Question			Answer	Marks	AO	Guidance	
6	(a)		$3x^2 + 2 > 0$ for all values of x therefore stationary point is a minimum	**B1**	2.4		
				[1]			
6	(b)		$y' = \int (3x^2 + 2) dx = x^3 + 2x + k$	**M1***	2.1	Attempt to integrate (at least one of the terms in x correct)	Condone with no $+k$
			$y' = 0$ at $x = -1$ $\Rightarrow (-1)^3 + 2(-1) + k = 0$ leading to $k = \dots$	**M1dep***	1.1	Uses correct conditions to find the value of k (candidates may use the fact that when $x = 0$, $y' = 3$)	If correct $k = 3$
			$y = \int (x^3 + 2x + '3') dx = \frac{1}{4}x^4 + x^2 + '3'x + c$	**M1**	1.1	Integrates their y' correctly (allow with $k = 0$)	Condone with no $+c$ (allow use of same letter for second constant)
			$\left(-1, \frac{1}{4}\right) \Rightarrow \frac{1}{4}(-1)^4 + (-1)^2 + '3'(-1) + c = \frac{1}{4}$ leading to $c = \dots$	**M1**	1.1	Uses correct conditions to find the value of c	
			$y = \frac{1}{4}x^4 + x^2 + 3x + 2$	**A1**	2.5	cao (must include $y =$)	
				[5]			