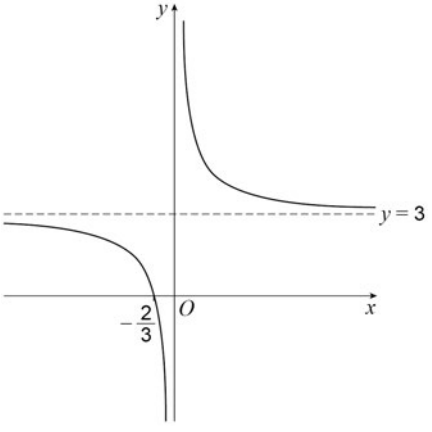
Q	Marking instructions	AO	Marks	Typical solution
9(a)	Obtains $-\frac{2}{3}$ OE	1.1b	B1	$0 = \frac{2}{x} + 3$ $x = -\frac{2}{3}$
	Subtotal		**1**	

Q	Marking instructions	AO	Marks	Typical solution
9(b)	Recalls shape of rectangular hyperbola and sketches at least one branch with evidence of approximate asymptotic behaviour	1.1a	M1	
	Sketches a full rectangular hyperbola with at least one horizontal asymptote not on the axes and evidence of approx asymptotic behaviour	1.1a	M1	
	Sketches a fully correct graph with horizontal asymptote $y = 3$ correctly labelled. Condone omission of $-\frac{2}{3}$	1.1b	A1	
	Subtotal		**3**	

Q	Marking instructions	AO	Marks	Typical solution
9(c)(i)	Eliminates y to obtain $px + 2 = \frac{2}{x} + 3$ OE	1.1a	M1	$px + 2 = \frac{2}{x} + 3$ $px^2 + 2x = 2 + 3x$ $px^2 - x - 2 = 0$
	Completes reasoned argument to obtain $px^2 - x - 2 = 0$ Must see at least one line of working before conclusion AG	2.1	R1	
	Subtotal		**2**	

Q	Marking instructions	AO	Marks	Typical solution
9(c)(ii)	Compares $(-1)^2 - 4(p)(-2)$ to 0 Condone missing brackets and/or 1 or 1^2	3.1a	M1	$b^2 - 4ac > 0$ $(-1)^2 - 4(p)(-2) > 0$ $1 + 8p > 0$ $p > -\frac{1}{8}$ where $p \neq 0$
	Obtains the critical value of $-\frac{1}{8}$	1.1b	A1	
	Obtains $p > -\frac{1}{8}$ CAO Condone omission of $p \neq 0$	1.1b	A1	
	Subtotal		**3**	