

$y = \ln(\ln x)$

$$y = \ln u \quad \text{und} \quad u = \ln x$$

$$y' = \frac{1}{u} \quad u' = \frac{1}{x}$$

$$\begin{aligned} y' &= \frac{1}{u} \cdot \frac{1}{x} \\ &= \frac{1}{\ln x} \cdot \frac{1}{x} \\ &= \frac{1}{x \ln x} \end{aligned}$$