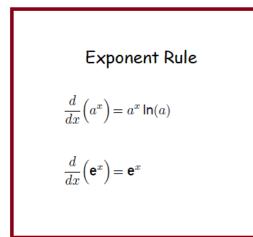
The Exponents Rule The Logarithms Rule

Derivatives of Exponents and Logarithms



Logarithm Rule

$$\frac{d}{dx} \left(\ln(x) \right) = \frac{1}{x}, \quad x > 0$$

$$\frac{d}{dx} \left(\ln|x| \right) = \frac{1}{x}, \quad x \neq 0$$

$$\frac{d}{dx} \left(\log_a(x) \right) = \frac{1}{x \ln(a)}, \quad x > 0$$