

EXERCICIOS DERIVADAS 2

- 1.-a) $y = x 2^x$ b) $y = x^3 + 3^x$ c) $y = (2x - 5)e^x$ d) $y = e^{2x}$
e) $y = 5^{x^2-3}$ f) $y = e^{x^2-2x}$ g) $y = \frac{x^2 e^x}{5x^3 - 1}$ h) $y = (e^{-x} + 3)^4$
i) $y = \frac{e^{5x+1}}{3 \log x}$ j) $y = (x^2 3^x + x^3)^5$ k) $y = \sqrt{e^{2x} - x}$ l) $y = x \cdot 2^{x-4}$
- 2.-a) $y = 2 \log x$ b) $y = \log(2x)$ c) $y = x^2 \ln x$ d) $y = \ln\left(\frac{x}{2}\right)$
e) $y = \frac{\ln(5x+1)}{3}$ f) $y = (4 \log(5x) + 2)e^x$ h) $y = \ln^2 x$ i) $y = \ln x^2$
j) $y = \log \frac{x}{3x-1}$ k) $y = \frac{x \ln x}{3x+1}$ l) $y = \ln(x^2 + x)$ m) $y = (\sqrt{2x} + 4^x)^3$
- 3.-a) $y = x \operatorname{sen} x$ b) $y = \cos 2x$ c) $y = \operatorname{tang}(x^2 + 1)$ d) $y = e^{\operatorname{sen} x}$
e) $y = 3x \operatorname{sen} 5x$ f) $y = \cos^3 x$ g) $y = \cos x^3$ h) $y = \ln(\operatorname{tang} x)$
e) $y = \operatorname{tang} x \cdot \ln x$ f) $y = 3x^4 \cdot 4^x$ g) $y = \frac{x \ln x}{x^2 + 5x}$ h) $y = \frac{e^x \operatorname{sen} x}{2x - 5}$
- 4.-a) $y = 3 \operatorname{arcsen} x$ b) $y = 6x \operatorname{arcos} x$ c) $y = 3x - 2x^3 \operatorname{arctg} x$
d) $y = \frac{\operatorname{arcsen} x}{5x}$ f) $y = \operatorname{arcos} 2x$ g) $y = \operatorname{arctg}\left(\frac{5x}{3}\right)$ h) $y = \operatorname{arctg}(e^x)$
- 5.-a) $y = x^4 e^{3x}$ b) $y = x 2^{x^2-3}$ c) $y = \ln \sqrt{x-2}$ d) $y = \ln \frac{x+2}{x^2}$
e) $y = \operatorname{tang} x \cdot \ln x$ f) $y = 4 \operatorname{sen}(2x) - x \operatorname{actg}(5x)$ g) $y = \ln^3(6x)$
- 6.-a) $y = \left(\frac{x \cos x}{e^{5x}}\right)^3$ b) $y = \ln(\operatorname{arctg}(5x))$ c) $y = e^{x \cos x} \operatorname{arcsen} x$
d) $y = \frac{e^{-2x} \cos 5x}{2^{3x-5}}$ e) $y = \ln \sqrt{\frac{1 - \cos^2 x}{1 + \cos^2 x}}$ f) $y = \operatorname{arctg} \frac{x}{\sqrt{1-x^2}}$
g) $y = \ln(x^2 \sqrt{1-2x})$ h) $y = x^3 \operatorname{tang}^4(x^2 - x)$ j) $y = \ln^3(x^2 \operatorname{sen} 2x)^5$