DERIVADAS

POLINOMIOS

$y = 3 \qquad\qquad \rightarrow y' = 0$

$y = 3x \qquad\qquad \rightarrow y' = 3$

$y = 2x^3 \qquad\qquad \rightarrow y' = 2 \cdot 3x^{3-1} = 6x^2$

$y = x^3 - 6x^2 + 9x - 2 \rightarrow y' = 3x^2 - 12x + 9$

RADICALES (raíces)

$y = \sqrt{u} \;\; \rightarrow y' = \dfrac{u'}{2\sqrt{u}}$

$y = \sqrt[n]{u} \;\; \rightarrow y' = \dfrac{u'}{n \cdot \sqrt[n]{(u)^{n-1}}}$

DIVISIÓN (Fracción)

$y = \dfrac{u}{v} \rightarrow y' = \dfrac{u' \cdot v - u \cdot v'}{v^2}$

PRODUCTO

$y = u \cdot v \rightarrow y' = u' \cdot v + u \cdot v'$

EXPONENCIALES

$y = e^u \;\; \rightarrow y' = e^u \cdot u'$

$y = a^u \;\; \rightarrow y' = a^u \cdot u' \cdot Ln\, a$

POTENCIA

$y = (u)^n \rightarrow y' = n \cdot u^{n-1} \cdot u'$

LOGARITMOS

$y = Ln(u) \;\;\; \rightarrow y' = \dfrac{u'}{u}$

$y = \log_a u \rightarrow y' = \dfrac{u'}{u} \cdot \log_a e$

TRIGONOMÉTRICAS

$y = sen(u) \;\; \rightarrow y' = \cos(u) \cdot u'$

$y = \cos(u) \;\; \rightarrow y' = -sen(u) \cdot u'$

$y = tg(u) \;\;\; \rightarrow y' = \dfrac{u'}{\cos^2(u)}$

La llibreta
Aprendiendo a aprender

INTEGRALES INMEDIATAS

POLINOMIOS

$\int 2\,dx = 2x + C$

$\int x^n\,dx = \dfrac{x^{n+1}}{n+1} + C$

$\int x^3 - 6x^2 + 9x - 2\,dx = \dfrac{x^4}{4} - \dfrac{6x^3}{3} + \dfrac{9x^2}{2} - 2x + C$

LOGARITMOS

$\int \dfrac{u'}{u}\,dx = Ln\,|u| + C$

EXPONENCIALES

$\int e^u \cdot u'\,dx = e^u + C$

$\int a^u \cdot u'\,dx = \dfrac{a^u}{Lna} + C$

POTENCIA

$\int (u)^n \cdot u'\,dx = \dfrac{u^{n+1}}{n+1} + C$

ARCOS

$\int \dfrac{u'}{1+(u)^2}\,dx = arctg\,u + C$

$\int \dfrac{u'}{\sqrt{1-(u)^2}}\,dx = arcsen\,u + C$

TRIGONOMÉTRICAS

$\int sen(u) \cdot u'\,dx = -cos\,(u) + C$

$\int cos(u) \cdot u'\,dx = sen\,(u) + C$

$\int \dfrac{u'}{cos^2(u)}\,dx = tg\,(u) + C$