6 (a) Show that the equation

$$2\sin x - 1 = 2\cos^2 x$$

can be written as

$$2\sin^2 x + 2\sin x - 3 = 0$$

[2 marks]

6 (b) Use the result from part **(a)** to solve the equation

$$2\sin x - 1 = 2\cos^2 x$$

where $0° < x < 360°$

Give your solutions to the nearest degree.

Fully justify your answer.

[4 marks]