Επιμέλεια: Σκουφά Σωτήρη
Βούρβαχη Κώστα

ΤΥΠΟΛΟΓΙΟ ΠΑΡΑΓΩΓΩΝ

Απλές συναρτήσεις:		**Παράγωγοι αυτών:**
$f(x)=c$	$\Rightarrow$	$f'(x)=0\,/\,\mathbb{R}$
$f(x)=x$	$\Rightarrow$	$f'(x)=1\,/\,\mathbb{R}$
$f(x)=\alpha x+\beta$	$\Rightarrow$	$f'(x)=\alpha\,/\,\mathbb{R}$
$f(x)=x^{\nu},\quad \nu\in\mathbb{N}^*,$	$\Rightarrow$	$f'(x)=\nu\cdot x^{\nu-1}\,/\,\mathbb{R}$
$f(x)=x^{\alpha},\quad \alpha\in\mathbb{R},$	$\Rightarrow$	$f'(x)=\alpha\cdot x^{\alpha-1}$
$f(x)=\sqrt{x}$	$\Rightarrow$	$f'(x)=\dfrac{1}{2\sqrt{x}}\,/\,\mathbb{R}_+^*$
$f(x)=\dfrac{1}{x}$	$\Rightarrow$	$f'(x)=\dfrac{-1}{x^2}\,/\,\mathbb{R}^*$
$f(x)=\sqrt[\kappa]{x},\quad \kappa\in\mathbb{N}^*-\{-1\}$	$\Rightarrow$	$f'(x)=\dfrac{1}{\kappa\sqrt[\kappa]{x^{\kappa-1}}}\,/\,\mathbb{R}_+^*$
$f(x)=e^x$	$\Rightarrow$	$f'(x)=e^x\,/\,\mathbb{R}$
$f(x)=\ell nx$	$\Rightarrow$	$f'(x)=\dfrac{1}{x}\,/\,(0,+\infty)$
$f(x)=\ell n\lvert x\rvert$	$\Rightarrow$	$f'(x)=\dfrac{1}{x}\,/\,\mathbb{R}^*$
$f(x)=\log_\alpha x,\quad \alpha>0,\quad \alpha\neq 1$	$\Rightarrow$	$f'(x)=\dfrac{1}{x\cdot\ell n\alpha}\,/\,\mathbb{R}^*_+$
$f(x)=\alpha^x,\quad \alpha>0,\quad \alpha\neq 1$	$\Rightarrow$	$f'(x)=\alpha^x\ell n\alpha\,/\,\mathbb{R}$
$f(x)=\eta\mu x$	$\Rightarrow$	$f'(x)=\sigma\upsilon\nu x\,/\,\mathbb{R}$
$f(x)=\sigma\upsilon\nu x$	$\Rightarrow$	$f'(x)=-\eta\mu x\,/\,\mathbb{R}$
$f(x)=\varepsilon\varphi x$	$\Rightarrow$	$f'(x)=\dfrac{1}{\sigma\upsilon\nu^2 x}=1+\varepsilon\varphi^2 x$
$f(x)=\sigma\varphi x$	$\Rightarrow$	$f'(x)=\dfrac{-1}{\eta\mu^2 x}=-\left(1+\sigma\varphi^2 x\right)$
$f(x)=x^x,\ x>0$	$\Rightarrow$	$f'(x)=x^x(1+\ell nx)\,/\,\mathbb{R}_+^*$
$f(x)=e^{-x}$	$\Rightarrow$	$f'(x)=-e^{-x}$