Q	Marking instructions	AO	Mark	Typical solution
13	Chooses an appropriate technique to differentiate accept any evidence of product rule or quotient rule	3.1a	M1	$x \neq 0$ as y is undefined $\frac{dy}{dx} = \frac{3e^{3x-5}x^2 - 2xe^{3x-5}}{x^4}$
	Differentiates e^{3x-5} correctly	1.1b	B1	At a turning point $\frac{dy}{dx} = 0$
	Obtains correct $\frac{dy}{dx}$ ACF	1.1b	A1	$\Rightarrow \frac{3e^{3x-5}x^2 - 2xe^{3x-5}}{x^4} = 0$
	Explains that stationary points occur when $\frac{dy}{dx} = 0$	2.4	E1	$\Rightarrow 3e^{3x-5}x^2 - 2xe^{3x-5} = 0$ $\Rightarrow (3x-2)xe^{3x-5} = 0$
	Equates their $\frac{dy}{dx}$ to zero and solves their equation with at least one correct line of correct rearrangement. Resulting in a value for x.	1.1a	M1	$\Rightarrow x = \frac{2}{3}, \quad e^{3x-5} = 0$ $e^{3x-5} \neq 0$ $\therefore$ there is only one stationary point.
	Deduces their factor $e^{3x-5} \neq 0$	2.2a	B1F	
	Completes argument to show exactly one stationary point at $x = \frac{2}{3}$. Must include consideration of $x \neq 0$ somewhere.	2.1	R1	
	Total		**7**	