7 A curve C has equation $y = \log_{10}(x + 2)$

(a) Using the axes below, sketch the graph of C.
Label the coordinates of the points of intersection of C with the coordinate axes.

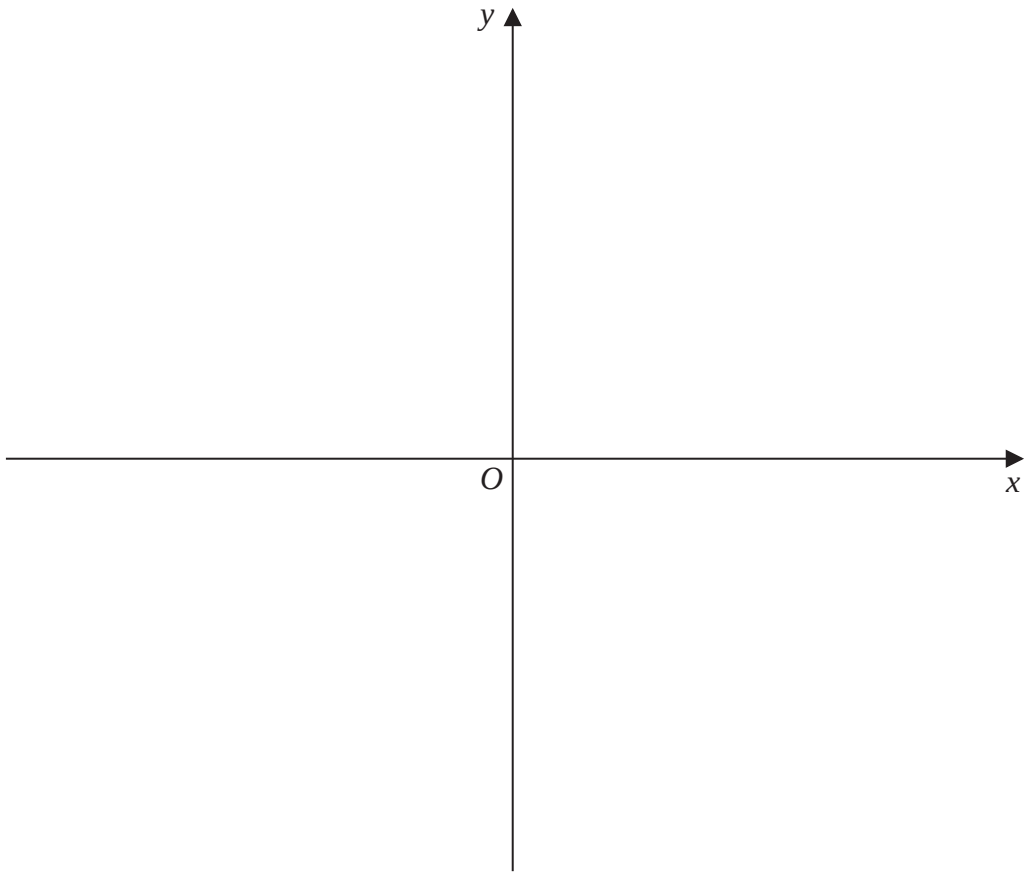
(2)

(b) Solve the equation $2\left(\log_a 4 + \log_a 16\right) = 1$

(3)

(c) Solve the equation $5\log_q 16 + 4\log_2 q = 24$

(6)



Question 7 continued

Question 7 continued

Question 7 continued

(Total for Question 7 is 11 marks)