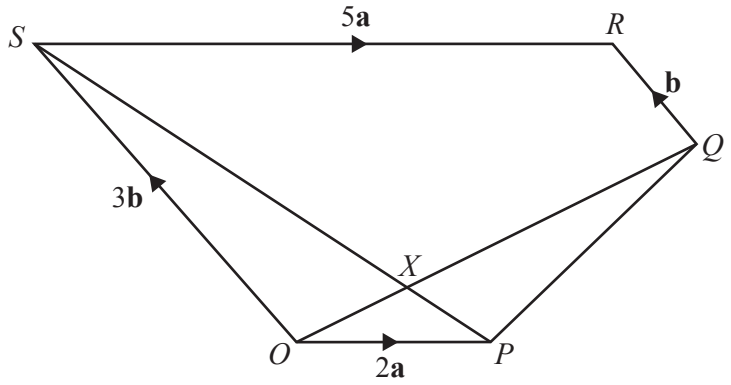
11



In the vector diagram, $\overrightarrow{OP} = 2\mathbf{a}$, $\overrightarrow{SR} = 5\mathbf{a}$, $\overrightarrow{OS} = 3\mathbf{b}$ and $\overrightarrow{QR} = \mathbf{b}$.

(a) Given that $\overrightarrow{PX} = \lambda\overrightarrow{PS}$, write $\overrightarrow{OX}$ in terms of **a**, **b** and λ. [3]

(b) Given that $\overrightarrow{OX} = \mu\overrightarrow{OQ}$, write $\overrightarrow{OX}$ in terms of **a**, **b** and μ. [2]

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(c) Find the values of λ and μ. [4]

(d) Write down the value of $\frac{OX}{OQ}$. [1]

(e) Find the value of $\frac{PX}{XS}$. [1]

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