

Regras de derivação

Observação: estamos considerando $u = f(x)$

$$\textcircled{1} [c]' = 0$$

$$\textcircled{2} [c \cdot f(x)]' = c \cdot f'(x)$$

$$\textcircled{3} [f(x) \pm g(x)]' = f'(x) \pm g'(x)$$

$$\textcircled{4} [f(x) \cdot g(x)]' = f(x) \cdot g'(x) + g(x) \cdot f'(x)$$

$$\textcircled{5} \left[\frac{f(x)}{g(x)} \right]' = \frac{g(x) \cdot f'(x) - f(x) \cdot g'(x)}{[g(x)]^2}$$

$$\textcircled{6} [x^p]' = p \cdot x^{p-1} \Rightarrow [u^p]' = p \cdot u^{p-1} \cdot u'$$

$$\textcircled{7} [\ln x]' = \frac{1}{x} \Rightarrow [\ln u]' = \frac{1}{u} \cdot u'$$

$$\textcircled{8} [e^x]' = e^x \Rightarrow [e^u]' = e^u \cdot u'$$

$$\textcircled{9} [\text{sen } x]' = \cos x \Rightarrow [\text{sen } u]' = \cos u \cdot u'$$

$$\textcircled{10} [\cos x]' = -\text{sen } x \Rightarrow [\cos u]' = -\text{sen } u \cdot u'$$

$$\textcircled{11} [\text{tg } x]' = \sec^2 x \Rightarrow [\text{tg } u]' = \sec^2 u \cdot u'$$

$$\textcircled{12} [\text{cotg } x]' = -\text{cossec}^2 x \Rightarrow [\text{cotg } u]' = -\text{cossec}^2 u \cdot u'$$

$$\textcircled{13} [\sec x]' = \sec x \cdot \text{tg } x \Rightarrow [\sec u]' = \sec u \cdot \text{tgu} \cdot u'$$

$$\textcircled{14} [\text{cossec } x]' = -\text{cossec } x \cdot \text{cotg } x \Rightarrow [\text{cossec } u]' = -\text{cossec } u \cdot \text{cotgu} \cdot u'$$