

4 **(i)** Solve the equation $4 \sin^2 x + 8 \cos x - 7 = 0$ for $0^\circ \leq x \leq 360^\circ$. [4]

(ii) Hence find the solution of the equation $4 \sin^2 \left(\frac{1}{2}\theta\right) + 8 \cos \left(\frac{1}{2}\theta\right) - 7 = 0$ for $0^\circ \leq \theta \leq 360^\circ$. [2]