

**5**      (i) Prove the identity  $\frac{\sin \theta - \cos \theta}{\sin \theta + \cos \theta} \equiv \frac{\tan \theta - 1}{\tan \theta + 1}$ . [1]

(ii) Hence solve the equation  $\frac{\sin \theta - \cos \theta}{\sin \theta + \cos \theta} = \frac{\tan \theta}{6}$ , for  $0^\circ \leq \theta \leq 180^\circ$ . [4]