

QUESTION

Differentiate the function $\frac{\ln x}{x^2}$ with respect to x .

ANSWER

$$\frac{d}{dx} \left(\frac{\ln x}{x^2} \right) = \frac{x^2 \left(\frac{1}{x} \right) - (\ln x)(2x)}{(x^2)^2} = \frac{x - 2x \ln x}{x^4} = \frac{1 - 2 \ln x}{x^3}$$