MAT144 – Cálculo Diferencial e Integral I para Oceanografia
Respostas da Lista de Exercícios 9

1. (a) $\frac{15\pi}{2}$; (b) $\frac{3}{10}$; (c) $\frac{2\pi\sqrt{2}}{3}$; (d) $\frac{11\pi}{6}$; (e) $\frac{44\pi}{15}$.

2. (a) $\frac{4\pi}{15}$; (b) 8π; (c) $\frac{5\pi}{6}$.

3. (a) $\pi/6$; (b) $29\pi/30$.

4. $\ln|\sec x + \tan x| + C$.

5. (a) $\frac{2}{3}(2\sqrt{2}-1)$; (b) $\int \sqrt{1+x^2}\,dx = \frac{1}{2}\left(x\sqrt{1+x^2} + \ln|x+\sqrt{1+x^2}|\right) + C$, logo a resposta é $\frac{1}{2}(\sqrt{2} + \ln(1+\sqrt{2}))$.