

EXERCÍCIOS: Derive as seguintes funções:

1) $y = \sqrt[3]{(3x^2 + 6x - 2)^2} \cdot (x^2 + 1)^3$

2) $f(t) = \sqrt{\frac{2t+1}{t-1}}$

3) $f(x) = \frac{5}{\ln\left(\frac{1}{x} + \frac{1}{x^2}\right)}$

4) $f(y) = y^3 \cdot \ln(y^2)$

5) $y = \frac{\ln(\text{sen}(x))}{x}$

6) $y = \frac{2^{3x}}{4^{3x^2-6x}}$

7) $g(\theta) = e^{\text{sen}^2(\theta)}$

8) $y = \frac{1}{2} \cdot (2 + 3x)^{\ln(2+3x)}$

9) $f(z) = 2 \cdot \cos(z)^2 \cdot \text{sen}^3(2z)$

10) $y = \text{sen}^3(\cos(\text{tg}(x^2)))$

11) $g(\beta) = \beta \cdot \cos^3(\sqrt[5]{\beta^3})$

12) $f(y) = \frac{3 \cdot \sec^2(y)}{y}$

13) $y = e^{2x} \cdot \cos(3x)$

14) $y = \frac{\text{arc sen}^2(x)}{(1-x^2)^2}$

15) $f(t) = \text{arc cos}^3(\text{sen}(t))$

16) $y = \text{cotg}^4(2x - 3)^2$

17) $f(\theta) = \ln(\cos(\theta^2 - 1))$

18) $y = (\text{sen}(x) \cdot \text{cotg}(x))^2 + \text{sen}^2(x)$

19) $y = \sqrt{(3-x) \cdot \sqrt[3]{x^6 - 10x}}$

20) $y = \sqrt{(\sqrt{1-x} - x^2)^3 + 1}$