Question number	Scheme	Marks
4 (a) (i)	$x-\frac{1}{2x^2}=\frac{2x^3-1}{2x^2}$	B1
(ii)	$x=\sqrt[3]{0.5} \Rightarrow 2x^3=1 \Rightarrow y=0, \quad x\approx 0.8$	M1,A1 [3]
(b)	$4-2x+\frac{1}{2x^2}=0 \quad x-\frac{1}{2x^2}=4-x$	M1
	Draw $y=4-x, \quad x=2.1$ or 2.0	dM1,A1 [3]
		Total 6 marks

Notes

(a) (i)	B1	Correct fraction only $\frac{2x^3-1}{2x^2}$ Award when seen, and isw any attempts to simplify.
(ii)	M1	Substitutes $x=\sqrt[3]{0.5}$ into $y=\frac{2x^3-1}{2x^2} \Rightarrow y=\frac{2\left(\sqrt[3]{0.5}\right)^3-1}{2\left(\sqrt[3]{0.5}\right)^2}=\frac{'1'-1}{2\left(\sqrt[3]{0.5}\right)^2} \quad (=0)$ **and** uses the graph to write a value for x for their value of y. If there is no working with just an answer given here - M0 Minimum working we need to see; $y=0 \Rightarrow x\approx 0.8$ or $y=0 \Rightarrow x=0.8$
	A1	$x = 0.8$ only. More digits implies a calculator answer so is A0.
(b)	M1	For attempting to achieve a minimum of $x-\frac{1}{2x^2}=\pm 4 \pm x$
	dM1	Draws their line correctly. Coordinates of the correct line are (0, 4) (1, 3) (2,2) (3, 1), (4, 0) **and** identifies a value of x for their intersection.
	A1	For either $x=2.1$ or 2.0 only