2 (a) Show that the equation $6\cos^2\alpha - \sin\alpha = 5$ can be written as

$$6\sin^2\alpha + \sin\alpha - 1 = 0$$

(2)

(b) Solve, to 1 decimal place where appropriate, for $0 \leqslant \theta \leqslant 90$

$$6\cos^2(2\theta + 40)° - \sin(2\theta + 40)° = 5$$

(5)

Question 2 continued

(Total for Question 2 is 7 marks)