11 (a) Show that

$$(2 - \sqrt{3})^2 = 7 - 4\sqrt{3}$$

[1 mark]

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

$$x^2 = 21 - 12\sqrt{3}$$

Give your solutions in the form $a + b\sqrt{3}$ where a and b are integers.

Fully justify your answer.

[3 marks]