REGULI DERIVARE

$$(cf)' = cf'$$
$$(f \pm g)' = f' \pm g'$$
$$(f \cdot g)' = f' \cdot g + f \cdot g'$$

$$(f \cdot g \cdot h)' = f' \cdot g \cdot h + f \cdot g' \cdot h + f \cdot g \cdot h'$$
$$\left(\frac{f}{g}\right)' = \frac{f' \cdot g - f \cdot g'}{g^2}$$
$$\left(f^{-1}\right)'(y) = \frac{1}{f'(x)}$$

$$\left(f^{g}\right)' = g \cdot f^{g-1} \cdot f' + f^{g} \cdot \ln f \cdot g'$$
$$(f \circ g)'(x) = (f(g(x))'(x) = f'(g(x)) \cdot g'(x)$$

TABEL DERIVATE

$$c' = 0 \qquad x' = 1 \qquad \left(x^2\right)' = 2x \qquad \left(x^3\right)' = 3x^2 \quad ,..., \quad \left(x^n\right)' = nx^{n-1}$$

$\left(x^p\right)' = px^{p-1}$	$\left(u^p\right)' = n \cdot u^{p-1} \cdot u'$
$\left(\dfrac{1}{x}\right)' = -\dfrac{1}{x^2}$	$\left(\dfrac{1}{u}\right)' = -\dfrac{1}{u^2} \cdot u'$
$\left(\dfrac{1}{x^n}\right)' = -\dfrac{n}{x^{n+1}}$	$\left(\dfrac{1}{u^n}\right)' = -\dfrac{n}{u^{n+1}} \cdot u'$
$\left(\sqrt{x}\right)' = \dfrac{1}{2\sqrt{x}}$	$\left(\sqrt{u}\right)' = \dfrac{1}{2\sqrt{u}} \cdot u'$
$\left(\sqrt[n]{x}\right)' = \dfrac{1}{n \cdot \sqrt[n]{x^{n-1}}}$	$\left(\sqrt[n]{u}\right)' = \dfrac{1}{n \cdot \sqrt[n]{u^{n-1}}} \cdot u'$
$\left(e^x\right)' = e^x$	$\left(e^u\right)' = e^u \cdot u'$
$\left(a^x\right)' = a^x \cdot \ln a$	$\left(a^u\right)' = a^u \cdot \ln a \cdot u'$
$(\ln x)' = \dfrac{1}{x} \qquad (\lg x)' = \dfrac{1}{x \cdot \ln 10}$	$(\ln u)' = \dfrac{1}{u} \cdot u' \quad (\lg u)' = \dfrac{1}{u \cdot \ln 10} \cdot u'$
$(\log_b x)' = \dfrac{1}{x \cdot \ln b}$	$(\log_b u)' = \dfrac{1}{u \cdot \ln b} \cdot u'$
$(\sin x)' = \cos x$ $(\cos x)' = -\sin x$ $(tg\,x)' = \dfrac{1}{\cos^2 x} = tg^2 x + 1$ $(ctg\,x)' = -\dfrac{1}{\sin^2 x} = -\left(ctg^2 x + 1\right)$	$(\sin u)' = \cos u \cdot u'$ $(\cos u)' = -\sin u \cdot u'$ $(tg\,u)' = \dfrac{1}{\cos^2 u} \cdot u' = \left(tg^2 x + 1\right) \cdot u'$ $(ctg\,u)' = -\dfrac{1}{\sin^2 u} \cdot u' = -\left(ctg^2 u + 1\right) \cdot u'$
$(\arcsin x)' = \dfrac{1}{\sqrt{1-x^2}}$ $(\arccos x)' = -\dfrac{1}{\sqrt{1-x^2}}$ $(arctg\,x)' = \dfrac{1}{1+x^2}$ $(arcctg\,x)' = -\dfrac{1}{1+x^2}$	$(\arcsin u)' = \dfrac{1}{\sqrt{1-u^2}} \cdot u'$ $(\arccos u)' = -\dfrac{1}{\sqrt{1-u^2}} \cdot u'$ $(arctg\,u)' = \dfrac{1}{1+u^2} \cdot u'$ $(arcctg\,u)' = -\dfrac{1}{1+u^2} \cdot u'$