Question	Working	Answer	Mark	Notes
17 a	$\left(\overrightarrow{BC} =\right)\begin{pmatrix}-2\\-7\end{pmatrix}+\begin{pmatrix}10\\11\end{pmatrix}\left(=\begin{pmatrix}8\\4\end{pmatrix}\right)$ $\begin{pmatrix}5\\8\end{pmatrix}+"\begin{pmatrix}8\\4\end{pmatrix}"$ **or** $\begin{pmatrix}10\\11\end{pmatrix}+"\begin{pmatrix}3\\1\end{pmatrix}"$	(13, 12)	3	M1 or coordinates (5 – 2, 8 – 7) (= (3, 1)) assigned to *A* (may be seen in vector form) **or** (13, *y*) or (*x*, 12) given as coordinates for *C* M1 for coordinates (5 – 2 + 10, 8 – 7 + 11) assigned to *C* A1
b	e.g. $\begin{pmatrix}63\\211\end{pmatrix}-\begin{pmatrix}5\\8\end{pmatrix}\left(=\begin{pmatrix}58\\203\end{pmatrix}\right)$ **with** e.g. "58" ÷ 2 (=29) **and** "203" ÷ 7 (=29) **OR** e.g. $\begin{pmatrix}63\\211\end{pmatrix}-\begin{pmatrix}3\\1\end{pmatrix}\left(=\begin{pmatrix}60\\210\end{pmatrix}\right)$ **with** e.g. "60" ÷ 2 (=30) **and** "210" ÷ 7 (=30)	Proof	2	M1 may work with *A* and *E*, in which case may need to ft for method mark from (a) A1 proof with justification eg. $\overrightarrow{BE} = 29\begin{pmatrix}2\\7\end{pmatrix}$ (**or** $\overrightarrow{AE} = 30\begin{pmatrix}2\\7\end{pmatrix}$) with *ABE* is a straight line **or** 210 ÷ 60 = 3.5 and 7 ÷ 2 = 3.5 so *ABE* is a straight line