Problemario calculo

CÁLCULO

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GRADO: 4° | GRUPO: BRH

. $y = x^5 + 5x^4 - 10x^2 + 6$

$=$8x1/'$- x^{3/2} + 2x^{-1/2}$

$$\frac{1}{2x^2} \quad \frac{4}{\sqrt{x}} \quad 1$$

. $y = \frac{1}{2x^2} + \frac{4}{\sqrt{x}} =$ — + 4x-1/'

. $y = \sqrt{2x} + 2\sqrt{x}$

. $f(t) = \frac{2}{\sqrt{t}} + \frac{6}{\sqrt[3]{t}}$

. $y = (1 - 5x)^6$

. $f(x) = (3x - x^3 + 1)^4$

. $y = (3 + 4x - x^2)^{1/2}$

$\frac{Dy}{Dx} = 6x + 2$

$y = x^5 + 5x^6 - 10x^3 + 6$

$y = 5x^6 + x^5 - 10x^3 + 6$

$\frac{d}{dx}[5x^6 + x^5 - 10x^3 + 6]$

$dy = \frac{d}{dx}(5x^6) + \frac{d}{dx}(x^5) - \frac{d}{dx}(10x^3) + \frac{d}{dx}(6)$

$= 5\frac{d}{dx}(6x^{6-1}) + 5x^{5-1} - 10\frac{d}{dx}(x^3) + 0$

$= 5(6)x^{6-1} + 5x^4 - 10(3)x^{3-1}$

$= 30x^5 + 5x^4 - 30x^2$

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$y = x^5 + 5x^6 - 10x^3 + 6$

$y = 5x^6 + x^5 - 10x^3 + 6$

$= 30x^5 + 5x^4 - 30x^2$

$x = \frac{1}{2x^2} + \frac{4}{\sqrt{x}}$

$y = \frac{1}{2} \cdot \frac{1}{x^2} + \frac{4}{x^{1/2}}$

$= \frac{1}{2}x^{-2} + 4x^{-1/2}$

$= \frac{-2}{2}x^{-3} + 4\left(-\frac{1}{2}\right)x$

$= -x^{-3} - 2x^{-3/2}$

$= -\frac{1}{x^3} - \frac{2}{x^{3/2}}$

$= -\frac{1}{x^3} - \frac{2}{\sqrt{x^3}}$

$f(t) = \frac{2}{\sqrt{t}} + \frac{6}{\sqrt[3]{t}}$

$= \frac{2}{t^{1/2}} + \frac{6}{t^{1/3}}$

$= 2t^{-1/2} + 6t^{-1/3}$

$= -2\left(\frac{1}{2}\right)t^{-1/2-1} + 6\left(-\frac{1}{3}\right)t^{-1/3-3/3}$

$= -t^{-3/2} - 2t^{-4/3}$

$= \frac{-1}{t^{3/2}} - \frac{2}{t^{4/3}}$ $= \frac{1}{\sqrt{t^3}} - \frac{2}{\sqrt[3]{t^4}}$