25 (a) (i)		$\frac{8}{5}\mathbf{a}+3\mathbf{b}$	1	B1oe	must be in simplest form eg $1.6\mathbf{a}+3\mathbf{b}$ or $\frac{8\mathbf{a}+15\mathbf{b}}{5}$
(ii)		$\frac{9}{4}\mathbf{b}-2\mathbf{a}$	1	B1oe	must be in simplest form eg $2.25\mathbf{b}-2\mathbf{a}$ or $\frac{9\mathbf{b}-8\mathbf{a}}{4}$
(b)	eg $\left(\overrightarrow{OM}=\right)2\mathbf{a}+\frac{3}{4}\mathbf{b}$ oe or $\left(\overrightarrow{OY}=\right)k\left("\frac{8}{5}\mathbf{a}+3\mathbf{b}"\right)$ oe or $\left(\overrightarrow{YN}=\right)(1-k)\left("\frac{8}{5}\mathbf{a}+3\mathbf{b}"\right)$ oe or $\left(\overrightarrow{OY}=\right)2\mathbf{a}+\frac{3}{4}\mathbf{b}+\lambda\left("\frac{9}{4}\mathbf{b}-2\mathbf{a}"\right)$ oe or $\left(\overrightarrow{OY}=\right)3\mathbf{b}-\mu\left("\frac{9}{4}\mathbf{b}-2\mathbf{a}"\right)$ oe		4	M1ft	ft their answers in (a) for a correct expression for a vector eg $\overrightarrow{OM}$ or $\overrightarrow{OY}$ or $\overrightarrow{YN}$ Students may use other variations eg $\overrightarrow{MO}$ or $\overrightarrow{YO}$ or $\overrightarrow{NY}$ For all M marks Allow any letter for k eg n, λ Allow any letter for λ eg μ
	eg $\left(\overrightarrow{OY}=\right)k\left("\frac{8}{5}\mathbf{a}+3\mathbf{b}"\right)$ oe **and** $2\mathbf{a}+\frac{3}{4}\mathbf{b}+\lambda\left("\frac{9}{4}\mathbf{b}-2\mathbf{a}"\right)$ oe or $\left(\overrightarrow{OY}=\right)k\left("\frac{8}{5}\mathbf{a}+3\mathbf{b}"\right)$oe **and** $3\mathbf{b}-\mu\left("\frac{9}{4}\mathbf{b}-2\mathbf{a}"\right)$oe or $\left(\overrightarrow{OM}=\right)2\mathbf{a}+\frac{3}{4}\mathbf{b}$ oe **and** $k\left("\frac{8}{5}\mathbf{a}+3\mathbf{b}"\right)-\lambda\left("-2\mathbf{a}+\frac{9}{4}\mathbf{b}"\right)$ oe or $\left(\overrightarrow{YN}=\right)(1-k)\left("\frac{8}{5}\mathbf{a}+3\mathbf{b}"\right)$oe **and** $-\lambda\left("-2\mathbf{a}+\frac{9}{4}\mathbf{b}"\right)+\frac{3}{4}(3\mathbf{b})-\frac{1}{5}(2\mathbf{a})$ oe or $\left(\overrightarrow{OY}=\right)2\mathbf{a}+\frac{3}{4}\mathbf{b}+\lambda\left("\frac{9}{4}\mathbf{b}-2\mathbf{a}"\right)$ **and** $3\mathbf{b}-\mu\left("\frac{9}{4}\mathbf{b}-2\mathbf{a}"\right)$			M1ft	for 2 independent expressions for the same vector (may be embedded in a correct equation)
	eg $3k=\frac{3}{4}+\frac{9}{4}\left(1-\frac{4}{5}k\right)$oe or $3k=3-\frac{9}{4}\left(\frac{4}{5}k\right)$ oe or $4k=3\left(\frac{5-4k}{5}\right)+1$ oe or $\lambda = 0.5$ oe or $\mu = 0.5$ oe			M1	a **correct** equation for k or the correct value of λ or μ (cannot assume that Y is the midpoint of MR)
	*Question requires a complete **vector method** to be awarded marks*	$\frac{5}{8}$		A1oe	dep on M2
					Total 6 marks