Marked example 2

Paper 1 style · No calculator

2 5 marks SL 5.6 ●○○ Routine

(a) Find $\frac{dy}{dx}$ when $y = (3x - 1)^5$. [2]

(b) Find $\frac{dy}{dx}$ when $y = e^{2x} \cos x$. [3]

MARKSCHEME (a)

attempt to use the chain rule (M1)

$\frac{dy}{dx} = 15(3x - 1)^4$ A1

Total 2 marks

Note $5(3x - 1)^4$ (the factor 3 missing) earns M0A0.

MARKSCHEME (b)

attempt to use the product rule M1

$\frac{dy}{dx} = 2e^{2x} \cos x - e^{2x} \sin x$ A1A1

Total 3 marks

Note Award A1 for $2e^{2x} \cos x$ and A1 for $-e^{2x} \sin x$. Accept $e^{2x}(2 \cos x - \sin x)$.

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