

2	(a)	$\frac{dy}{dx} = 5x^4 - 20x^3 \text{ oe}$ $\frac{d^2y}{dx^2} = 20x^3 - 60x^2 \text{ oe}$	M1 A1 A1FT [3]	1.1a 1.1 1.1	For attempt at differentiation FT their $\frac{dy}{dx}$	Both indices decrease
2	(b)	When $x = 4$, $\frac{dy}{dx} = 5x^4 - 20x^3 = 5 \times 4^4 - 20 \times 4^3$ $= 0$ hence there is a stationary point	M1 A1 [2]	1.1 2.1	Substitute into their $\frac{dy}{dx}$	
2	(c)	When $x = 4$, $\frac{d^2y}{dx^2} = 20x^3 - 60x^2 = 20 \times 4^3 - 60 \times 4^2$ > 0 hence the stationary point is a minimum	M1 E1FT [2]	1.1 2.2a	FT from their $\frac{d^2y}{dx^2}$ in part (i)	