

Question		Answer	Mark	AO	Guidance
1	(a)	$\text{LHS} = \cos x + \sin x \times \frac{\sin x}{\cos x}$ $= \frac{\cos^2 x + \sin^2 x}{\cos x}$ $= \frac{1}{\cos x} \quad \text{AG}$	M1* dM1 A1 [3]	1.1a 1.1 2.2a	Use of $\tan = \sin/\cos$ Attempt common denominator (by multiplying numerator) OR apply $\sin^2 x + \cos^2 x \equiv 1$ in correct working to reach $\cos x + \frac{1 - \cos^2 x}{\cos x}$ oe www, Must see previous line and answer
1	(b)	$\tan^2 x = \frac{1}{2}$ $\tan x = \pm \frac{1}{\sqrt{2}}$ $x = 35.3^\circ \text{ or } x = 145^\circ \quad (\text{Both})$	M1 A1 [2]	1.1a 1.1	or $3\sin^2 x = 1$ or $2 = 3\cos^2 x$ and attempt to solve $\sin x = \pm \frac{1}{\sqrt{3}}$ $\cos x = \pm \frac{\sqrt{2}}{\sqrt{3}}$ $(35.26\dots^\circ, 144.7\dots^\circ)$ A0 if any additional solutions within range (isw any outside)