$$y^5 + 4y^2 + y + 2x^3 = 0 \quad (A)$$

$$G(x,y) = 0 \quad (3)$$

$$D_x\left[y^5 + 4y^2 + y + 2x^3\right] = D_x[0] ;$$

$$D_x[y]^5 + 4 \cdot D_x[y]^2 + D_x[y] + 2 D_x[x^3] = D_x[0] ;$$

$$5y^4 \cdot y' + 4 \cdot 2 \cdot y \cdot y' + 1 \cdot y^{1-1} \cdot y' + 2 \cdot 3 \cdot x^2 = 0 ;$$

$$y'\left[5y^4 + 8y + 1\right] = -6x^2 ;$$

$$y' = \frac{-6x^2}{5y^4 + 8y + 1} \quad \text{ou} \quad \boxed{\frac{dy}{dx} = \frac{-6x^2}{5y^4 + 8y + 1}} \quad (C)$$

PARA $x^2 + y^2 - 4 = 0 \Rightarrow \begin{cases} y = +\sqrt{4 - x^2} \\ y = -\sqrt{4 - x^2} \end{cases}$

DERIVANDO:

$$y = (4 - x^2)^{\frac{1}{2}} \Rightarrow \frac{dy}{dx} = \frac{1}{2}(4 - x^2)^{-\frac{1}{2}}(-2x) = \frac{-x}{(4 - x^2)^{\frac{1}{2}}} ;$$

$$\frac{dy}{dx} = \frac{-x}{\sqrt{4 - x^2}} ;$$

$$\boxed{\frac{dy}{dx} = \frac{-x}{y}}$$