Dérivées usuelles

Fonction	Dérivée	
$f(x) = k$	$f'(x) = 0$	$k \in \mathbb{R}$; $x \in \mathbb{R}$
$f(x) = x$	$f'(x) = 1$	$x \in \mathbb{R}$
$f(x) = x^n$	$f'(x) = nx^{n-1}$	$n \in \mathbb{Z}^*$; $x \in \mathbb{R}$ ou $\mathbb{R}^*$ si $n \leqslant -1$
$f(x) = \dfrac{1}{x}$	$f'(x) = -\dfrac{1}{x^2}$	$x \in \mathbb{R}^*$
$f(x) = \sqrt{x}$	$f'(x) = \dfrac{1}{2\sqrt{x}}$	$x \in]0;+\infty[$
$f(x) = \ln(x)$	$f'(x) = \dfrac{1}{x}$	$x \in]0;+\infty[$
$f(x) = \mathrm{e}^x$	$f'(x) = \mathrm{e}^x$	$x \in \mathbb{R}$

Opérations

Fonction	Dérivée	
$f = U + V$	$f' = U' + V'$	
$f = kU$	$f' = kU'$	$k \in \mathbb{R}$
$f = UV$	$f' = UV' + U'V$	
$f = \dfrac{U}{V}$	$f' = \dfrac{VU' - UV'}{V^2}$	$V(x) \neq 0$
$f = \dfrac{1}{V}$	$f' = \dfrac{-V'}{V^2}$	$V(x) \neq 0$
$f = U^n$	$f' = nU'U^{n-1}$	$n \in \mathbb{N}^*$
$f = \sqrt{U}$	$f' = \dfrac{U'}{2\sqrt{U}}$	$U(x) > 0$
$f = \ln(U)$	$f' = \dfrac{U'}{U}$	$U(x) > 0$
$f = \exp(U) = \mathrm{e}^U$	$f' = U'\exp(U) = U'\mathrm{e}^U$	
$f(x) = V \circ U(x)$	$f'(x) = U'(x) \times V'(U(x))$	