

7

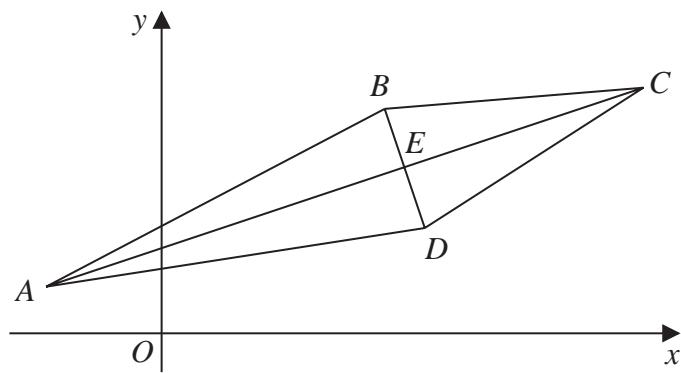
Diagram NOT
accurately drawn**Figure 2**

Figure 2 shows a quadrilateral $ABCD$ with $\overrightarrow{AB} = \begin{pmatrix} 8.5 \\ 4.5 \end{pmatrix}$ and $\overrightarrow{AC} = \begin{pmatrix} 15 \\ 5 \end{pmatrix}$

The diagonals AC and BD meet at the point E

- (a) Find as a column vector \overrightarrow{BC} (1)

The point E has coordinates $(6, 4)$

Given that $AE:AC = 3:5$

- (b) find the coordinates of the point A (3)

Given that $ABCD$ is a kite,

- (c) find the coordinates of the point D (3)



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Question 7 continued

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(Total for Question 7 is 7 marks)



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