7 **(a)** Prove the identity $\dfrac{\tan\theta + 7}{\tan^2\theta - 3} \equiv \dfrac{\sin\theta\cos\theta + 7\cos^2\theta}{1 - 4\cos^2\theta}$. [3]

(b) Hence solve the equation $\dfrac{\sin\theta\cos\theta + 7\cos^2\theta}{1 - 4\cos^2\theta} = \dfrac{5}{\tan\theta}$ for $0° \leqslant \theta \leqslant 180°$. [4]