Cristian Fernando Parada Mira B4

1 $(x+1)^2 \cdot (3^x)$

$(x+1)^{2\prime} \cdot (3^x) + (x+1)^2 (3^x)'$

$2(x+1)(x+1)'(3^x) + (x+1)^2(3^x(\ln$

R// $2(x+1)(\cancel{1})(3^x) + (x+1)^2(3^x)(\ln($

$2(x+1)3^x + (x+1)^2 3^x \ln(3)$

2 $\log_5(5x^3+6)$

$\left(\frac{1}{(5x^3+6)(\ln(5))}\right) \cdot (5x^3+\cancel{6})'$

$\left(\frac{1}{(5x^3+6)(\ln(5))}\right)\frac{(15x^2)}{1}$

R// $\left(\frac{15x^2}{(5x^3+6)(\ln(5))}\right)$

$\left(\frac{15x^2}{(5x^3+6)(\ln(5))}\right)$

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3 $\frac{sen(x)}{2+cos(x)}$

$$\frac{sen(x)' \cdot (2+cos(x)) - sen(x) \cdot (2+cos(x))'}{(2+cos(x))^2}$$

$$\frac{cos(x) \cdot (2+cos(x)) - sen(x) \cdot (\cancel{0} + -sen(x))}{(2+cos(x))^2}$$

$$\frac{cos(x)(2+cos(x)) + sen^2(x)}{(2+cos(x))^2}$$

$$\frac{sen^2(x) + (cos^2(x) + 2) \cdot cos(x)}{(2+cos(x))^2} \quad R//$$

4 dy ... $y = x - x \ldots$

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4 $\frac{dy}{dx}$ de $\frac{2}{3}x^3y^2 + \frac{3}{4}x^4 - 2 = 0$

$$\left(\frac{2}{3}\right)\cdot\frac{d(x^3y^2)}{dx} + \left(\frac{3}{4}\right)\cdot\frac{d(x^4)}{dx} + \cancel{\frac{d(-2)}{dx}} = 0$$

$$\frac{2\left(\frac{d(x^3)}{dx}\cdot y^2 + x^3\frac{d(y^2)}{dx}\right)}{3} + \frac{3\cdot\cancel{4}x^3}{\cancel{4}} + 0 = 0$$

$$\frac{2(3x^2y^2 + x^3\cdot 2y\cdot\frac{dy}{dx})}{3} + 3x^3 = 0$$

$$\frac{4x^3y\left(\frac{dy}{dx}\right)}{3} + 2x^2y^2 + 3x^3 = 0$$

$$\left(\frac{dx}{dy}\right) = -\frac{3(3x+2y^2)}{4xy}$$

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5 $\frac{dx}{dy}$ de $y - x = xy + 1$

$$\frac{d(y)}{d\cancel{x}} \cdot \frac{d(-x)}{dy} = \frac{d(x)}{d(y)}(y) + (x)\frac{\cancel{d\left(\frac{dy}{dy}\right)}}{d(1)}$$

$$1 - 1\frac{d(x)}{dy} = \left(\frac{d(x)}{dy}\right)y + x \cdot 1 \quad \frac{\cancel{d(1)}}{\cancel{d}x} = 0$$

Despeje

$$1 - 1\left(\frac{dx}{dy}\right) = \left(\frac{dx}{dy}\right)y + x$$

$$-1\left(\frac{dx}{dy}\right) - y\left(\frac{dx}{dy}\right) = x - 1$$

$$\left(\frac{dx}{dy}\right)(-y - 1) = x - 1$$

$$\frac{dx}{dy} = \frac{x - 1}{(-y - 1)} = \frac{x - 1}{y + 1} \quad R//$$