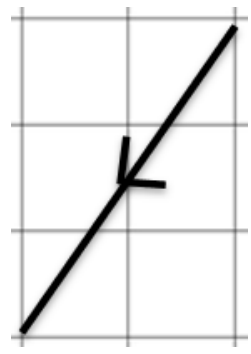
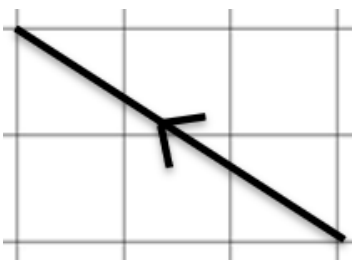
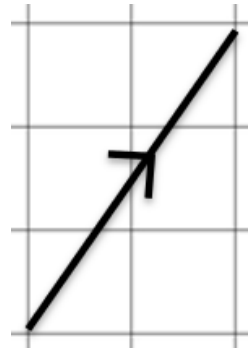


11.2) Representing vectors

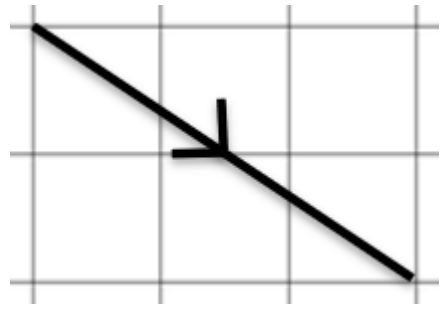
Worked example

Represent in column vector form:



Your turn

Represent in column vector form:



$$\begin{pmatrix} 3 \\ -2 \end{pmatrix}$$

Worked example

Draw a diagram to represent the vector:

$$2\mathbf{i} + 3\mathbf{j}$$

$$-3\mathbf{i} + 2\mathbf{j}$$

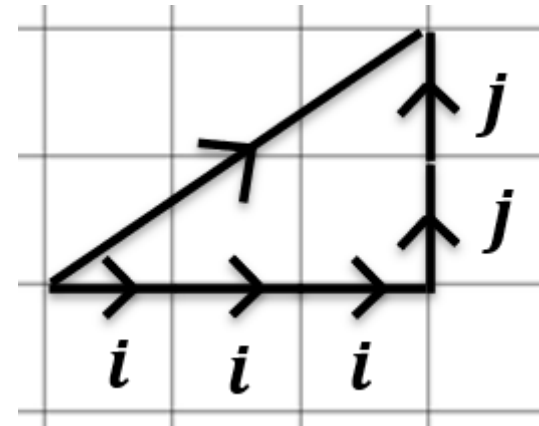
$$2\mathbf{i} - 3\mathbf{j}$$

$$-2\mathbf{i} - 3\mathbf{j}$$

Your turn

Draw a diagram to represent the vector:

$$3\mathbf{i} + 2\mathbf{j}$$



Worked example

Given $\mathbf{a} = 8\mathbf{i} - 6\mathbf{j}$ and $\mathbf{b} = 9\mathbf{i} + 7\mathbf{j}$, find:

- $4\mathbf{b} - 2\mathbf{a}$
- $-\mathbf{b} + \frac{1}{4}\mathbf{a}$

Your turn

Given $\mathbf{a} = 5\mathbf{i} + 2\mathbf{j}$ and $\mathbf{b} = 3\mathbf{i} - 4\mathbf{j}$, find:

- $2\mathbf{a} - \mathbf{b}$
- $-\mathbf{a} + \frac{1}{2}\mathbf{b}$
- $7\mathbf{i} + 8\mathbf{j}$
- $-\frac{7}{2}\mathbf{i} - 4\mathbf{j}$