

3 The points A and B have position vectors $\begin{pmatrix} 2 \\ -1 \end{pmatrix}$ and $\begin{pmatrix} 5 \\ 4 \end{pmatrix}$ respectively. The vector \overrightarrow{AC} is $\begin{pmatrix} -2 \\ 2 \end{pmatrix}$.

(a) Write down the position vector of C as a column vector. **[1]**

(b) Show that B is equidistant from A and C . **[3]**