Question	Answer	Marks	Guidance
8(b)	$\left(\frac{9}{2},\ -2\right)$	**2**	**B1** for one correct **FT** on $2\times(their\ k)-their\frac{2}{5}$
	$\left(-\frac{51}{10},\ \frac{14}{5}\right)$	**2**	**B1** for one correct **FT** on $\left[\left(3\times their\ \frac{2}{5}\right)-(2\times their\ k)\right]$
9(a)	$\mathbf{c}-2\mathbf{a}$	**B1**	
9(b)	$4\mathbf{a}+\frac{2}{3}(their\ (\mathbf{c}-2\mathbf{a}))$ oe	**M1**	Alternative route: $OC + CB + BD = \mathbf{c} + 2\mathbf{a} - \frac{1}{3}\ their\ AB$
	$\frac{8}{3}\mathbf{a}+\frac{2}{3}\mathbf{c}$	**A1**	Allow unsimplified
9(c)	$\mu\left(their\ \left(\frac{8}{3}\mathbf{a}+\frac{2}{3}\mathbf{c}\right)\right)$	**B1**	Must be in terms of **a** and **c** in a valid vector form. Allow unsimplified
9(d)	$\overrightarrow{AC}=\mathbf{c}-4\mathbf{a}$	**B1**	
	$\lambda(their\ (\mathbf{c}-4\mathbf{a}))$	**B1**	Must be in terms of **a** and **c** in a valid vector form
9(e)	$4\mathbf{a}=$ *their* (c) – *their* (d) oe	**M1**	Must be in terms of **a** and **c** in a valid vector form
	$\lambda=\frac{1}{2},\ \mu=\frac{3}{4}$	**3**	**M1 dep** on first M1 for equating like vectors once **M1 dep** on first M1 for attempt to solve 2 simultaneous equations in λ and μ. leading to $\lambda=\ldots$ or $\mu=\ldots$ **A1** for both
10(a)	$\tan\theta=\frac{2}{7},\ \ \tan\theta=-1$	**2**	**M1** for attempt to factorise or use formula to obtain $\tan\theta=...$
	$15.9^{o},\ -164.1^{o},\ -45^{o},\ 135^{o}$	**2**	**A1** for two correct solutions **A1** for a further 2 correct solutions and no extras in the range

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