

Lista de Exercícios – Regra da Cadeia (Cálculo I)

Parte I – Exercícios

- 1) Calcule $d/dx[(3x+2)^5]$
- 2) Calcule $d/dx[(5x-1)^{1/2}]$
- 3) Calcule $d/dx[e^{7x}]$
- 4) Calcule $d/dx[\ln(4x^2+1)]$
- 5) Calcule $d/dx[\sin(2x+3)]$
- 6) Calcule $d/dx[\cos(5x^2)]$
- 7) Calcule $d/dx[\tan(x^{1/2})]$
- 8) Calcule $d/dx[\arctan(3x+1)]$
- 9) Calcule $d/dx[(x^2+1)^3 \cdot e^{x^2}]$
- 10) Calcule $d/dx[\sin(3x)/(x^2+1)]$
- 11) Calcule $d/dx[e^{\sin(x^2)}]$
- 12) Calcule $d/dx[\ln(\cos(x^3))]$

Parte II – Gabarito

1) $15(3x+2)^4$

2) $(5/2)(5x-1)^{-1/2}$

3) $7e^{(7x)}$

4) $8x / (4x^2+1)$

5) $2\cos(2x+3)$

6) $-10x \sin(5x^2)$

7) $(1/2)x^{-1/2} \sec^2(x^{1/2})$

8) $3 / (1+(3x+1)^2)$

9) $2x e^{(x^2)} (x^2+1)^2 (x^2+4)$

10) $[3(x^2+1)\cos(3x) - 2x \sin(3x)] / (x^2+1)^2$

11) $2x \cos(x^2) e^{(\sin(x^2))}$

12) $-3x^2 \tan(x^3)$