Question			Answer	Marks	AO	Guidance
12			**DR** $\frac{dy}{dx} = (3x-1)(x-3) = 3x^2 - 10x + 3$	**M1**	**3.1a**	Expands brackets
			$y = x^3 - 5x^2 + 3x[+c]$	**M1**	**1.1**	Attempt to integrate. Condone missing $+c$
			$(-1,-8)$ on curve so $c = 1$ $y = x^3 - 5x^2 + 3x + 1$	**M1** **A1**	**2.1** **1.1**	Use given point to attempt to evaluate c Correct cubic curve.
			Point of intersection when $x^3 - 5x^2 + 3x + 1 = 1 - 3x$ $x^3 - 5x^2 + 6x = 0$	**M1**	**3.1a**	Solves simultaneously with $y = 1 - 3x$
			$x(x-2)(x-3) = 0$	**B1**	**1.1**	Correct factors seen Allow for another algebraic method of solving seen
			$x = 0, 2, 3$	**A1**	**1.1**	At least 2 correct x values. FT their equation formed from $y = 1 - 3x$ and their cubic curve
			The coordinates are $(0,1), (2,-5), (3,-8)$	**A1**	**3.2a**	cao
				[8]		