Question	Answer	Marks	Partial Marks
1(a)	$f > 3$	**B1**	Allow y but not x
	$g \in \mathbb{R}$	**B1**	Allow y but not x
1(b)	$\ln(x-3)$	**B1**	
	$\ln(x-3)=9$ $x-3=e^9$	**M1**	For attempt to equate to 9 and solve, must get rid of ln
	$x=e^9+3$	**A1**	
1(c)	$9(9x-5)-5=112$	**M1**	For correct order of operation
	$x=2$	**A1**	
2(a)	Either $2\log_4 y=\log_2 y$ Or $\log_2 x=2\log_4 x$	**B1**	
	Either $\log_2 x+\log_2 y=8$ leading to $\log_2 xy=8$ Or $2\log_4 x+2\log_4 y=8$ leading to $\log_4 xy=4$	**M1**	For use of log law
	$xy=256$	**A1**	
2(b)	$2y^2-3y+1=0$	**B1**	
	$y=\frac{1}{2},\ 1$	**M1**	For attempt to solve for y
	$x=-1$	**A1**	
	$x=0$	**A1**	
3(a)	$v=(2t+1)^{\frac{1}{2}}(+c)$	**B1**	For $v=(2t+1)^{\frac{1}{2}}$ condone absence of c
	$8=1+c,\quad c=7$	**M1**	For attempt to find c must have $k(2t+1)^{\frac{1}{2}}$
	$v=(2t+1)^{\frac{1}{2}}+7$	**A1**	