

Advanced Higher Maths
SQA 2022 Paper 2
Question 8



(a) Differentiate $x \ln x - x$ with respect to x . 2

(b) Hence find the general solution of the differential equation

$$\frac{dy}{dx} + y \ln x = x^{-x}. \quad 4$$

Answers:

(a) $\ln x$

(b) $y = \frac{-e^{-x} + c}{x^x e^{-x}}$