Question	Answer	Marks	Partial Marks
9	$x(5x-3)=2$ $5x^2-3x-2=0$	**M1**	attempt at a 3-term quadratic equation in one variable with solution
	$x=1,\ x=-\frac{2}{5}$	**A1**	Allow if $x=-\frac{2}{5}$ not seen
	$A\ (1,\ 2)$	**A1**	
	$B\left(\frac{3}{5},\ 0\right)$	**B1**	
	Area of triangle $=\frac{2}{5}$	**M1**	Using *their A* and *B*
	Area under curve: $\int_1^3 \frac{2}{x}\,dx=\left[2\ln x\right]_1^3$	**B1**	For $\left[2\ln x\right]_1^3$
	$=2\ln 3$	**M1**	For use of limits
	Total area $=\frac{2}{5}+\ln 9$	**A1**	
10(a)	$\frac{dy}{dx}=\frac{1}{2}x(x+2)^{-\frac{1}{2}}+(x+2)^{\frac{1}{2}}$	**B1**	For $\frac{1}{2}(x+2)^{-\frac{1}{2}}$
		M1	For differentiation of a product
		A1	
	$\frac{dy}{dx}=\frac{1}{2}(x+2)^{-\frac{1}{2}}\left[x+2(x+2)\right]$	**M1**	For attempt to simplify
	$\frac{dy}{dx}=\frac{3x+4}{2\sqrt{x+2}}$	**A1**	
10(b)	$3x+4=0$	**M1**	For setting *their* numerator in (a) to zero and attempt to solve
	$x=-\frac{4}{3}$	**A1**	
	$y=-\frac{4\sqrt{6}}{9}$ oe	**A1**	
10(c)	Using the gradient method or inspection of y-coordinates either side of stationary point. Allow use of second derivative	**M1**	complete method
	Minimum	**A1**	Must be from correct work

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