Question	Answer	Marks	Guidance
3	$\lg\left((2x-1)(x+2)\right)=\lg\frac{100}{4}$ oe or $10^2=4(2x-1)(x+2)$ oe	**M2**	**M1** for one log law correctly applied within a correct equation e.g. $\lg 4(2x-1)(x+2) \quad =2$
	$2x^2+3x-27[=0]$	**A1**	Collects terms to correct 3-term quadratic in solvable form
	$(2x+9)(x-3)[=0]$	**M1**	**dep** on at least **M1** previously awarded Factorises *their* $2x^2+3x-27$ or solves *their* $2x^2+3x-27=0$
	$x = 3$ indicated as only valid solution	**A1**	nfww
4(a)	$2k+6=8-16+6k+2$ oe	**M1**	For equating line to curve and substituting $x = 2$, or vice versa
	$k = 3$	**A1**	
4(b)	$x^3-4x^2+(2\times \textit{their}\, k)x-4 \quad [=0]$ or $x^3-4x^2+6x-4 \quad [=0]$	**M1**	**FT** *their k* in correct cubic
	x^2-2x+2	**A2**	Correct quadratic factor from correct cubic **A1** for a quadratic factor with two terms correct, from correct cubic
	$(-2)^2-4(1)(2) < 0$ oe or $4 - 8 < 0$ oe [and so $x = 2$ is the only solution]	**A1**	Uses discriminant correctly on the correct quadratic factor