8 The points A and B have coordinates $(1,5)$ and $(9,7)$ respectively.

(a) Find an equation of AB, giving your answer in the form $y = ax + b$, where a and b are rational numbers.

(3)

The line l is the perpendicular bisector of AB.

(b) Find an equation of l.

(4)

The point C has coordinates $(3, q)$. Given that C lies on l

(c) find the value of q.

(2)

The line l meets the x-axis at the point D.

(d) Find the exact area of the kite $ACBD$.

(4)

Question 8 continued

P 3 8 6 4 7 A 0 1 7 2 8

PMT

Question 8 continued

P 3 8 6 4 7 A 0 1 8 2 8

Question 8 continued

(Total for Question 8 is 13 marks)

P 3 8 6 4 7 A 0 1 9 2 8