

Question			Answer	Marks	AO	Guidance
8			$\frac{dy}{dx} = 6x^2 + 6mx - 9m$	M1*	3.1a	differentiation of all 4 terms with 3 of the 4 terms differentiated correctly
				A1	1.1	all correct
			$(6m)^2 - 4 \times 6 \times (-9m)$ oe seen	M1dep*	3.1a	discriminant for their $6, 6m$ and $-9m$; may see $(2m)^2 - 4 \times 2 \times (-3m)$
			two values of m obtained from their discriminant $36m^2 + 216m < 0$ or $36m^2 + 216m = 0$ oe	M1	2.1	dependent on obtaining discriminant from their derivative; M0 for use of their discriminant > 0 or ≥ 0
			0 and -6 identified	A1	1.1	NB $4m^2 + 24m < 0$ or $4m^2 + 24m = 0$
			$-6 < m < 0$ oe	A1	3.2a	
				[6]		