Question	Answer	Marks	Partial Marks
2	Valid method to find m $m = \frac{9-7}{10-6}\left[=\frac{1}{2}\right]$	**M1**	
	Valid method to find c e.g. $7 = their\frac{1}{2}\times 6 + c$	**M1**	**FT** *their m*
	$\lg y = \left(their\frac{1}{2}\right)x^3 + their4$	**M1**	
	$y = 10^{\frac{1}{2}x^3+4}$ oe, isw	**A1**	
3	Rewrites in quadratic form soi e.g. $y = 3^x$ then $y^2 - 3y - 4 = 0$ or $(3^x)^2 - 3(3^x) - 4 = 0$	**M1**	
	Factorises or solves *their* 3-term quadratic e.g. $(y + 1)(y – 4)$ [= 0] or $(3^x + 1)(3^x – 4)$ [= 0]	**M1**	
	$3^x = 4$	**A1**	ignore $3^x = –1$
	$x = \log_3 4$ or $\frac{\ln 4}{\ln 3}$ oe, only	**A1**	
4	$\overrightarrow{OC} - \overrightarrow{OA} = 4(\overrightarrow{OC} - \overrightarrow{OB})$ soi	**B1**	
	$[\overrightarrow{OC} =]$ $\begin{pmatrix}15\\-3\end{pmatrix}$	**B2**	**B1** for [x =] 15 or [y =] –3
	$\left\lvert\overrightarrow{OC}\right\rvert = \sqrt{their15^2 + their(-3)^2}$	**M1**	
	$\frac{1}{\sqrt{234}}\begin{pmatrix}15\\-3\end{pmatrix}$ oe	**A1**	**FT** *their* $\begin{pmatrix}15\\-3\end{pmatrix}$ and *their* $\sqrt{234}$
5(a)	Correct V shape with vertex on positive x-axis	**B1**	
	(0, 7)	**B1**	
	$\left(\frac{7}{5}, 0\right)$	**B1**	