Question	Working	Answer	Mark	Notes
17(a)	Two of $12x^2+10x+2$		2	M1 for differentiating 2 or 3 terms correctly
		$12x^2+10x+2$		A1 for all 3 terms correct
(b)	$(3x+1)(4x+2)\,(=0)$ or $(6x+2)(2x+1)(=0)$ or $2(3x+1)(2x+1)\,(=0)$ or $(3x+1)(2x+1)(=0)$ $\frac{-10\pm\sqrt{10^2-4\times12\times2}}{2\times12}$ or $\frac{-5\pm\sqrt{5^2-4\times6\times1}}{2\times6}$ or $12\left[\left(x+\frac{10}{24}\right)^2-\left(\frac{10}{24}\right)^2\right]+2(=0)$ oe or $6\left[\left(x+\frac{5}{12}\right)^2-\left(\frac{5}{12}\right)^2\right]+1(=0)$ oe		4	M1 ft dep on M1 for a correct method to solve their **3 term quadratic** equation (with at least 2 correct coefficients) using any correct method (if factorising, allow brackets which expanded give 2 out of 3 terms correct) (if using formula allow one sign error and some simplification – allow as far as $\frac{-10\pm\sqrt{100-96}}{24}$) Derivative must be a **3 term quadratic** for this M mark NB Can be implied by answers of $(x=)-\frac{1}{2}$ **and** $(x=)-\frac{1}{3}$
		$-\frac{1}{2}, -\frac{1}{3}$		A1 oe dep on previous M1 Allow –0.33(333) or $-0.\dot{3}$ for correct *x* values
	$(y=)4\times\left(-\frac{1}{2}\right)^3+5\left(-\frac{1}{2}\right)^2+2\left(-\frac{1}{2}\right)\left(=-\frac{1}{4}\right)$ or $(y=)4\times\left(-\frac{1}{3}\right)^3+5\left(-\frac{1}{3}\right)^2+2\left(-\frac{1}{3}\right)\left(=-\frac{7}{27}\right)$			M1 ft dep on previous M1for substituting at least one *x* value into *y* NB Can be implied by one correct value of *y*
	Working required	$\left(-\frac{1}{2}, -\frac{1}{4}\right)$ $\left(-\frac{1}{3}, -\frac{7}{27}\right)$		A1 oe dep on M1 for correct coordinates $(-0.5, -0.25), (-0.33, -0.25(9...))$
				Total 6 marks