22	eg $\left(\overrightarrow{AC}=\right)\begin{pmatrix}12\\3\end{pmatrix}-\begin{pmatrix}2\\8\end{pmatrix}\quad\left(=\begin{pmatrix}\pm10\\\pm5\end{pmatrix}\right)$ oe **or** $\left(\overrightarrow{BC}=\right)\begin{pmatrix}12\\3\end{pmatrix}-\begin{pmatrix}21\\14\end{pmatrix}\quad\left(=\begin{pmatrix}\pm9\\\pm11\end{pmatrix}\right)$ oe **or** $\left(\overrightarrow{AB}=\right)\begin{pmatrix}21\\14\end{pmatrix}-\begin{pmatrix}2\\8\end{pmatrix}\quad\left(=\begin{pmatrix}\pm19\\\pm6\end{pmatrix}\right)$ oe		4	M1	for a method to find at least one of $\overrightarrow{AC}$ (or $\overrightarrow{CA}$), $\overrightarrow{BC}$ (or $\overrightarrow{CB}$), or $\overrightarrow{AB}$ (or $\overrightarrow{BA}$); allow subtraction to be either way around and ignore any labelling this mark can be implied by the correct components for at least one of the vectors (ignoring signs) allow components to be seen in coordinate form or on a diagram etc
	$(AC=)\sqrt{(\pm10)^2+(\pm5)^2}\ \left(=\sqrt{125}=5\sqrt{5}=11.1(8...)\right)$ oe **or** $(BC=)\sqrt{(\pm9)^2+(\pm11)^2}\ \left(=\sqrt{202}=14.2(1...)\right)$ oe **or** $(AB=)\sqrt{(\pm19)^2+(\pm6)^2}\ \left(=\sqrt{397}=19.9(2...)\right)$ oe **or** (Anna's distance =) $\sqrt{(\pm10)^2+(\pm5)^2}+\sqrt{(\pm9)^2+(\pm11)^2}$ (= 25.3(9…)) oe			M1	for a method to find the length of at least one of *AC*, *BC* or *AB* **or** for a method to find the distance Anna walks invisible brackets must be recovered implies previous M mark
	"$\sqrt{125}$"+"$\sqrt{202}$"−"$\sqrt{397}$" (= "25.3(9…)" – "19.9(2…)" = 5.4(68…)) oe **or** "$\sqrt{125}$"+"$\sqrt{202}$"−[*AB*] oe **or** "$\sqrt{125}$"+[*BC*]−"$\sqrt{397}$" oe **or** [*AC*]+"$\sqrt{202}$"−"$\sqrt{397}$" oe			M1	for a complete method using lengths from a correct method **or** for a complete method where at least two lengths come from a correct method [*AB*], [*BC*] and [*AC*] are their identifiable lengths of *AB*, *BC* and *AC* respectively. The length must come from a calculation of the form $\sqrt{x^2+y^2}$ (condone unrecovered invisible brackets here), but do **NOT** allow this mark if the third length comes from use of $[AB]=\sqrt{[BC]^2+[AC]^2}$ oe lengths used may be exact or decimal values rounded or truncated to 1dp
	Correct answer scores full marks (unless from obvious incorrect working).	5.5		A1	allow an answer in the range 5.4 – 5.5
					Total 4 marks