

7

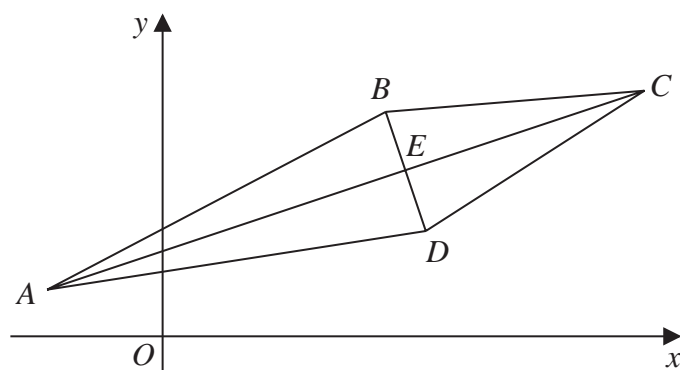


Diagram **NOT**  
accurately drawn

**Figure 2**

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

The diagonals  $AC$  and  $BD$  meet at the point  $E$

- (a) Find as a column vector  $\vec{BC}$  (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)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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**Question 7 continued**

Handwriting practice area with horizontal dotted lines.

**(Total for Question 7 is 7 marks)**

