

TG 2 Let $\vec{a} = \begin{pmatrix} 4 \\ -3 \end{pmatrix}$.

Find the magnitude of \vec{a} , and find a unit vector in the same direction as \vec{a} .

$$\begin{aligned} |\vec{a}| &= \sqrt{4^2 + (-3)^2} \\ &= 5 \end{aligned}$$

$$\therefore \text{unit vector is } \frac{1}{5} \begin{pmatrix} 4 \\ -3 \end{pmatrix}$$

* These solutions have been provided by [projectmaths](http://projectmaths.com.au) and are not supplied or endorsed by NESA.

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