

Q	Marking instructions	AO	Marks	Typical solution
4(a)	Uses a trig identity, either $\tan \theta = \frac{\sin \theta}{\cos \theta}$ or $\sin^2 \theta + \cos^2 \theta = 1$ correctly to obtain an equation in a single trig function.	1.1a	M1	$5 \cos^2 \theta = 4 \sin^2 \theta$ $\frac{5}{4} = \frac{\sin^2 \theta}{\cos^2 \theta} = \tan^2 \theta$ $\tan \theta = \pm \frac{\sqrt{5}}{2}$
	Obtains $\tan^2 \theta = \frac{5}{4}$ or $\sin^2 \theta = \frac{5}{9}$ or $\cos^2 \theta = \frac{4}{9}$ PI by one correct value for $\tan \theta$ $\sin \theta$ or $\cos \theta$	1.1b	A1	
	Obtains $\tan \theta = \pm \frac{\sqrt{5}}{2}$ OE Must be in exact form	1.1b	A1	
	Subtotal		3	

Q	Marking instructions	AO	Marks	Typical solution
4(b)	Obtains at least two correct solutions in the range based on the value of their $\tan \theta$, $\sin \theta$ or $\cos \theta$ OE	1.1a	M1	$\theta = 48.2, 131.8, 228.2, 311.8$
	Obtains all 4 correct solutions and no further ones AWRT 48, 132, 228, 312	1.1b	A1	
	Subtotal		2	

	Question 4 Total		5	
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