Question		Working	Answer	Mark	Notes	
13	(a)		$3x^2 - 2x - 8$	2	B2	(B1 for at least 1 correct non zero term)
	(b)	"$3x^2 - 2x - 8$" = 0	$-\frac{4}{3}, 2$	3	M1	Dep on at least B1, ft on M marks only dep on $\frac{dy}{dx}$ being a 3 term quadratic
		$(3x + 4)(x - 2)$ (=0)			M1	
		or				
		$x = \frac{2 \pm \sqrt{100}}{2 \times 3}$ or $x = \frac{2 \pm \sqrt{(-2)^2 - 4 \times 3 \times (-8)}}{2 \times 3}$				
					A1	(dep 2nd M1)
	(c)	At $x = 2$, $y = 2^3 - 2^2 - 8 \times 2 + 12$ (= 0)	Shown	2	M1	Substitutes at least one of $-\frac{4}{3}$ **or** 2 **or** their answer from (b) into $(y =)x^3 - x^2 - 8x + 12$
		or at $x = -\frac{4}{3}$, $y = \left(-\frac{4}{3}\right)^3 - \left(-\frac{4}{3}\right)^2 - 8 \times \left(-\frac{4}{3}\right) + 12$ $\left(= \frac{500}{27}\right)$				
					A1	must show that (2,0) is a turning point on the curve and give concluding statement