MAT216 – Cálculo Diferencial e Integral III
Respostas da Lista de Exercícios 3

1. (a) $-\pi/2$; (b) -1.

2. (a) -1, 1; (b) $1/3$, $1/3$, $-1/6$; (c) 1, 0.

3. $x - y - z + \frac{\pi}{6} = 0$.

4. 0.

5. $s_x = F'(t)g_x$, $s_y = F'(t)g_y$.

6. $f(x) = x^2$.

7. $x_u = (xv - 1)/(x - y)$, $x_v = (xu + 1)/(x - y)$, $y_u = (-yv + 1)/(x - y)$, $y_v = -(yu + 1)/(x - y)$.

8. $v_u = (-yv + 1)/(1 + uy)$, $v_y = (-x + y)/(1 + uy)$, $x_u = (u + v)/(1 + uy)$, $x_y = -(xu + 1)/(1 + uy)$.

9. $f_x = 1/(1 + 2y + 2z)$, $f_y = -2(y + z)/(1 + 2y + 2z)$, $f_{xy} = 2/((1 + 2y + 2z)^3$.

10. $\pm(1/\sqrt{751})(-24, 4\sqrt{7}, -3\sqrt{7})$

11. 0, $\pi/12$.

12. $\begin{pmatrix} -1 & -2/5 \\ 0 & -3/5 \end{pmatrix}$.