Topic : Logarithms

(i) Given that

$$\log_3(3b + 1) - \log_3(a - 2) = -1, \quad a > 2$$

express *b* in terms of *a*.

(3)

(ii) Solve the equation

$$2^{2x + 5} - 7(2^x) = 0$$

giving your answer to 2 decimal places.
(*Solutions based entirely on graphical or numerical methods are not acceptable.*)

(4)

(Total for question = 7 marks)