25 (a)	eg $3\mathbf{a}+2\mathbf{a}+2\mathbf{b}+\frac{3}{2}(2\mathbf{a}+2\mathbf{b})$ oe eg $3\mathbf{a}+2\mathbf{a}+2\mathbf{b}+3\mathbf{a}+3\mathbf{b}$		2	M1	for a correct method to find $\overrightarrow{OD}$
	Correct answer scores full marks (unless from obvious incorrect working)	8**a**+5**b**		A1	cao
(b)	eg $\overrightarrow{OP}=\lambda("8\mathbf{a}+5\mathbf{b}")$ oe **or** $\overrightarrow{OP}=4\mathbf{b}+\mu(-4\mathbf{b}+3\mathbf{a}+2\mathbf{a}+2\mathbf{b})$ or $\overrightarrow{OP}=4\mathbf{b}+\mu(5\mathbf{a}-2\mathbf{b})$ oe **or** $\overrightarrow{OP}=3\mathbf{a}+2\mathbf{a}+2\mathbf{b}+x(-2\mathbf{a}-2\mathbf{b}-3\mathbf{a}+4\mathbf{b})$ or $\overrightarrow{OP}=5\mathbf{a}+2\mathbf{b}+x(2\mathbf{b}-5\mathbf{a})$ oe **OR** eg $\overrightarrow{PD}=r("8\mathbf{a}+5\mathbf{b}")$ oe **or** $\overrightarrow{PD}=s(-4\mathbf{b}+3\mathbf{a}+2\mathbf{a}+2\mathbf{b})+\frac{3}{2}(2\mathbf{a}+2\mathbf{b})$ or $\overrightarrow{PD}=s(5\mathbf{a}-2\mathbf{b})+3\mathbf{a}+3\mathbf{b}$ oe		4	M1	ft, for an expression for $\overrightarrow{OP}$ **OR** $\overrightarrow{PD}$ ft an answer in the form $m\mathbf{a}+n\mathbf{b}$ from (a)
	eg 2 of eg $\overrightarrow{OP}=\lambda("8\mathbf{a}+5\mathbf{b}")$ oe **or** $\overrightarrow{OP}=4\mathbf{b}+\mu(-4\mathbf{b}+3\mathbf{a}+2\mathbf{a}+2\mathbf{b})$ or $\overrightarrow{OP}=4\mathbf{b}+\mu(5\mathbf{a}-2\mathbf{b})$ oe **or** $\overrightarrow{OP}=3\mathbf{a}+2\mathbf{a}+2\mathbf{b}+x(-2\mathbf{a}-2\mathbf{b}-3\mathbf{a}+4\mathbf{b})$ or $\overrightarrow{OP}=5\mathbf{a}+2\mathbf{b}+x(2\mathbf{b}-5\mathbf{a})$ oe **OR** eg $\overrightarrow{PD}=r("8\mathbf{a}+5\mathbf{b}")$ oe **or** $\overrightarrow{PD}=s(-4\mathbf{b}+3\mathbf{a}+2\mathbf{a}+2\mathbf{b})+\frac{3}{2}(2\mathbf{a}+2\mathbf{b})$ or $\overrightarrow{PD}=s(5\mathbf{a}-2\mathbf{b})+3\mathbf{a}+3\mathbf{b}$ oe			M1	ft, for 2 different expressions for $\overrightarrow{OP}$ **OR** $\overrightarrow{PD}$ ft an answer in the form $m\mathbf{a}+n\mathbf{b}$ from (a)
	eg $8\lambda=5\mu$ **and** $5\lambda=4-2\mu$ oe or $8\lambda=5-5x$ **and** $5\lambda=2+2x$ oe **OR** $8r=5s+3$ **and** $5r=-2s+3$ oe			M1	ft, dep on M2, for comparing coefficients for **a** and **b** ft an answer in the form $m\mathbf{a}+n\mathbf{b}$ from (a)
	Working required	20:21		A1	dep on M2, oe
					Total 6 marks