

$$1. \quad \mathbf{a} = \begin{pmatrix} 3 \\ 5 \end{pmatrix} \qquad \mathbf{b} = \begin{pmatrix} 4 \\ 1 \end{pmatrix}$$

Complete these column vectors

$$(i) \quad 2\mathbf{a} = \begin{pmatrix} \dots \\ \dots \end{pmatrix}$$

$$(ii) \quad 3\mathbf{b} = \begin{pmatrix} \dots \\ \dots \end{pmatrix}$$

$$2. \quad \mathbf{c} = \begin{pmatrix} 2 \\ 1 \end{pmatrix} \qquad \mathbf{d} = \begin{pmatrix} 1 \\ -3 \end{pmatrix}$$

Complete these column vectors

$$(i) \quad 3\mathbf{c} = \begin{pmatrix} \dots \\ \dots \end{pmatrix}$$

$$(ii) \quad 4\mathbf{d} = \begin{pmatrix} \dots \\ \dots \end{pmatrix}$$

$$3. \quad \mathbf{p} = \begin{pmatrix} 5 \\ 2 \end{pmatrix} \qquad \mathbf{q} = \begin{pmatrix} -3 \\ 4 \end{pmatrix}$$

Complete these column vectors

$$(i) \quad 3\mathbf{p} = \begin{pmatrix} \dots \\ \dots \end{pmatrix}$$

$$(ii) \quad 4\mathbf{q} = \begin{pmatrix} \dots \\ \dots \end{pmatrix}$$

## Answers

1. (i) 6 (ii) 12  
10 3
2. (i) 6 (ii) 4  
3 -12
3. (i) 15 (ii) -12  
6 16