Taula de Derivades

INS Vilafant 17/18

Funció	**Derivada**
Constant	$(k)' = 0 \forall k \in \mathbb{R}$
Identitat	$x' = 1$
Suma	$(f(x) + g(x))' = f'(x) + g'(x)$
Producte per un nombre	$(k \cdot f(x))' = k \cdot f'(x)$
Potència	$(x^n)' = n \cdot x^{n-1}$
Polinomi:	$[a_n x^n + a_{n-1}x^{n-1} + ... + a_2 x^2 + a_1 x + a_0]' = n \cdot a_n x^{n-1} + (n-1) \cdot a_{n-1} x^{n-2} + ... + 2 \cdot a_2 x + a_1$
Producte	$(f(x) \cdot g(x))' = f'(x) \cdot g(x) + f(x) \cdot g'(x)$
Quocient	$\left(\frac{f(x)}{g(x)}\right)' = \frac{f'(x) \cdot g(x) - f(x) \cdot g'(x)}{g(x)^2}$
Trigonomètriques	$\big(\sin(x)\big)' = \cos(x)$ $\big(\cos(x)\big)' = -\sin(x)$ $\big(\tan(x)\big)' = 1 + \tan^2(x)$
Inverses Trigonomètriques	$\big(arcsin(x)\big)' = \frac{1}{\sqrt{1-x^2}}$ $\big(arccos(x)\big)' = -\frac{1}{\sqrt{1-x^2}}$ $\big(arctan(x)\big)' = \frac{1}{1+x^2}$
Composició (regla de la cadena)	$\big(f(g(x))\big)' = f'\big(g(x)\big) \cdot g'(x)$
Exponencials	$\big(e^x\big)' = e^x$ $\big(a^x\big)' = a^x \cdot ln(a)$
Logarítmiques	$\big(ln(x)\big)' = \frac{1}{x}$ $\big(log_a(x)\big)' = \frac{1}{x} \cdot \frac{1}{ln(a)}$