\sin x = \frac{-1+\sqrt{7}}{2}$ As $-1 \leq \sin x \leq 1$, $\frac{-1-\sqrt{7}}{2}$ is out of range $x = 55°, 125°$
	Explains why $\sin x = \frac{-1-\sqrt{7}}{2}$ is not a valid solution with reference to the range of sine	2.4	E1	
	Obtains AWRT 55	1.1a	M1	
	Obtains AWRT 55 and 125 and no others within the interval	1.1b	A1	
	Subtotal		**4**	

	Question 6 Total		**6**	