5 The points P, Q, R and S have coordinates $(4, 7)$, $(3, 0)$, $(10, 1)$ and $(11, 8)$ respectively.

   (a) Show, by calculation, that the lines PR and QS are perpendicular.

                                                        (3)

   (b) Find the exact lengths of   (i) PR (ii) QS

                                                          (2)

   (c) Find the area of the quadrilateral $PQRS$

                                                          (2)

Question 5 continued

(Total for Question 5 is 7 marks)