5 The graph of the straight line with equation $3x + y = 11$ is drawn on the grid opposite for $0 \leqslant x \leqslant 4$

(a) (i) On the grid, draw the graph of the straight line with equation $4x = 3 + 2y$ for $0 \leqslant x \leqslant 4$

(3)

(ii) Use your graphs to find estimates, to one decimal place, of the value of x and the value of y that satisfy the simultaneous equations

$$3x + y = 11$$
$$4x = 3 + 2y$$

(1)

(b) Solve the simultaneous equations

$$4x + xy - x^2 = -10$$
$$3y + x = 7$$

Show clear algebraic working.

(6)

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Question 5 continued

$3x + y = 11$

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P 6 8 8 1 9 A 0 1 3 3 6

Question 5 continued

P 6 8 8 1 9 A 0 1 4 3 6
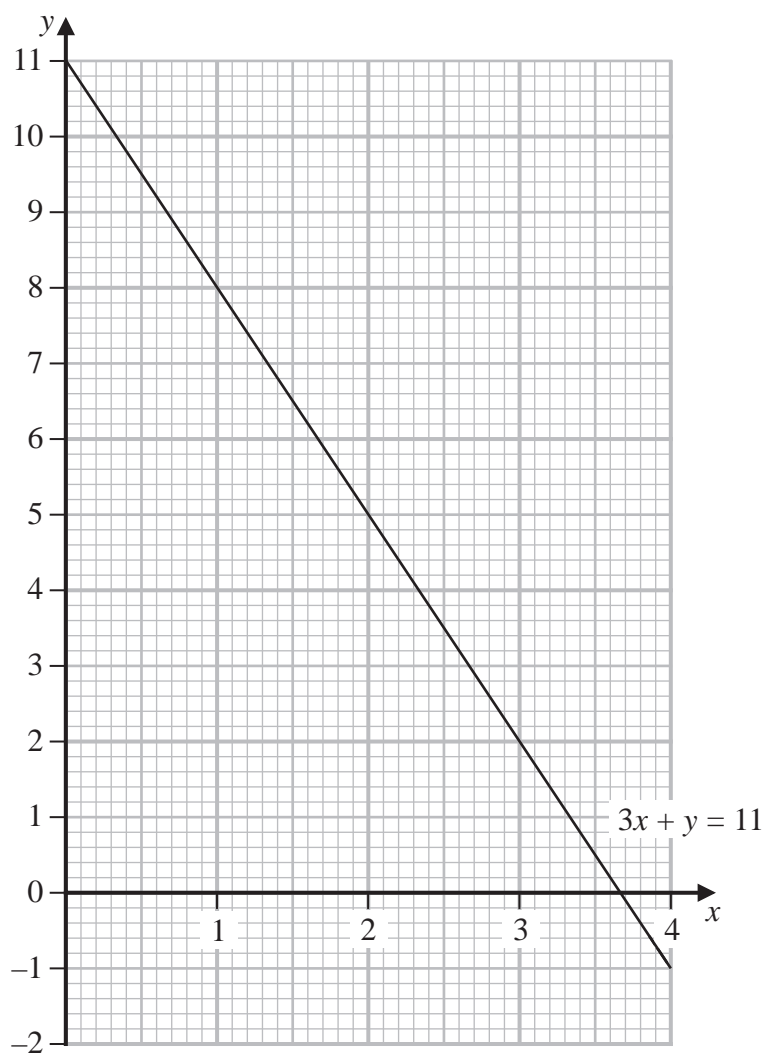
Question 5 continued

(Total for Question 5 is 10 marks)