



FORMULARIO

Derivadas:

$$\frac{d}{dx}(c) = 0$$

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

$$\frac{d}{dx}(cx) = c \frac{d}{dx}x$$

$$\frac{d}{dx}(x)^n = nx^{n-1}$$

$$\frac{d}{dx}(u + v - w) = \frac{d}{dx}u + \frac{d}{dx}v - \frac{d}{dx}w$$

$$\frac{d}{dx}(u)^n = nu^{n-1} \frac{d}{dx}u$$

$$\frac{d}{dx}(u * w) = u \frac{d}{dx}w + w \frac{d}{dx}u$$

$$\frac{d}{dx}\left(\frac{u}{w}\right) = \frac{w \frac{d}{dx}u - u \frac{d}{dx}w}{w^2}$$

$$\frac{d}{dx} \text{Sen } u = \text{Cos } u \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Cos } u = -\text{Sen } u \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Tan } u = \text{Sec}^2 u \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Cot } u = -\text{Csc}^2 u \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Sec } u = \text{Sec } u * \text{Tan } u \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Csc } u = -\text{Csc } u * \text{Cot } u \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Sen}^{-1}u = \frac{1}{\sqrt{1-u^2}} \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Cos}^{-1}u = -\frac{1}{\sqrt{1-u^2}} \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Tan}^{-1}u = \frac{1}{u^2 + 1} \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Sec}^{-1}u = \frac{1}{u\sqrt{u^2-1}} \frac{d}{dx}u$$

$$\frac{d}{dx} \ln u = \frac{1}{u} \frac{d}{dx}u$$

$$\frac{d}{dx} \text{Log}_a u = \frac{1}{u} * \frac{1}{\ln a} \frac{d}{dx}u$$

$$\frac{d}{dx} a^u = a^u \ln a \frac{d}{dx}u$$

$$\frac{d}{dx} e^u = e^u \frac{d}{dx}u$$

Algebra:

$$(a + b)^2 = a^2 + 2ab + b^2$$

$$(a - b)^2 = a^2 - 2ab + b^2$$

$$(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$$

$$(a - b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$$

$$a^2 - b^2 = (a + b)(a - b)$$

$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

$$a^3 + b^3 = (a + b)(a^2 - ab + b^2)$$

$$\sqrt[m]{a^n} = a^{n/m} \quad a^{-1} = \frac{1}{a}$$

$$\sqrt{ab} = \sqrt{a} * \sqrt{b} \quad a^n * a^m = a^{n+m}$$

$$\frac{a^n}{a^m} = a^{n-m} \quad (a^n)^m = a^{n*m}$$

Identidades Trigonométricas:

$$\text{Sen}^2 u + \text{Cos}^2 u = 1$$

$$1 + \text{Tan}^2 u = \text{Sec}^2 u$$

$$1 + \text{Cot}^2 u = \text{Csc}^2 u$$

$$\text{Sen } u = \frac{1}{\text{Csc } u}$$

$$\text{Cos } u = \frac{1}{\text{Sec } u}$$

$$\text{Tan } u = \frac{1}{\text{Cot } u}$$

$$\text{Cot } u = \frac{1}{\text{Tan } u}$$

$$\text{Sec } u = \frac{1}{\text{Cos } u}$$

$$\text{Csc } u = \frac{1}{\text{Sen } u}$$

$$\text{Tan } u = \frac{\text{Sen } u}{\text{Cos } u}$$

$$\text{Cot } u = \frac{\text{Cos } u}{\text{Sen } u}$$

Identidades Trigonométricas reciprocas

$$\text{Sen } u * \text{Csc } u = 1$$

$$\text{Cos } u * \text{Sec } u = 1$$

$$\text{Tan } u * \text{Cot } u = 1$$