Question			Answer	Marks	AO	Guidance
5	(a)		Cubic curve, correct orientation cuts x-axis twice to left of O and once to right	B1 B1 [2]	1.2 1.1	 Allow cubic of incorrect orientation
5	(b)		$(-3a, 0)$, $(-a, 0)$, $(b, 0)$ all shown correctly $(0, -3a^2b)$ shown correctly	B1 B1 [2]	1.1 1.1	allow $-3a$, $-a$, b marked on x-axis allow $-3a^2b$ marked on y-axis
5	(c)		$\int_{-3}^{-1} (x+3)(x+1)(x-4)\,dx$ | $\int_{-1}^{4} (x^3-13x-12)\,dx$ $\left[\frac{x^4}{4}-\frac{13x^2}{2}-12x\right]_{-3}^{-1}$ | $\left[\frac{x^4}{4}-\frac{13x^2}{2}-12x\right]_{-1}^{4}$ $=8$ | $=-\frac{375}{4}$ or -93.75 $8-(-93.75)$ or $8+93.75$ $\frac{407}{4}$ or 101.75 or 102 (3 sf)	M1 A1 M1 A1 [4]	1.1 1.1 2.1 2.2a	State or imply integrating f(x) with any limits or none Allow incorrect expansion A1 for either answer or for $\frac{375}{4}$. **BC** Allow A1 for $\pm\frac{343}{4}$ Attempt subtract their integrals with correct limits, one +ve, one –ve ie $I_1 - I_2$ or $I_1 + (-I_2)$ or $I_1 + \lvert I_2\rvert$ dep I_2 being –ve NB $\int_{-3}^{-1} + \int_{-1}^{4} = 8 + 93.75$ M1A1M0A0 (Two errors)