

Aug 4.

A (0;0), B(0;2), C(2;0)

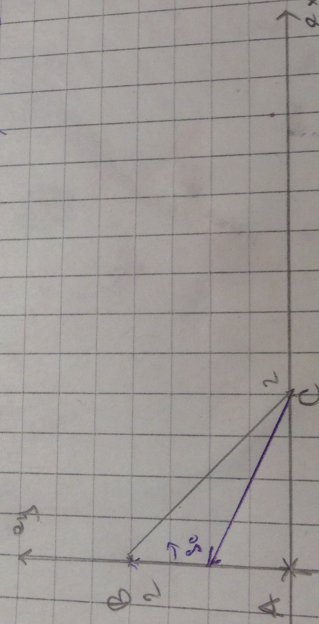
(i) $\vec{AB} = \vec{c} = (0;2)$

$\Rightarrow AB = |\vec{c}| = \sqrt{0^2 + 2^2} = 2$

$\vec{a} = \vec{BC} = (2;-2)$

$\vec{b} = \vec{AC} = (2;0) \Rightarrow AC = |\vec{b}| = \sqrt{2^2 + 0^2} = 2$

(ii)



$$S_{\triangle ABC} = \frac{1}{2} AB \cdot AC = \frac{1}{2} \cdot 2 \cdot 2 = 2 \text{ FE}$$

(iii) $\vec{c} = \vec{CD} = \begin{pmatrix} 0 \\ 1 \end{pmatrix} - \begin{pmatrix} 2 \\ 0 \end{pmatrix} = \begin{pmatrix} -2 \\ 1 \end{pmatrix}$

$|\vec{CD}| = \sqrt{(-2)^2 + 1^2} = \sqrt{5}$