

Question	Working	Answer	Mark	Notes
10 (a)	$3 \times \left(\frac{1}{3}\right)^3 - 7 \times \left(\frac{1}{3}\right)^2 + 5 \times \frac{1}{3} - 1$			M1
		$= 0, (3x - 1)$ is a factor	2	A1
(b)	$x^2 - 2x + 1$			M1
	$(x-1)(x-1)$			M1
		$x = \frac{1}{3}$ or 1	3	A1
(c)	$\frac{dy}{dx} = 9x^2 - 14x + 5$			M1
	$(x-1)(9x-5) = 0$			M1
		$1, \frac{5}{9}$		A1
	Substituting x values into $y = 3x^3 - 7x^2 + 5x - 1$			M1
		$(1, 0)$ $\left(\frac{5}{9}, \frac{32}{243}\right)$	5	A1
(d) (i)		5	1	B1ft (ft $\frac{dy}{dx}$)
(ii)	$y = "5"x - 1$			M1
		$y = 5x - 1$	2	A1oe
Total 13 marks				