

## TAULA DE DERIVADES

1) $f(x) = x^n \quad n \in \mathbb{R}$  $f'(x) = nx^{n-1}$	1') $f(x) = \sqrt[n]{x} \quad n \in \mathbb{N}$  $f'(x) = \frac{1}{n\sqrt[n]{x^{n-1}}}$
2) $f(x) = e^x$  $f'(x) = e^x$	3) $f(x) = \ln(x)$  $f'(x) = \frac{1}{x}$
4) $f(x) = a^x \quad a > 0$  $f'(x) = \ln(a) \cdot a^x$	5) $f(x) = \log_a(x) \quad a > 0$  $f'(x) = \frac{1}{\ln(a) \cdot x}$
6) $f(x) = \sin x$  $f'(x) = \cos x$	7) $f(x) = \cos x$  $f'(x) = -\sin x$
8) $f(x) = \tan x$  $f'(x) = \frac{1}{\cos^2 x}$	9) $f(x) = \arcsin x$  $f'(x) = \frac{1}{\sqrt{1-x^2}}$
10) $f(x) = \arccos x$  $f'(x) = -\frac{1}{\sqrt{1-x^2}}$	11) $f(x) = \arctan x$  $f'(x) = \frac{1}{1+x^2}$
<i>Suma</i> $(f + g)' = f' + g'$	<i>Producte per un escalar</i> $(k \cdot f)' = k \cdot f' \quad \text{on } k \in \mathbb{R}$
<i>Producte</i> $(f \cdot g)' = f' \cdot g + f \cdot g'$	<i>Recíproca</i> $\left(\frac{1}{f}\right)' = -\frac{f'}{f^2}$
<i>Quocient</i> $\left(\frac{f}{g}\right)' = \frac{f' \cdot g - f \cdot g'}{g^2}$	<i>Regle de la cadena</i> $[f(g(x))]' = f'(g(x)) \cdot g'(x)$