

8 $\mathbf{m} = \begin{pmatrix} 4 \\ 5 \end{pmatrix}$ $\mathbf{n} = \begin{pmatrix} 2 \\ -3 \end{pmatrix}$

(a) Find $2\mathbf{m} - \mathbf{n}$.

$\begin{pmatrix} \\ \end{pmatrix}$ [2]

(b) The vector $\begin{pmatrix} 5 \\ \sqrt{y} \end{pmatrix}$ has a magnitude of 7.

Find the value of y .

$y = \dots\dots\dots$ [2]