10 The point A has coordinates $(-3, 4)$ and the point C has coordinates $(5, 2)$. The mid-point of AC is M. The line l is the perpendicular bisector of AC.

(a) Find an equation of l.

(4)

(b) Find the exact length of AC.

(2)

The point B lies on the line l. The area of triangle ABC is $17\sqrt{2}$

(c) Find the exact length of BM.

(2)

(d) Find the exact length of AB.

(2)

(e) Find the coordinates of each of the two possible positions of B.

(6)

Question 10 continued

Question 10 continued

(Total for Question 10 is 16 marks)

TOTAL FOR PAPER IS 100 MARKS