ΠΙΝΑΚΑΣ ΑΝΑΚΕΦΑΛΑΙΩΣΗΣ

Κανόνες παραγώγισης

$$(f(x)\pm g(x))'=f'(x)\pm g'(x)$$

$$(c \cdot f(x))' = c \cdot f'(x) \qquad\qquad (f(x) \cdot g(x))' = f'(x) \cdot g(x) + f(x) \cdot g'(x)$$

$$\left(\frac{1}{g(x)}\right)' = -\frac{g'(x)}{[g(x)]^2} \qquad\qquad \left(\frac{f(x)}{g(x)}\right)' = \frac{f'(x)g(x) - f(x)g'(x)}{[g(x)]^2}$$

$$(g \circ f)'(x) = g'(f(x))\, f'(x)$$

Παράγωγοι βασικών συναρτήσεων	Παράγωγοι σύνθετων συναρτήσεων
$(c)' = 0$	
$(x)' = 1$	
$(x^\nu)' = \nu\, x^{\nu-1}, \quad \nu \in \mathbb{N}^*$	$([f(x)]^\nu)' = \nu\,[f(x)]^{\nu-1} \cdot f'(x)$
$\left(\sqrt{x}\right)' = \dfrac{1}{2\sqrt{x}} \quad (\text{για κάθε } x > 0)$	$\left(\sqrt{f(x)}\right)' = \dfrac{1}{2\sqrt{f(x)}} f'(x) \quad f(x) > 0$
$(\eta\mu x)' = \sigma\upsilon\nu x$	$(\eta\mu f(x))' = \sigma\upsilon\nu f(x) \cdot f'(x)$
$(\sigma\upsilon\nu x)' = -\eta\mu x$	$(\sigma\upsilon\nu f(x))' = -\eta\mu f(x) \cdot f'(x)$
$(\ln x)' = \dfrac{1}{x}, \quad x > 0$	$(\ln f(x))' = \dfrac{1}{f(x)}\, f'(x), \quad f(x) > 0$
$(\ln|x|)' = \dfrac{1}{x}$	$(\,\ln|f(x)|\,)' = \dfrac{1}{f(x)} f'(x)$
$(\varepsilon\varphi x)' = \dfrac{1}{\sigma\upsilon\nu^2 x}$	$\left(\varepsilon\phi f(x)\right)' = \dfrac{1}{\sigma\upsilon\nu^2 f(x)} \cdot f'(x)$
$(\sigma\varphi x)' = -\dfrac{1}{\eta\mu^2 x}$	$\left(\sigma\phi f(x)\right)' = -\dfrac{1}{\eta\mu^2 f(x)} \cdot f'(x)$
$(e^x)' = e^x$	$\left(e^{f(x)}\right)' = e^{f(x)} \cdot f'(x)$
$(\alpha^x)' = \alpha^x \cdot \ln\alpha$	$\left(\alpha^{f(x)}\right)' = \alpha^{f(x)} \cdot \ln\alpha \cdot f'(x)$
$(x^t)' = \tau \cdot x^{t-1}, \quad t \in \mathbb{R},\ x > 0$	$\left([f(x)]^t\right)' = t\,[f(x)]^{t-1} \cdot f'(x)$