3 **In this question you must show detailed reasoning.**

(a) Solve the equation $4\sin^2\theta = \tan^2\theta$ for $0° \leqslant \theta \leqslant 180°$. [5]

(b) Prove that $\dfrac{\sin^2\theta - 1 + \cos\theta}{1 - \cos\theta} \equiv \cos\theta$ $(\cos\theta \neq 1)$. [3]