

Q	Marking instructions	AO	Marks	Typical solution
4	Uses identity $\cos^2\theta = 1 - \sin^2\theta$	1.2	B1	$1 - \sin^2\theta = 10\sin\theta + 4$ $0 = \sin^2\theta + 10\sin\theta + 3$ $\sin\theta = -0.3095 \text{ or } -9.6904$ $\sin\theta = -9.6904 \text{ (not valid)}$ $\sin^{-1}(-0.3095) = -18.03^\circ$ $\theta = 198^\circ \text{ or } \theta = 342^\circ$
	Solves their quadratic in $\sin\theta$ PI by at least one correct value of θ or -18°	1.1a	M1	
	Explains that the second solution or both solutions is/are inappropriate. Accept N/A, out of range, no solutions, math error, reject OE Do not accept a 'x' or -9.69 (OE) crossed out alone.	2.4	E1F	
	Obtains one correct value for θ AWRT 198° or 342°	1.1b	A1	
	Obtains two correct values for θ Condone -18° included, but no other answers.	1.1b	A1	
Question 4 Total			5	