Q	Scheme	Marks	Notes
	Allow column vectors throughout apart from in the answers to (a) and (b).		
2a	Use of $\frac{1}{3}\left(10\mathbf{i}+4\mathbf{j}-(-5\mathbf{i}+16\mathbf{j})\right)$	M1	Condone subtraction in the wrong order and missing brackets
	$=\left(5\mathbf{i}-4\mathbf{j}\right)\left(\text{m s}^{-1}\right)$	A1	Correct only
		(2)	
2b	$\left\{-5\mathbf{i}+16\mathbf{j}-2\left(5\mathbf{i}-4\mathbf{j}\right)\right\}+t\left(5\mathbf{i}-4\mathbf{j}\right)$ **OR** $\left\{10\mathbf{i}+4\mathbf{j}-5\left(5\mathbf{i}-4\mathbf{j}\right)\right\}+t\left(5\mathbf{i}-4\mathbf{j}\right)$	M1	Any equivalent unsimplified form using their **v,** with correct structure.
	$=\left(-15+5t\right)\mathbf{i}+\left(24-4t\right)\mathbf{j}$	A1	Correct simplified form
		(2)	
2c	Finding **AB** (or **BA)** at $t = 5$ $(\mathbf{AB}=-5\mathbf{i}-12\mathbf{j})$ Must use given **r** at $t = 5$.	M1	Seen or implied, allow slips.
	e.g. $\theta=\tan^{-1}(\pm\frac{5}{12})$ or $\tan^{-1}(\pm\frac{12}{5})$ or $\sin^{-1}(\pm\frac{5}{13})$ or $\sin^{-1}(\pm\frac{12}{13})$ etc etc	M1	Correct use of trig to find a relevant angle, using their **AB** or **BA**, seen or implied
	Bearing $203(^\circ)$	A1	Correct only, to nearest degree.
		(3)	
		(7)	