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

(b) Hence solve the equation $\dfrac{\sin^2 x - \cos x - 1}{2 + 2\cos x} = \dfrac{1}{4}$ for $0° \leqslant x \leqslant 360°$. [3]