7 (a) Write down the value of $\log_2 16$

(1)

Given that $4 + 2\log_4 x = \log_2 y$

(b) show that $y = 16x$

(4)

(c) Hence solve the equation $4 + 2\log_4 x = \log_2(4x + 5)$

(3)

Question 7 continued

(Total for Question 7 is 8 marks)