Question	Answer	Marks	Guidance
	Line meets curve when: $2x+2=5x^{\frac{1}{2}}$ leading to $2x-5x^{\frac{1}{2}}+2[=0]$ **or** $4x^2+8x+4=25x$ leading to $4x^2-17x+4[=0]$ **or** $x=\frac{y^2}{25}$ leading to $2y^2-25y+50[=0]$	**M1**	Equating line and curve and rearranging so that terms are all on same side, condone sign errors, and making a valid attempt to solve by factorising, using the formula or completing the square. Factors are:$(2x^{\frac{1}{2}}-1)(x^{\frac{1}{2}}-2)$, $(4x-1)(x-4)$ and $(2y-5)(y-10)$.
	$x=\frac{1}{4}, x=4$	**A1**	**SC:** If M1 not scored, **SC B1** available for correct answers, could just be seen as limits.
	Area $=\int 5x^{\frac{1}{2}}-(2x+2)\mathrm{dx}=\int 5x^{\frac{1}{2}}-2x-2\ \mathrm{dx}$	***M1**	Intention to integrate and subtract areas. Condone missing brackets and/or subtraction wrong way around.
	$=\left[\frac{10}{3}x^{\frac{3}{2}}-x^2-2x\right]_{\frac{1}{4}}^{4}=\left(\left(\frac{10}{3}\times 8-16-8\right)-\left(\frac{10}{3}\times\frac{1}{8}-\frac{1}{16}-\frac{1}{2}\right)\right)$	**DM1**	Integrating($kx^{\frac{3}{2}}$ seen) and substituting '*their* points of intersection' (but limits need to be found, not assumed to be 0 and something else).
	$\frac{45}{16}$ or $2\frac{13}{16}$ or 2.8125	**A1**	OE exact answer. Condone $-\frac{45}{16}$ if corrected to $\frac{45}{16}$. A0 for inclusion of π. **SC:** If *M1 DM0 scored, **SC B1** available for correct answer.

Question	Answer	Marks	Guidance
	Alternative method for question		
	Line meets curve when: $2x+2=5x^{\frac{1}{2}} \Rightarrow 2x - 5x^{\frac{1}{2}} + 2 [=0]$ **or** $4x^2+8x+4=25x \Rightarrow 4x^2-17x+4[=0]$ **or** $x=\frac{y^2}{25} \Rightarrow 2y^2-25y+50[=0]$	**M1**	Equating line and curve and rearranging so that terms are all on same side, condone sign errors, and making a valid attempt to solve by factorising, using the formula or completing the square. Factors are:$(2x^{\frac{1}{2}}-1)(x^{\frac{1}{2}}-2)$, $(4x-1)(x-4)$ and $(2y-5)(y-10)$.
	$x=\frac{1}{4}, x=4$	**A1**	**SC:** If M1 not scored, **SC B1** available for correct answers, could just be seen as limits.
	Area = $\int 5x^{\frac{1}{2}}dx$ – {$\int (2x+2)dx$ or area of trapezium}	***M1**	Intention to integrate and subtract areas. Or integrate curve and subtract area of trapezium.
	$\left[\frac{10}{3}x^{\frac{3}{2}}\right]_{\frac{1}{4}}^{4} - \left\{\left[x^2+2x\right]_{\frac{1}{4}}^{4} or \frac{1}{2}(\text{sum of '}their\ y\text{ values'})\text{'}their\ \frac{15}{4},\right\}$ $= \left(\left(\frac{10}{3}\times 8\right)-\left(\frac{10}{3}\times\frac{1}{8}\right)\right) - \left\{\left((16+8)-\left(\frac{1}{16}+\frac{1}{2}\right)\right) or \frac{1}{2}\left(\frac{5}{2}+10\right)\frac{15}{4}\right\}$	**DM1**	Integrating ($kx^{\frac{3}{2}}$ seen) and substituting '*their* points of intersection' (but limits need to be found, not assumed to be 0 and something) or a trapezium using the correct formula ('*their* $\frac{15}{4}$' must be '*their* 4' – '*their* $\frac{1}{4}$' **but not 0**).
	$\frac{45}{16}$ or $2\frac{13}{16}$ or 2.8125	**A1**	OE exact answer. Condone $-\frac{45}{16}$ if corrected to $\frac{45}{16}$. A0 for inclusion of π. **SC:** If *M1 DM0 scored, **SC B1** available for correct answer.
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