ΠΑΡΑΓΩΓΟΙ

$(c)' = 0$

$\left(x^{v}\right)' = vx^{v-1}$

$\left(\log_a x\right)' = \dfrac{1}{x \ln a}$

Θέτω ότι : $f\left(x\right) = z$

$\left(e^{x}\right)' = e^{x}$ $\qquad$ $\left(e^{z}\right)' = z' e^{z}$

$\left(\ln x\right)' = \dfrac{1}{x}$ $\qquad$ $\left(\ln z\right)' = \dfrac{z'}{z}$

$\left(a^{x}\right) = a^{x} \ln a$ $\qquad$ $\left(a^{z}\right)' = z' a^{z} \ln a$

$\left(\eta\mu x\right)' = \sigma\upsilon\nu x$ $\qquad$ $\left(\eta\mu z\right)' = z'\sigma\upsilon\nu z$

$\left(\sigma\upsilon\nu x\right)' = -\eta\mu x$ $\qquad$ $\left(\sigma\upsilon\nu z\right)' = -z'\eta\mu z$

$\left(\varepsilon\phi x\right)' = \tau\varepsilon\mu^{2} x$ $\qquad$ $\left(\varepsilon\phi z\right)' = z'\tau\varepsilon\mu^{2} z$

$\left(\sigma\phi x\right)' = -\sigma\tau\varepsilon\mu^{2} x$ $\qquad$ $\left(\sigma\phi z\right)' = -z'\sigma\tau\varepsilon\mu^{2} z$

$\left(\tau\varepsilon\mu x\right)' = \tau\varepsilon\mu x \ \varepsilon\phi x$ $\qquad$ $\left(\tau\varepsilon\mu z\right)' = z'\tau\varepsilon\mu z \ \varepsilon\phi z$

$\left(\sigma\tau\varepsilon\mu z\right)' = \sigma\tau\varepsilon\mu x \ \sigma\phi x$ $\qquad$ $\left(\sigma\tau\varepsilon\mu z\right)' = -z'\sigma\tau\varepsilon\mu z \ \sigma\varphi z$

Κανόνες παραγωγικής

$\left(u + v\right)' = u' + v$

$\left(u \cdot v\right)' = u' \cdot v + u \cdot v'$

$\left(\dfrac{u}{v}\right)' = \dfrac{u' \cdot v - u \cdot v'}{v^{2}}$

$\left(c \cdot u\right)' = c \cdot u'$

Παράγωγος συνάρτησης που ορίζεται παραμετρικά

Αν $x = f\left(t\right)$

$$\text{τότε} \quad \frac{dy}{dx} = \frac{\frac{dy}{dt}}{\frac{dx}{dt}}$$

$y = g\left(t\right)$

$$\text{και} \quad \frac{d^{2}y}{dx^{2}} = \frac{d}{dt}\left(\frac{dy}{dx}\right)\frac{dt}{dx}$$