

Derivatives

$(\bar{c}) = 0, c = \text{constant.}$
$(\bar{x}) = 1$
$(\bar{x}^n) = n x^{(n-1)}$
$[\frac{\bar{1}}{x}] = \frac{-1}{x^2}, [\frac{1}{x}]^{(n)} = (-1)^n \frac{n!}{(x^{(n+1)})}$
$(\sqrt{\bar{x}}) = \frac{1}{(2\sqrt{x})}$
$(\sqrt{\bar{x}}) = \frac{1}{(2\sqrt{x})}$
$(\sqrt[n]{\bar{x}}) = \frac{1}{(n\sqrt{x^{(n-1)}})}$
$(\bar{e}^x) = e^x, (\bar{e}^u) = e^u \cdot \bar{u}$
$(\bar{a}^x) = a^x \ln a$
$(\bar{\ln} x) = \frac{1}{x}, (\ln x)^{(n)} = \frac{(-1)^n * (n-1)!}{x^n}$
$(\bar{\log}_a x) = \frac{1}{x} \log_a e = \frac{1}{(x \ln a)}$
$(\bar{\sin} x) = \cos x, (\sin ax)^{(n)} = a^n \sin[ax + n \frac{\pi}{2}]$
$(\bar{\cos} x) = -\sin x, (\cos ax)^{(n)} = a^n \cos[ax + n \frac{\pi}{2}]$
$(\bar{\tan} x) = \frac{1}{(\cos^2 x)} = \sec^2 x$
$(\bar{\cot} x) = \frac{-1}{(\sin^2 x)} = -\text{cosec}^2 x$