

N5 - Applications

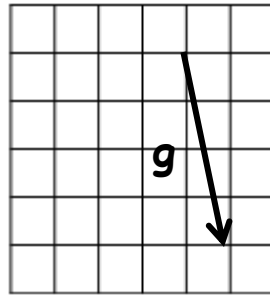
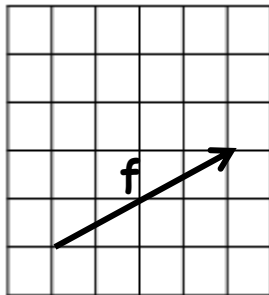
Worksheet 3

Bronze Level

Outcome 1 - Adding Vectors

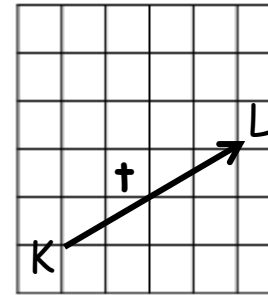
For the following directed line segments, sketch the resultant vector.

1

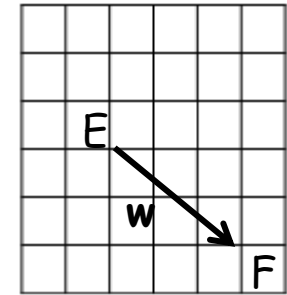


Sketch
 $f + g$.

1



2



Outcome 3 - Using Vector Components

Complete the following vector component calculations...

1

Vector $\mathbf{a} = \begin{pmatrix} 9 \\ 4 \end{pmatrix}$ and vector $\mathbf{b} = \begin{pmatrix} 3 \\ -5 \end{pmatrix}$.

Calculate $\mathbf{a} + \mathbf{b}$.

2

Vector $\mathbf{p} = \begin{pmatrix} 7 \\ 9 \end{pmatrix}$ and vector $\mathbf{q} = \begin{pmatrix} 3 \\ -8 \end{pmatrix}$.

Calculate $6\mathbf{p} - 4\mathbf{q}$.

Outcome 4 - Calculating Magnitude

Calculate the magnitude for the following vectors...

1

Vector $\mathbf{c} = \begin{pmatrix} 7 \\ 3 \end{pmatrix}$. Calculate $|\mathbf{c}|$.

2

Vector $\mathbf{m} = \begin{pmatrix} 7 \\ 6 \end{pmatrix}$ and vector $\mathbf{n} = \begin{pmatrix} 4 \\ 2 \end{pmatrix}$.

Calculate $|\mathbf{m} - \mathbf{n}|$.