

Considerando que  $u$  e  $v$  são funções reais de variável real  $x$  e que  $a, b, k \in \mathbb{R}$ , tem-se

$(ax + k)' = a$	casos particulares: $(x)' = 1$	$(k)' = 0$ ( $k = \text{const.}$ )
$(u \pm v)' = u' \pm v'$	$(u \times v)' = u' \times v + u \times v'$	$(k \times u)' = k \times u'$
$\left(\frac{u}{v}\right)' = \frac{u' \times v - u \times v'}{v^2}$	$(u(v))' = v' \times u'(v)$	$\left(\frac{u^{k+1}}{k+1}\right)' = u' u^k$ ( $k \neq -1$ )
$(\ln u)' = \frac{u'}{u}$ ( $u(x) > 0$ )	$(\log_a u)' = \frac{u'}{u} \log_a e$ ( $a \in \mathbb{R}^+ \setminus \{1\}, u(x) > 0$ )	$(a^u)' = u' a^u \ln a$ ( $a \in \mathbb{R}^+ \setminus \{1\}$ )
$(e^u)' = u' e^u$	$(u^v)' = v u^{(v-1)} u' + v' u^v \ln u$ ( $u(x) > 0$ )	$(\cos u)' = -u' \sin u$
$(\sin u)' = u' \cos u$	$(\operatorname{tg} u)' = \frac{u'}{\cos^2 u}$	$(\operatorname{cotg} u)' = \frac{-u'}{\sin^2 u}$
$(\sec u)' = \frac{u' \sin u}{\cos^2 u}$	$(\operatorname{cosec} u)' = \frac{-u' \cos u}{\sin^2 u}$	$(\arccos u)' = \frac{-u'}{\sqrt{1-u^2}}$
$(\operatorname{arcsen} u)' = \frac{u'}{\sqrt{1-u^2}}$	$(\operatorname{arctg} u)' = \frac{u'}{1+u^2}$	$(\operatorname{arccotg} u)' = \frac{-u'}{1+u^2}$
$(\operatorname{ch} u)' = u' \operatorname{sh} u$	$(\operatorname{sh} u)' = u' \operatorname{ch} u$	$(\operatorname{th} u)' = \frac{u'}{\operatorname{ch}^2 u}$
$(\operatorname{coth} u)' = \frac{-u'}{\operatorname{sh}^2 u}$	$(\operatorname{sech} u)' = \frac{-u' \operatorname{sh} u}{\operatorname{ch}^2 u}$	$(\operatorname{cosech} u)' = \frac{-u' \operatorname{ch} u}{\operatorname{sh}^2 u}$
$(\operatorname{argsh} u)' = \frac{u'}{\sqrt{u^2+1}}$	$(\operatorname{argch} u)' = \frac{u'}{\sqrt{u^2-1}}$	$(\operatorname{argth} u)' = \frac{u'}{1-u^2}$
$(\operatorname{argcoth} u)' = \frac{u'}{1-u^2}$		

### Algumas fórmulas trigonométricas

$\cos(a \pm b) = \cos a \cos b \mp \sin a \sin b$	$\cos^2 a = \frac{1 + \cos(2a)}{2}$	
$\sin(a \pm b) = \sin a \cos b \pm \sin b \cos a$	$\sin^2 a = \frac{1 - \cos(2a)}{2}$	
$\operatorname{tg}(a \pm b) = \frac{\operatorname{tg} a \pm \operatorname{tg} b}{1 \mp \operatorname{tg} a \operatorname{tg} b}$	$\operatorname{tg}^2 a = \frac{1 - \cos(2a)}{1 + \cos(2a)}$	
$\cos^2 a + \sin^2 a = 1$	$\sec a = \frac{1}{\cos a}$	$\operatorname{cosec} a = \frac{1}{\sin a}$