

Relative to an origin O , the position vectors of the points A , B and C are given by

$$\overrightarrow{OA} = \begin{pmatrix} 1 \\ -3 \\ 2 \end{pmatrix}, \quad \overrightarrow{OB} = \begin{pmatrix} -1 \\ 3 \\ 5 \end{pmatrix} \quad \text{and} \quad \overrightarrow{OC} = \begin{pmatrix} 3 \\ 1 \\ -2 \end{pmatrix}.$$

(i) Find \overrightarrow{AC} .

[1]

.....

.....

.....

.....

.....

(ii) The point M is the mid-point of AC . Find the unit vector in the direction of \overrightarrow{OM} .

[3]

[illegible]

This image shows a full page of a handwriting practice worksheet. It consists of approximately 20 horizontal dotted lines spaced evenly down the page, providing a guide for letter height and placement. The background is plain white, and there are no other markings or text present.

[4]