

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

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

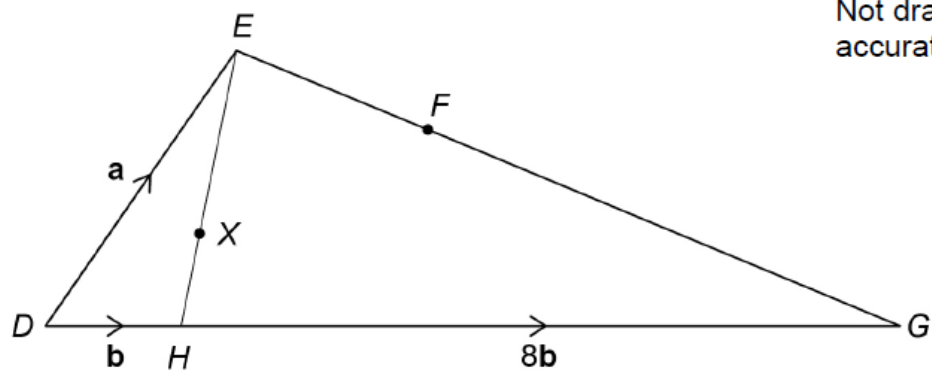
$$\overrightarrow{DE} = \mathbf{a}$$

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

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

$$EX : XH = 3 : 1$$

$$EF : FG = 1 : 3$$

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]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.