regole di derivazione

$$y = k \cdot f(x) \quad \Rightarrow \quad y' = k \cdot f'(x)$$

$$y = f(x) + g(x) \quad \Rightarrow \quad y' = f'(x) + g'(x)$$

$$y = f(x) \cdot g(x) \quad \Rightarrow \quad y' = f'(x) \cdot g(x) + g'(x) \cdot f(x)$$

$$y = \frac{f(x)}{g(x)} \quad \Rightarrow \quad y' = \frac{f'(x) \cdot g(x) - g'(x) \cdot f(x)}{[g(x)]^2}$$

$$y = f(g(x)) \quad \Rightarrow \quad y' = f'(g(x)) \cdot g'(x)$$

$$y = f^n(x) \quad \Rightarrow \quad y' = n \cdot f^{n-1}(x) \cdot f'(x)$$

$$y = a^{f(x)} \quad \Rightarrow \quad y' = a^{f(x)} \cdot \ln a \cdot f'(x)$$

$$y = \ln|f(x)| \quad \Rightarrow \quad y' = \frac{f'(x)}{f(x)}$$