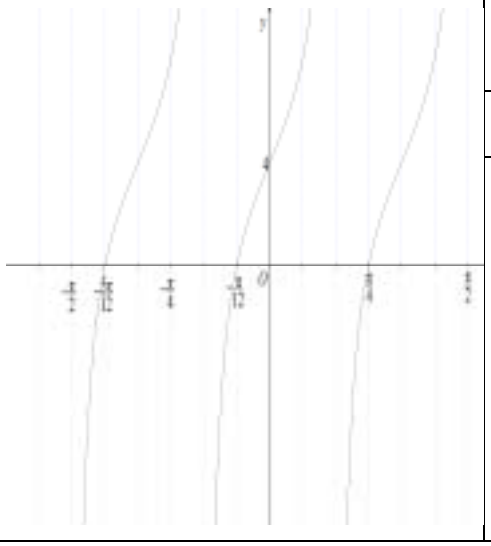
Question	Answer	Marks	Partial Marks
8(e)	$\frac{1}{2}(\mathbf{b}-\mathbf{a})+k\mathbf{b}=n\left(\frac{1}{2}\mathbf{b}-\frac{1}{4}\mathbf{a}\right)$ $-\frac{1}{2}=-\frac{n}{4}$ $\frac{1}{2}+k=\frac{n}{2}$	**M1**	For equating *their* (c) and (d) and then equating like vectors to obtain 2 equations
	$n=2$	**A1**	
	$k=\frac{1}{2}$	**A1**	
9(a)(i)	$v=20\cos 2t$ when $t=\pi,\ v=20$	**B1**	
9(a)(ii)	$20\cos 2t=0$	**M1**	Equating *their* (i) to zero, must be a cosine and attempt to solve
	$t=\frac{\pi}{4}$	**A1**	
9(a)(iii)	$a=-40\sin 2t$	**M1**	Attempt to differentiate *their v*, dep on previous M mark, and use *their* value for (ii)
	–40	**A1**	
9(b)(i)	35	**B1**	
9(b)(ii)	$112.5=\frac{1}{2}(35+x)\times 5$	**M1**	Use of area under appropriate part of the graph
		A1	
	$x=10$	**A1**	
9(b)(iii)	$\frac{25}{5}=\frac{10}{t'}$	**M1**	Using a ratio method or otherwise, find extra time to stop = 2s or equivalent
	$t'=2$	**A1**	
	27	**A1**	

Question	Answer	Marks	Partial Marks
10(a)	$3x = -\frac{5\pi}{4} - \frac{\pi}{4}, \ \frac{3\pi}{4}$	**M1**	For a correct attempt to solve, may be implied by one correct solution
	$x = -\frac{\pi}{12}$	**A1**	
	$x = \frac{\pi}{4}$	**A1**	
	$x = -\frac{5\pi}{12}$	**A1**	
10(b)		**B1**	Shape – must have three 'parts' with asymptotes
		B1	For correct x-coordinates
		B1	For correct y-coordinate