10	**(i)**		$\frac{dx}{dt} = 1 - 2t^{-2}$	**B1**	**1.1**	Correct $\frac{dx}{dt}$	Any equivalent form
			$\frac{dy}{dt} = 1 + 2t^{-2}$	**B1**	**1.1**	Correct $\frac{dy}{dt}$	Any equivalent form
			$\frac{dy}{dx} = \frac{1+2t^{-2}}{1-2t^{-2}} = \frac{\frac{t^2+2}{t^2}}{\frac{t^2-2}{t^2}}$	**M1**	**1.1a**	Attempt correct method to combine their derivatives	Division must be correct way around
			$\frac{dy}{dx} = \frac{t^2+2}{t^2-2}$	**A1**	**1.1**	Obtain correct derivative	Allow any simplified equivalent such as $1 + \frac{4}{t^2-2}$
				[4]			

Question			Answer	Marks	AO	Guidance	
	(ii)		$\frac{dy}{dx} = 0 \Rightarrow t^2 + 2 = 0$	E1ft	2.2a	Justify $t^2 + 2 = 0$ for stat point	Must state that gradient (or $\frac{dy}{dx}$) $= 0$ (cannot be implied by method) then equate their numerator to 0 Allow use of a gradient that is no longer a fraction
			$t^2 \geq 0$, hence $t^2 + 2 = 0$ has no solutions, hence curve has no stationary points	E1	2.4	Justify no stationary points	Explain why there are no solutions eg referring to $t^2 + 2 \geq 2$ eg t^2 is always positive (as $t \neq 0$ given) eg $t^2 + 2 = 0$ has no real roots and conclude with 'no stationary points' Must now be from a fully correct derivative only
				[2]			
	(iii)		$x + y = 2t$ hence $t = \frac{1}{2}(x + y)$	B1	1.1	Correct expression for t	Any correct equation involving t along with x and/or y where t only appears once
			$x = \frac{1}{2}(x + y) + \frac{2}{\frac{1}{2}(x + y)}$	M1	1.2	Substitute for t into either equation	Expression for t must be correct Could be using attempt (possibly no longer correct) at a rearranged parametric equation eg $xt - t^2 = 2$
			$2x(x + y) = (x + y)^2 + 8$ $2x^2 + 2xy = x^2 + 2xy + y^2 + 8$	M1	3.1a	Attempt rearrangement	As far as requested form
			$x^2 - y^2 = 8$	A1	1.1	Correct equation	Any correct three term equivalent Allow A1 for eg $y = \pm\sqrt{x^2 - 8}$, but A0 if not $\pm$
				[4]			