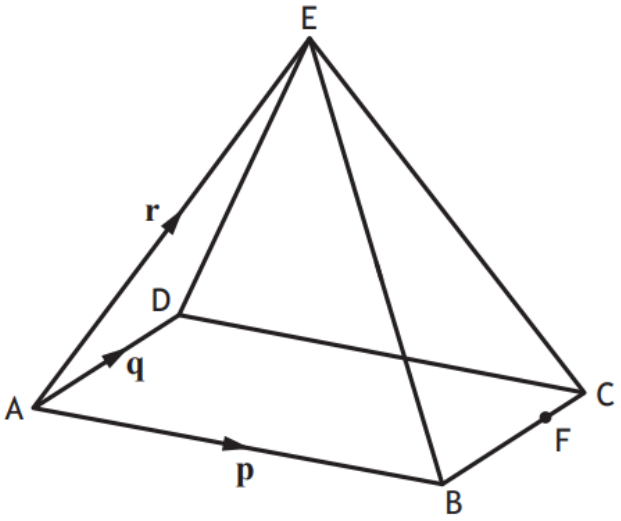
Higher Maths
SQA 2019 Paper 2
Question 3

E,ABCD is a rectangular based pyramid.

$\overrightarrow{AB} = \mathbf{p}$, $\overrightarrow{AD} = \mathbf{q}$ and $\overrightarrow{AE} = \mathbf{r}$.



(a) Express $\overrightarrow{BE}$ in terms of $\mathbf{p}$ and $\mathbf{r}$. **1**

Point F divides BC in the ratio 3:1.

(b) Express vector $\overrightarrow{EF}$ in terms of $\mathbf{p}$, $\mathbf{q}$ and $\mathbf{r}$. **2**

Answers:

(a) $-\mathbf{p}+\mathbf{r}$

(b) $\mathbf{p}-\mathbf{r}+\frac{3}{4}\mathbf{q}$ or equivalent