20	$h = f\left(\frac{x+1}{2}\right) = 1 + \frac{1}{\frac{x+1}{2}}$ $\left(= 1 + \frac{2}{x+1}\right)$	$\frac{2}{x-1} - 1$ or $\frac{3-x}{x-1}$	4	M1	for $1 + \frac{1}{\frac{x+1}{2}}$
	$\left(y = 1 + \frac{2}{x+1}\right)$ $y - 1 = \frac{2}{x+1}$ or $y(x+1) = 1(x+1) + 2$			M1	(dep on M1) for a correct first step to change the subject
	$x + 1 = \frac{2}{y-1}$ or $xy - x = 3 - y$			M1	(dep on M1)
	$x = \frac{2}{y-1} - 1$ or $x = \frac{3-y}{y-1}$			A1	oe
					Total 4 marks
	Alternative scheme				
	$h = f\left(\frac{x+1}{2}\right) = 1 + \frac{1}{\frac{x+1}{2}}$ $\left(= 1 + \frac{2}{x+1} = \frac{x+3}{x+1}\right)$	$\frac{3-x}{x-1}$	4	M1	for $1 + \frac{1}{\frac{x+1}{2}}$
	$\left(y = \frac{x+3}{x+1}\right)$ $y(x+1) = (x+3)$			M1	(dep on M1) for a correct first step to change the subject
	$xy - x = 3 - y$			M1	(dep on M1)
	$x = \frac{3-y}{y-1}$			A1	oe
					Total 4 marks
Note: Allow candidates to swap *x* and *y* when finding the inverse					

21	(a)	$x(x^2-1)$ or $(x^2-x)(x+1)$	$x^3 - x$	1	B1 for correct expansion of a pair of brackets and then $x^3 - x$ written down
	(b)	(One of the numbers) is even **or** multiple of 2 **or** 2 is a factor	Proof	3	M1
		(One of the numbers) is a multiple of 3 **or** 3 is a factor			M1
		Hence a multiple of 6			A1
					Total 4 marks