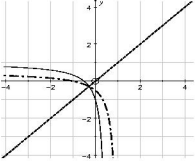


Question	Answer	Marks	Guidance
5(a)(i)	$[f(-1)=] \frac{1}{3}$	<b>B1</b>	Condone 0.333.
		<b>1</b>	
5(a)(ii)		<b>B1</b>	For showing the correct mirror line.
		<b>B1</b>	For correct shape: the curves should intersect in the first square in the third quadrant. To the left of the point of intersection, the reflection is below the original and crosses the x-axis. To the right of the point of intersection, the reflection is to the right the original.
		<b>2</b>	

Question	Answer	Marks	Guidance
5(a)(iii)	$\frac{2x+1}{2x-1} = y \Rightarrow 2x+1 = y(2x-1)$	<b>M1</b> *	Equating $y$ to the given function and clearing of fractions. $x$ and $y$ may be interchanged at this stage.
	$2xy - 2x = y + 1$	<b>DM1</b>	Condone $\pm$ errors during simplification.
	$\frac{x+1}{2(x-1)}, \frac{-x-1}{2-2x}$	<b>A1</b>	Allow ' $f^{-1}$ ' or ' $y =$ ' but NOT ' $x =$ ', nor fractions within fractions.
	[Domain of $f^{-1}$ is] $x < 1$	<b>B1</b>	Accept $-\infty < x < 1$ or $(-\infty, 1)$ , condone $[-\infty, 1)$ .
	<b>Alternative Method for Question 5(a)(iii)</b>		
	$y = 1 + \frac{2}{2x-1} \Rightarrow y-1 = \frac{2}{2x-1}$	<b>M1</b> *	Equating $y$ to the given function after division by $2x-1$ . Isolating the term in $x$ . $x$ and $y$ may be interchanged at this stage.
	$2x = \frac{2}{y-1} + 1$	<b>DM1</b>	Condone $\pm$ errors during simplification.
	$\frac{1}{x-1} + \frac{1}{2}$	<b>A1</b>	OE Allow ' $f^{-1}$ ' or ' $y =$ ' but NOT ' $x =$ ', nor fractions within fractions.
	[Domain of $f^{-1}$ is] $x < 1$	<b>B1</b>	Accept $-\infty < x < 1$ or $(-\infty, 1)$ , condone $[-\infty, 1)$ .
		<b>4</b>	

Question	Answer	Marks	Guidance
5(b)	$gf\left(\frac{1}{4}\right) = -7$	B1	
	$\frac{2x+1}{2x-1} = -7$	M1	Equating $\frac{2x+1}{2x-1}$ to <i>their</i> $gf\left(\frac{1}{4}\right)$ .
	$[x =] \frac{3}{8}$	A1	OE
	<b>Alternative solution for Question 5(b)</b>		
	$gf\left(\frac{1}{4}\right) = -7$	B1	
	$x = f^{-1}(-7)$	M1	$x = f^{-1}\left(\text{their } gf\left(\frac{1}{4}\right)\right)$
	$[x =] \frac{3}{8}$	A1	OE
		3	