

- 5** (i) Show that $\sin^4 \theta - \cos^4 \theta \equiv 2 \sin^2 \theta - 1$. [3]
- (ii) Hence solve the equation $\sin^4 \theta - \cos^4 \theta = \frac{1}{2}$ for $0^\circ \leq \theta \leq 360^\circ$. [4]