

**Advanced Higher Maths**  
**SQA 2016 Specimen**  
**Question 10**



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Using logarithmic differentiation, or otherwise, find  $\frac{dy}{dx}$  given that

$$e^y = \frac{(3x+2)e^{2x}}{(2x-1)^2}, \quad x > \frac{1}{2}.$$

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Answer:

$$\frac{3}{3x+2} + 2 - \frac{4}{2x-1}$$