

1) Derivadas Formulas generales:

$$\frac{d}{dx} [f(x) + g(x)] = f'(x) + g'(x)$$

$$\frac{d}{dx} [kf(x)] = kf'(x)$$

$$\frac{d}{dx} [f(x)g(x)] = f'(x)g(x) + f(x)g'(x)$$

$$\frac{d}{dx} \left[\frac{f(x)}{g(x)} \right] = \frac{f'(x)g(x) - f(x)g'(x)}{g(x)^2}$$

$$\frac{d}{dx} [f[g(x)]] = f'[g(x)]g'(x)$$

$$\frac{d}{dx} (x^k) = kx^{k-1}$$

2) Derivadas de funciones trigonométricas:

$$\frac{d}{dx} (\sin x) = \cos x$$

$$\frac{d}{dx} (\cos x) = -\sin x$$

$$\frac{d}{dx} (\tan x) = \sec^2(x)$$

$$\frac{d}{dx} (\cot(x)) = -\csc^2(x)$$

$$\frac{d}{dx} (\sec x) = \sec(x) \tan(x)$$

$$\frac{d}{dx} (\csc x) = -\csc(x) \cot(x)$$

3) Derivadas de funciones hiperbólicas:

$$\frac{d}{dx} (\sinh x) = \cosh x$$

$$\frac{d}{dx} (\cosh x) = \sinh x$$

$$\frac{d}{dx} (\tanh x) = \operatorname{sech}^2(x)$$

$$\frac{d}{dx} (\coth(x)) = -\operatorname{csch}^2(x)$$

$$\frac{d}{dx} (\operatorname{sech} x) = -\operatorname{sech} x \tanh(x)$$

$$\frac{d}{dx} (\operatorname{csch} x) = -\operatorname{csch} x \coth(x)$$

4) Inversas trigonométricas:

$$\frac{d}{dx} (\arcsen x) = \frac{1}{\sqrt{1-x^2}}$$

$$\frac{d}{dx} (\arccos x) = \frac{-1}{\sqrt{1-x^2}}$$

$$\frac{d}{dx} (\arctan x) = \frac{1}{1+x^2}$$

$$\frac{d}{dx} (\operatorname{arccot} x) = \frac{-1}{1+x^2}$$

5) Exponenciales y Logaritmos:

$$\frac{d}{dx} (e^x) = e^x$$

$$\frac{d}{dx} (a^x) = a^x \ln a$$

$$\frac{d}{dx} (\ln x) = \frac{1}{x}$$

$$\frac{d}{dx} (\log_a x) = \frac{1}{x \ln a}$$