Vectors – GCSE Mathematics Paper 3

1. No.26

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

[1 mark]

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

2. No.2

Work out $\begin{pmatrix}-4\\8\end{pmatrix}-\begin{pmatrix}3\\-2\end{pmatrix}$

Circle your answer.

[1 mark]

$\begin{pmatrix}-7\\10\end{pmatrix}$ $\begin{pmatrix}-7\\6\end{pmatrix}$ $\begin{pmatrix}-1\\10\end{pmatrix}$ $\begin{pmatrix}-1\\6\end{pmatrix}$

3. No.27

In the diagram

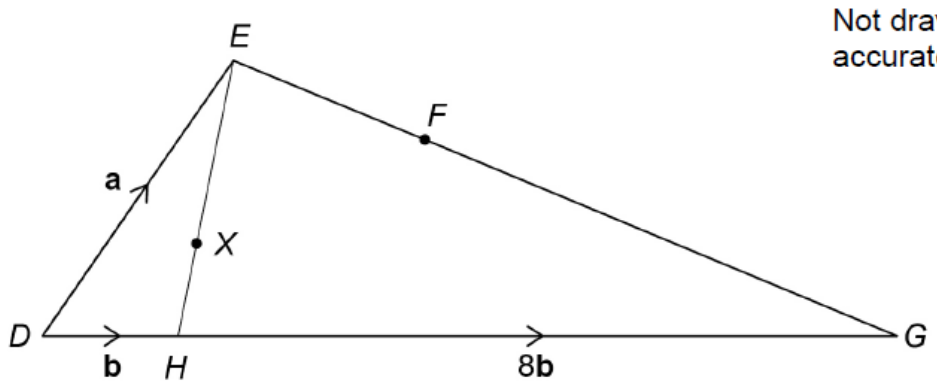
$\overrightarrow{DE} = \mathbf{a}$

$\overrightarrow{DH} = \mathbf{b}$

$\overrightarrow{HG} = 8\mathbf{b}$

$EX : XH = 3 : 1$

$EF : FG = 1 : 3$



Not drawn accurately

(a) Show that $\overrightarrow{DX} = \frac{1}{4}\mathbf{a} + \frac{3}{4}\mathbf{b}$

[2 marks]

(b) Is *DXF* a straight line?

Show working to support your answer.

[4 marks]