

Advanced Higher Maths
SQA 2024 Paper 2
Question 6



A curve is defined parametrically by $x = t^2$ and $y = 4t \ln t$ where $t > 0$.

Find fully simplified expressions for:

(a) $\frac{dy}{dx}$ 3

(b) $\frac{d^2y}{dx^2}$. 3

Answers:

(a) $\frac{2(\ln t + 1)}{t}$

(b) $\frac{-\ln t}{t^3}$