Question Number	Answer	Notes	Marks
3	(a) $y = e^{3x}(5x-7)^2$ $\frac{dy}{dx} = 3e^{3x}(5x-7)^2 + 10e^{3x}(5x-7)$ (b) $y = \frac{\cos 2x}{x+9}$ $\frac{dy}{dx} = \frac{-2\sin 2x(x+9) - \cos 2x}{(x+9)^2}$	M1A1 A1 M1A1 A1	**(6)**

Notes

(a)

M1 for an attempt at product rule. There must be two terms added.

A1ft for one term correct

A1 for both terms correct, ignore any further simplification

Allow e^{3x} as the derivative for e^{3x} for the method mark

(b)

M1 for an attempt at quotient rule. The denominator must be squared. There must be two terms in the numerator irrespective of order and signs.

A1 for one term correct in the numerator

A1 for a fully correct differentiated expression, ignore any further simplification.

If candidates use $(x+9)^{-1}\cos 2x$ as an alternative to quotient rule please mark as in (a) given a correct $(x+9)^{-2}$