9 The point A has coordinates $(-4, 3)$ and the point B has coordinates $(6, 8)$
The points A and B lie on the line k

(a) Find an equation of k

(2)

The point C, on k, is such that $AC : CB = 4{:}1$

(b) Find the coordinates of point C

(2)

The point D with coordinates (p, q), where $p < 0$, lies on the line l through C that is perpendicular to k

The length of CD is $8\sqrt{5}$

(c) Find the coordinates of D

(6)

(d) Find the area of triangle ACD

(2)

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P 7 4 0 9 9 A 0 2 2 3 2

Question 9 continued

Question 9 continued

Question 9 continued

(Total for Question 9 is 12 marks)

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