**Advanced Higher Maths
SQA 2025 Paper 2
Question 14**

Advanced Higher Maths

Maths.scot

Find the general solution of the differential equation

$$\frac{dy}{dx} - \frac{2}{x}y = x^2 \sec^2 3x.$$

Give your answer in the form $y = f(x)$. **5**

Answer:

$$y = x^2 \left(\frac{1}{3}\tan 3x + c \right)$$