MAT143 – Cálculo para Ciências Biológicas
Respostas da Lista de Exercícios 9

1. (a) $\frac{(3x-2)^4}{12} + C$

(b) $\frac{1}{3}e^{x^3} + C$

(c) $2\ln|x+3| + C$

(d) $\frac{1}{8}\ln(1+4x^2) + C$

(e) $-\frac{1}{8(1+4x^2)} + C$

(f) $\frac{2}{3}\sqrt{(1+e^x)^3}$

(g) $-\frac{1}{2(x-1)^2} + C$

(h) $-\frac{1}{3}\cos^3 x + C$

(i) $\frac{1}{3}\cos^3 x - \cos x + C$

(j) $-\frac{1}{5}\text{sen}^5 x + \frac{1}{3}\text{sen}^3 x + C$

(k) $\frac{1}{5}\text{sen}^5 x - \frac{2}{3}\text{sen}^3 x + \text{sen}\, x + C$

(l) $\frac{1}{2}\tan^2 x + C$

(m) $\frac{1}{4}\tan^4 x + C$

(n) $\frac{1}{3}\sec^3 x + C$

(o) $\frac{1}{6}\sec^6 x - \frac{1}{4}\sec^4 x + C$

(p) $\sec x + C$

(q) $\frac{1}{2}\sec^2 x + C$

(r) $\frac{1}{8}x - \frac{1}{32}\text{sen}\, 4x + C$

(s) $2\ln|x-3| + C$

(t) $\frac{1}{2}\ln|2x+3| + C$

(u) $5\ln|x-1| + 2\ln|x| + C$

(v) $\frac{x^2}{2} + 3\ln|x-2| + C$

(w) $x - \ln|x+1| + C$

(x) $x + 3\ln|x-1| + C$

(y) $2x + \ln|x+1| + C$

(z) $\frac{(x+1)^2}{2} - 2(x+1) + \ln|x+1| + C$