1 $\mathbf{a} = \begin{pmatrix} 2 \\ 7 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} 5 \\ -2 \end{pmatrix}$

Work out $3\mathbf{a} + \mathbf{b}$

[2 marks]

Answer $\begin{pmatrix} \\ \end{pmatrix}$

2   Work out $3\begin{pmatrix} 1 \\ 6 \end{pmatrix} + \begin{pmatrix} 2 \\ 5 \end{pmatrix}$

[1 mark]
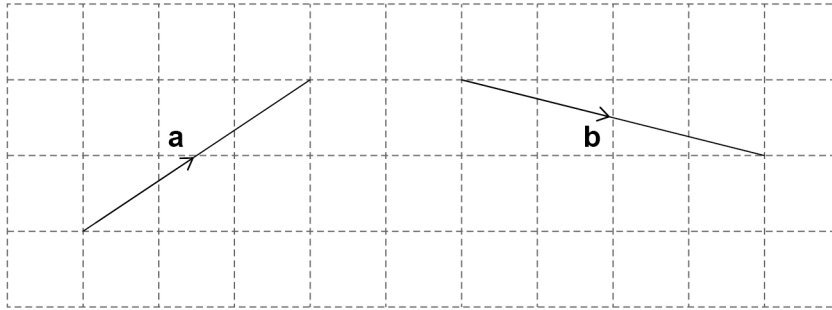
Answer $\begin{pmatrix} \\ \end{pmatrix}$

3   The diagram shows the vectors **a** and **b**.

As a column vector $\mathbf{a} = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$

3 (a)   What is **b** as a column vector?

[2 marks]

Answer $\begin{pmatrix} \\ \end{pmatrix}$

3 (b)   Work out 4**a** as a column vector.

[1 mark]

Answer $\begin{pmatrix} \\ \end{pmatrix}$

3 (c) $\mathbf{a} + \mathbf{c} = \begin{pmatrix} 3 \\ 0 \end{pmatrix}$

Work out **c** as a column vector.

Circle your answer.

[1 mark]

$\begin{pmatrix} 2 \\ 0 \end{pmatrix}$ $\qquad$ $\begin{pmatrix} 0 \\ 2 \end{pmatrix}$ $\qquad$ $\begin{pmatrix} -2 \\ 0 \end{pmatrix}$ $\qquad$ $\begin{pmatrix} 0 \\ -2 \end{pmatrix}$

4   Work out $\begin{pmatrix} 1 \\ 2 \end{pmatrix} + \begin{pmatrix} 4 \\ 6 \end{pmatrix}$

[1 mark

Answer $\begin{pmatrix} \\ \end{pmatrix}$