15.1 - Integrais duplas sobre retângulos

Calcule a integral iterada.

1. $\int_1^4 \int_0^2 (6x^2y + 2x)\, dy\, dx$ Resposta: 222

2. $\int_0^1 \int_0^1 (x + y)^2\, dx\, dy$ Resposta: $\frac{7}{6}$

3. $\int_0^1 \int_1^2 (x + e^{-y})\, dx\, dy$ Resposta: $\frac{5}{2} - e^{-1}$

4. $\int_0^{\frac{\pi}{6}} \int_0^{\frac{\pi}{2}} (\sin x + \sin y)\, dy\, dx$ Resposta: $(\frac{8-3\sqrt{3}}{12})\pi$

5. $\int_0^2 \int_0^{\frac{\pi}{2}} (x \sin y)\, dy\, dx$ Resposta: 2

Referência

STEWART, James. Cálculo: volume 2. 8ª ed. São Paulo, SP: Cengage Learning, 2016. ISBN 9788522125845.