

Cálculo Diferencial e Integral ii Respostas à Ficha de Trabalho 4

1. $\begin{bmatrix} 0 & 0 \\ 2 & -2 \end{bmatrix}$

2. $2t$.

3. $-e^{-x-y} + 2ye^{2xy}$

4. 34

5. $\begin{bmatrix} 0 \\ 2 \\ 4 \end{bmatrix}$

6. $g'(x) = -\frac{\frac{\partial F}{\partial x}(x,g(x))}{\frac{\partial F}{\partial y}(x,g(x))}$

7. Recta tangente: $\{(1, 0, 0) + t(0, 1, 1) : t \in \mathbb{R}\}$; Plano normal: $y + z = 0$.

8. Recta normal: $\{(1, 0, 1) + t(1, 0, -1) : t \in \mathbb{R}\}$; Plano tangente: $x - z = 0$.