

$$1 \quad \mathbf{a} = \begin{pmatrix} 2 \\ 3 \end{pmatrix} \quad \mathbf{b} = \begin{pmatrix} -1 \\ 2 \end{pmatrix} \quad \mathbf{c} = \begin{pmatrix} 4 \\ 1 \end{pmatrix}$$

(a) Work out as a column vector

(i) $\mathbf{a} + \mathbf{b}$

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

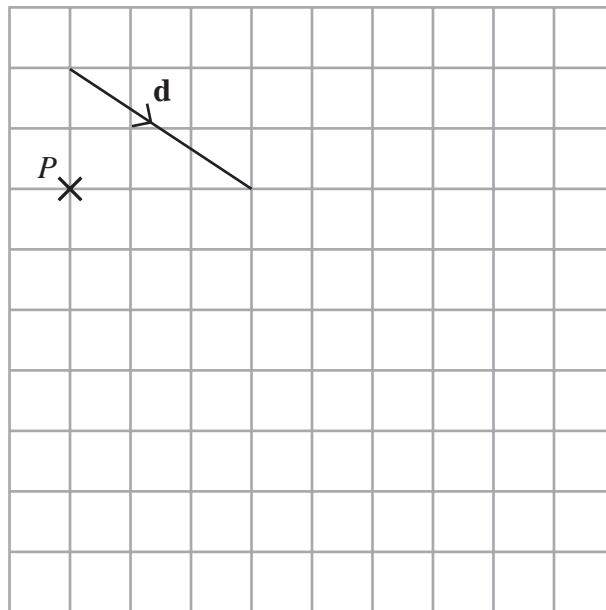
(1)

(ii) $2\mathbf{a} - \mathbf{c}$

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

(2)

The vector \mathbf{d} is drawn on the grid.



(b) From the point P , draw the vector $2\mathbf{d}$

(1)

(Total for Question 1 is 4 marks)