25
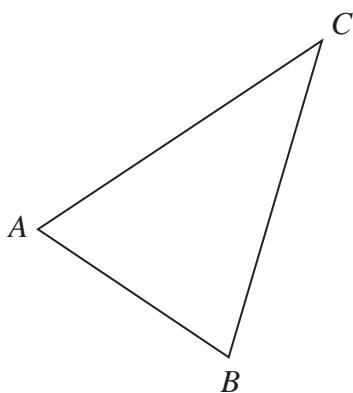
C

Diagram **NOT**
accurately drawn

A

B

ABC is a triangle.

$$\overrightarrow{AB} = \begin{pmatrix} 3 \\ -2 \end{pmatrix} \quad \overrightarrow{BC} = \begin{pmatrix} x \\ 5x \end{pmatrix} \text{ where } x > 0 \text{ and } \left| \overrightarrow{AC} \right| = 5$$

Find $\overrightarrow{AC}$ as a column vector.
Show clear algebraic working.

(Total for Question 25 is 5 marks)