

Question	Scheme	Marks	AOs
2(a)	Identifies an error for student A: They use $\frac{\cos \theta}{\sin \theta} = \tan \theta$ It should be $\frac{\sin \theta}{\cos \theta} = \tan \theta$	B1	2.3
		(1)	
(b)	(i) Shows $\cos(-26.6^\circ) \neq 2 \sin(-26.6^\circ)$, so cannot be a solution	B1	2.4
	(ii) Explains that the incorrect answer was introduced by squaring	B1	2.4
		(2)	
(3 marks)			
Notes:			
(a)			
B1: Accept a response of the type 'They use $\frac{\cos \theta}{\sin \theta} = \tan \theta$. This is incorrect as $\frac{\sin \theta}{\cos \theta} = \tan \theta$ ' It can be implied by a response such as 'They should get $\tan \theta = \frac{1}{2}$ not $\tan \theta = 2$ ' Accept also statements such as 'it should be $\cot \theta = 2$ '			
(b)			
B1: Accept a response where the candidate shows that -26.6° is not a solution of $\cos \theta = 2 \sin \theta$. This can be shown by, for example, finding both $\cos(-26.6^\circ)$ and $2 \sin(-26.6^\circ)$ and stating that they are not equal. An acceptable alternative is to state that $\cos(-26.6^\circ) = +ve$ and $2 \sin(-26.6^\circ) = -ve$ and stating that they therefore cannot be equal.			
B1: Explains that the incorrect answer was introduced by squaring Accept an example showing this. For example $x = 5$ squared gives $x^2 = 25$ which has answers ± 5			