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|---|---|
| $f(x) = x^5$  | $f'(x) = 5x^4$  |
| $f(x) = \frac{1}{x^3}$<br>Podem posar: $f(x) = x^{-3}$  | $f'(x) = -3x^{-4} = \frac{-3}{x^4}$<br>(també es podria haver fet com derivada d'un quocient, però així és més directe)   |
| $f(x) = \sqrt{x}$                                       | $f'(x) = \frac{1}{2\sqrt{x}}$   |
| $f(x) = \sqrt[3]{x}$<br>Podem posar: $f(x) = x^{1/3}$   | $f'(x) = \frac{1}{3}x^{\frac{1}{3}-1} = \frac{1}{3}x^{-\frac{2}{3}} = \frac{1}{3x^{\frac{2}{3}}} = \frac{1}{3\sqrt[3]{x^2}}$  |
| $f(x) = \sqrt[5]{x^3}$<br>Podem posar: $f(x) = x^{3/5}$ | $f'(x) = \frac{3}{5}x^{\frac{3}{5}-1} = \frac{3}{5}x^{-\frac{2}{5}} = \frac{3}{5x^{\frac{2}{5}}} = \frac{3}{5\sqrt[5]{x^2}}$  |
| $f(x) = e^x$  | $f'(x) = e^x$   |
| $f(x) = 2^x$  | $f'(x) = 2^x \ln 2$   |
| $f(x) = \ln x$  | $f'(x) = \frac{1}{x}$   |
| $f(x) = \log_2 x$                                       | $f'(x) = \frac{1}{\ln 2} \cdot \frac{1}{x}$   |
| $f(x) = 5x + x^3 + e^x - \ln x$                         | $f'(x) = 5 + 3x^2 + e^x - \frac{1}{x}$  |
| $f(x) = x^2 e^x$  | $f'(x) = (x^2)' \cdot e^x + x^2 \cdot (e^x)' = 2xe^x + x^2 e^x$ (derivada del producte)   |
| $f(x) = x \ln x$  | $f'(x) = (x)' \cdot \ln x + x \cdot (\ln)' = \ln x + x \cdot \frac{1}{x} = \ln x + 1$ (derivada del producte)   |
| $f(x) = \frac{x^3}{e^x}$                                | $f'(x) = \frac{(x^3)' \cdot e^x - x^3 \cdot (e^x)'}{(e^x)^2} = \frac{3x^2 e^x - x^3 e^x}{(e^x)^2} = \frac{x^2 e^x (3 - x)}{(e^x)^2} = \frac{x^2 (3 - x)}{e^x}$<br>(derivada del quocient)   |
| $f(x) = \frac{x^2}{x^2 - 1}$                            | $f'(x) = \frac{(x^2)' \cdot (x^2 - 1) - x^2 \cdot (x^2 - 1)'}{(x^2 - 1)^2} = \frac{2x \cdot (x^2 - 1) - x^2 \cdot 2x}{(x^2 - 1)^2} =$<br>$= \frac{2x^3 - 2x - 2x^3}{(x^2 - 1)^2} = \frac{-2x}{(x^2 - 1)^2}$ (derivada del quocient) |