5 The line l with gradient $-\dfrac{1}{12}$ passes through the points A and B with coordinates $(p, 10)$ and $(123, 0)$ respectively.

(a) Show that $p = 3$

(2)

(b) Find an equation for l in the form $rx + sy + t = 0$ where r, s and t are integers.

(2)

The line k is perpendicular to l and passes through the point A.

(c) Find an equation for k in the form $y = mx + c$

(3)

Line k intersects the x-axis at the point C.

(d) Find the exact area of triangle ABC.

(4)

Question 5 continued

Question 5 continued

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Question 5 continued

(Total for Question 5 is 11 marks)