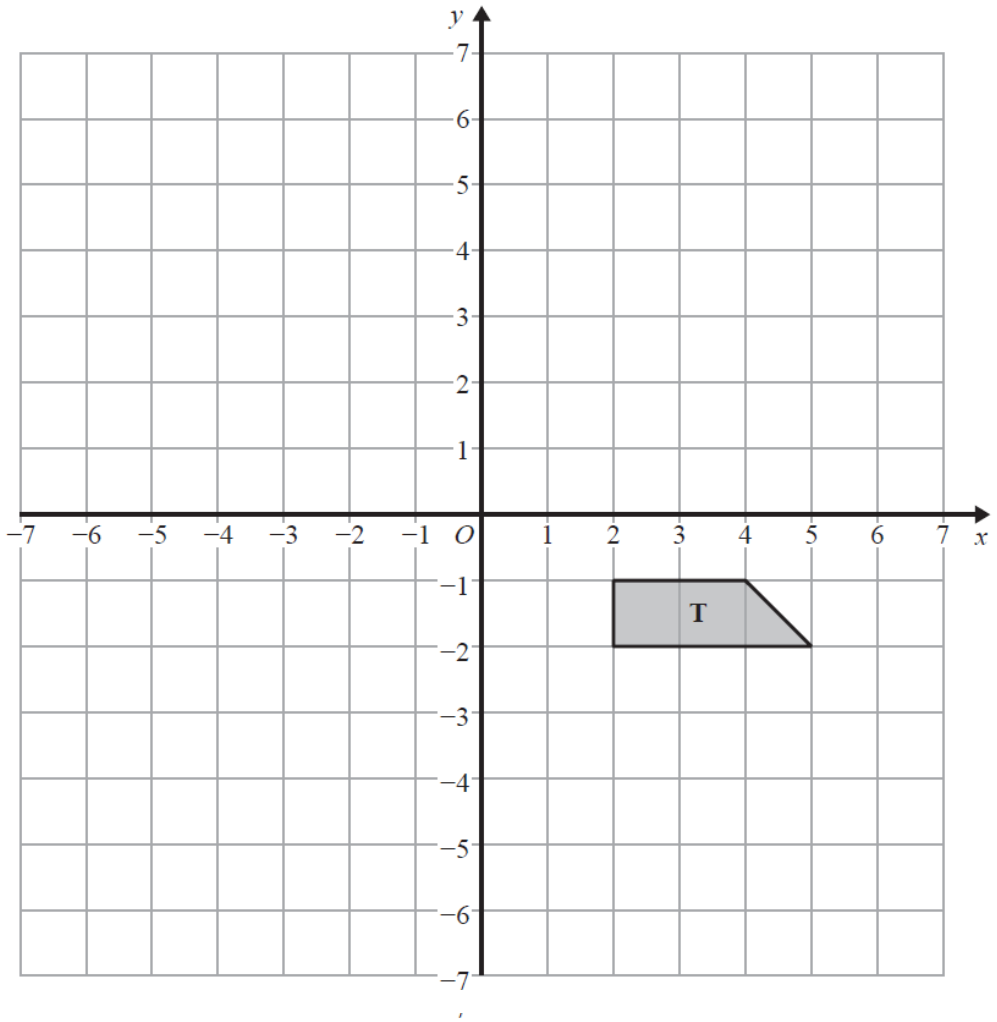
1



(a) Rotate trapezium **T** 180° about the origin.
Label the new trapezium **A**.

(1)

(b) Translate trapezium **T** by the vector $\begin{pmatrix} -1 \\ -3 \end{pmatrix}$
Label the new trapezium **B**.

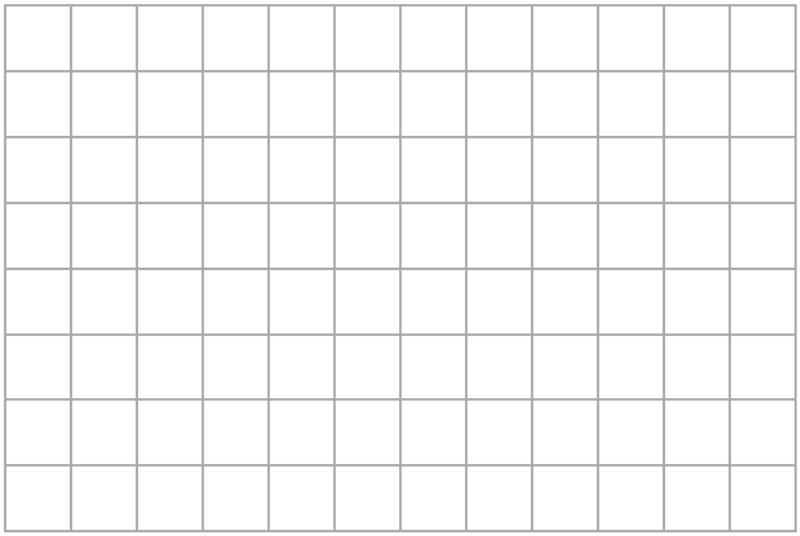
(1)

(Total for Question is 2 marks)

2 Here are two column vectors.

$\mathbf{a} = \begin{pmatrix} 5 \\ 2 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} 3 \\ -1 \end{pmatrix}$

On the grid below, draw and label the vector $\mathbf{a} - 2\mathbf{b}$



(Total for Question is 3 marks)

3 $\mathbf{a} = \begin{pmatrix} 3 \\ 4 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} 5 \\ -2 \end{pmatrix}$

Find $2\mathbf{a} - 3\mathbf{b}$ as a column vector.

$\begin{pmatrix} \ldots\ldots \\ \ldots\ldots \end{pmatrix}$

(Total for Question is 2 marks)