DERIVADAS DE FUNCIONES

$f(x) = a$ $\qquad f'(x) = 0$

$f(x) = x$ $\qquad f'(x) = 1$

$f(x) = ax$ $\qquad f'(x) = a$

$f(x) = ax + b$ $\qquad f'(x) = a$

$f(x) = x^n$ $\qquad f'(x) = nx^{n-1}$

$f(x) = \sqrt{x}$ $\qquad f'(x) = \dfrac{1}{2\sqrt{x}}$

$f(x) = e^x$ $\qquad f'(x) = e^x$

$f(x) = \ln(x)$ $\qquad f'(x) = \dfrac{1}{x}$

$f(x) = a^x (a > 0)$ $\qquad f'(x) = a^x \ln(a)$

$f(x) = \log_b(x)$ $\qquad f'(x) = \dfrac{1}{x \ln(b)}$

$f(x) = \dfrac{1}{x^n} = (x^n)^{-1} = x^{-n}$

$f'(x) = -nx^{-n-1} = -nx^{-(n+1)} = \dfrac{-n}{x^{n+1}}$

$f(x) = \operatorname{sen}(x)$ $\qquad f'(x) = \cos(x)$

$f(x) = \cos(x)$ $\qquad f'(x) = -\operatorname{sen}(x)$

$f(x) = \tan(x)$

$f'(x) = \sec^2(x) = \dfrac{1}{cos^2(x)} = 1 + \tan^2(x)$

$f(x) = g(x) \pm h(x)$ $\qquad f'(x) = g'(x) \pm h'(x)$

$f(x) = g(x) \cdot h(x)$ $\qquad f'(x) = g'(x) \cdot h(x) + g(x) \cdot h'(x)$

$f(x) = \dfrac{g(x)}{h(x)}$

$$f'(x) = \frac{g'(x) \cdot h(x) - g(x) \cdot h'(x)}{h^2(x)}$$

$f(x) = k \cdot g(x)$ $\qquad$ $f'(x) = k \cdot g'(x)$

$f(x) = g \circ h = g(h(x))$ $\qquad$ $f'(x) = (g' \circ h) \cdot h' = g'(h(x)) \cdot h'(x)$