

1 **(a)** Prove that $\cos x + \sin x \tan x \equiv \frac{1}{\cos x}$ (where $x \neq \frac{1}{2}n\pi$ for any odd integer n). **[3]**

(b) Solve the equation $2 \sin^2 x = \cos^2 x$ for $0^\circ \leq x \leq 180^\circ$. **[2]**