Goal: Differentiate $\ln x$. Present the technique of Logarithmic Differentiation. Derive the power rule. Summary:

$$(\ln x)' = \frac{1}{x} \qquad (\log_b x)' = \frac{1}{x \ln b}$$
$$(\ln f(x))' = \frac{f'}{f} \qquad x^p = e^{p \ln x}$$