Question	Answer	Marks	Guidance
1(a)	$-3 < x < 1 \quad x > 5$	**B1**	
1(b)	$-\frac{1}{3}(x+3)(x-1)(x-5)$	**3**	**B1** for a negative cubic function **B1** for a cubic function multiplied by $\frac{1}{3}$ **B1** for $(x+3)(x-1)(x-5)$
2(a)	$a = \frac{10}{3}$ or $3\frac{1}{3}$	**B1**	
	$b = \frac{7}{3}$ or $2\frac{1}{3}$	**B1**	
	$c = \frac{9}{2}$ or $4\frac{1}{2}$ or 4.5	**B1**	
2(b)	$10(2^p)^2 - 17(2^p) + 3 = 0$ $(5(2^p) - 1)(2(2^p) - 3) = 0$ $2^p = \frac{1}{5}, \ 2^p = \frac{3}{2}$	**M1**	For recognition of a quadratic in 2^p, attempt to factorise and solve for 2^p
	$p = \frac{\ln \frac{1}{5}}{\ln 2}$ or $p = \frac{\ln 1.5}{\ln 2}$ oe	**M1**	For correct attempt to deal with $2^p = k$
	−2.32	**A1**	
	0.585	**A1**	
3(a)	$\lg \frac{1000a^2}{b^4}$	**4**	**B1** for $3 = \lg 1000$ **B1** for use of power rule once **B1** for use of addition or subtraction rule once **B1** All correct