Question Number	Scheme	Marks
1(a)	$2y^2-3y=7+13\Rightarrow 2y^2-3y-20=0\Rightarrow y=...$	M1
	$y=-\frac{5}{2}$ and $y=4$	A1
		(2)
(b)	$2y^2\rightarrow 4y\frac{\mathrm{d}y}{\mathrm{d}x}$	B1
	$-6xy\rightarrow \pm...x\frac{\mathrm{d}y}{\mathrm{d}x}\pm...y$	M1
	$4y\frac{\mathrm{d}y}{\mathrm{d}x}-6x\frac{\mathrm{d}y}{\mathrm{d}x}-6y=14\mathrm{e}^{2x-1}$	A1
	$4(4)\frac{\mathrm{d}y}{\mathrm{d}x}-6\left(\frac{1}{2}\right)\frac{\mathrm{d}y}{\mathrm{d}x}-6(4)=14\mathrm{e}^{2\left(\frac{1}{2}\right)-1}\Rightarrow \frac{\mathrm{d}y}{\mathrm{d}x}=...$	M1
	$y-"4"="\frac{38}{13}"\left(x-\frac{1}{2}\right)$	M1
	$38x-13y+33=0$	A1
		(6)
		(8 marks)

(a)

M1: Attempts all of the following

- substitutes $x=\frac{1}{2}$ into the equation for *C* (condoning slips),
- collect terms and forms a 3TQ in *y* (terms do not need to be on one side of the equation and the '= 0' may be implied by subsequent working)
- solves their 3TQ in *y* using usual rules (including via a calculator) to find at least one value for *y*. If a calculator is used, the values must be correct for their 3TQ

A1: Achieves both values $-\frac{5}{2}$, 4 following the award of M1