Question	Answer	Marks	Guidance
5(b)	$^{12}C_8\left(8y^2\right)^4\left(-\frac{1}{2y}\right)^8$ or $^{12}C_4\left(8y^2\right)^4\left(-\frac{1}{2y}\right)^8$	**M1**	
	7920	**A1**	
6	$b=12$	**2**	**M1** for attempt at differentiation
	$-27a+99-3b+c=0$ $a+11+b+c=16$	**2**	**M1** for attempt at $\mathrm{p}(-3)=0$ or $\mathrm{p}(1)=16$
	$a=2$ $c=-9$	**2**	**M1** for attempt to solve *their* equations
7(a)	$\mathrm{e}^{5y}=mx^3+c$ soi	**B1**	
	$4.38=-2.56m+c$ $9.84=6.54m+c$	**M1**	Must be using the coordinates correctly
	$m=0.6,\ c=5.92$	**2**	**M1 dep** for solution of *their* equations
	$y=\frac{1}{5}\ln\left(0.6x^3+5.92\right)$	**A1**	
	Alternative		
	$\mathrm{e}^{5y}=mx^3+c$ soi	**B1**	
	Gradient = $\frac{5.46}{9.1}\ (=m)$	**M1**	Must be using the coordinates correctly
	$4.38=-2.56m+c$ or $9.84=6.54m+c$	**M1**	Must be using the coordinates correctly
	$m=0.6,\ c=5.92$	**A1**	
	$y=\frac{1}{5}\ln\left(0.6x^3+5.92\right)$	**A1**	
7(b)	$0.6x^3+5.92>0$	**M1**	Allow use of *their* $\frac{1}{5}\ln\left(0.6x^3+5.916\right)$
	$x>-2.14$	**2**	**M1 dep** for a correct method of solution to obtain $x>\ldots$

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