Question	Answer	Marks	Guidance
(a)	Use law of logarithm of a power	**M1**	$\log_3(2x + 1) = 1 + \log_3(x - 1)^2$
	Use $\log_3 3 = 1$	**B1**	$\log_3(2x + 1) = \log_3 3 + 2\log_3(x - 1)$ $\left[\log 3\left(\frac{2x+1}{(x-1)^2}\right) = \log_3 3 \quad \text{or} \quad \left(\frac{2x+1}{(x-1)^2}\right) = 3\right]$ **SC** For candidates scoring M0 B0 due to combining logs before dealing with coefficient 2, and confusing coefficients, allow $\log_3(\ldots) = c$ leading to $(...) = 3^c$ **B1**.
	Obtain $3x^2 - 8x + 2 = 0$ or $1.5x^2 - 4x + 1 = 0$	**A1**	OE 3 terms only and = 0 required.
		3	
(b)	Solve 3-term quadratic equation from part **3(a)** or restart to find y	**M1**	$y = \frac{4 \pm \sqrt{10}}{6}$ or $y = 1.1937\ldots$ or $y = 0.1396\ldots$ ($x = 2.3874$ or $x = 0.2792$) May solve for x but must find $y = \frac{x}{2}$ to gain M1.
	Obtain answer 1.19	**A1**	CAO. 2 dp required.
		2	