Question	Answer	Marks	Guidance
11(c)	$\mathbf{a}+\lambda\left(\frac{\mathbf{b}}{2}-\mathbf{a}\right)=\frac{\mu}{2}(\mathbf{a}+\mathbf{b})$	**M1**	For equating *their* final answer for (a) and *their* final answer for (b) and attempt to equate like vectors at least once to obtain a scalar equation
	$\lambda=\mu=\frac{2}{3}$	**2**	**M1 dep** for solving *their* simultaneous equations to obtain at least one unknown. Each equation must be in terms of λ and μ **A1** for both.
11(d)	$\overrightarrow{OZ}=\frac{1}{3}(\mathbf{a}+\mathbf{b})$ oe	**B1**	Must be from correct work
12(a)	Cannot have the square root of a negative number. oe	**B1**	Must be a correct statement related to the question. Allow a numerical argument.
12(b)	$\frac{(x-3)\left(\frac{5}{2}\times(5x-2)^{-\frac{1}{2}}\right)-(5x-2)^{\frac{1}{2}}}{(x-3)^2}$ or $(x-3)^{-1}\frac{5}{2}(5x-2)^{-\frac{1}{2}}$ $+\left(-(x-3)^{-2}\right)(5x-2)^{\frac{1}{2}}$	**3**	**B1** for $\frac{5}{2}\times(5x-2)^{-\frac{1}{2}}$ seen **M1** for an attempt to differentiate a quotient or correct product **A1** for all other terms correct.
	$\frac{(5x-2)^{-\frac{1}{2}}}{2(x-3)^2}(5(x-3)-2(5x-2))$ oe	**M1**	**Dep** for an attempt to simplify to the given form, allow a sign error and an arithmetic error (e.g. Omission of a factor of 2 in the linear term).
	$\frac{-(5x+11)}{2(x-3)^2\sqrt{5x-2}}$ cao	**A1**	