Question	Scheme	Marks	AOs
1 (a)	$y = 2x^3 - 2x^2 - 2x + 8 \Rightarrow \frac{dy}{dx} = 6x^2 - 4x - 2$	M1 A1	1.1b 1.1b
		(2)	
(b)	Attempts $6x^2 - 4x - 2 > 0 \Rightarrow (6x+2)(x-1) > 0$	M1	1.1b
	$x = -\frac{1}{3}, 1$	A1	1.1b
	Chooses outside region	M1	1.1b
	$\left\{x : x < -\frac{1}{3}\right\} \cup \{x : x > 1\}$	A1	2.5
		(4)	
			(6 marks)

Notes:

(a)

M1: Attempts to differentiate. Allow for two correct terms un-simplified

A1: $\frac{dy}{dx} = 6x^2 - 4x - 2$

(b)

M1: Attempts to find the critical values of their $\frac{dy}{dx} > 0$ or their $\frac{dy}{dx} = 0$

A1: Correct critical values $x = -\frac{1}{3}, 1$

M1: Chooses the outside region

A1: $\left\{x : x < -\frac{1}{3}\right\} \cup \{x : x > 1\}$ or $\left\{x : x \in \mathrm{R} \;\; x < -\frac{1}{3} \text{ or } x > 1\right\}$

Accept also $\left\{x : x \text{,,} \; -\frac{1}{3}\right\} \cup \{x : x \ldots 1\}$