

Errata - The Kurzweil-Henstock Integral for Undergraduates, by Alessandro Fonda

1. page 65, line -3: replace dDominated by Dominated
2. page 112, exercise 1: replace

$$E_{\text{rot}} = \left\{ (x, y, z) \in \mathbb{R}^3 : (x, \sqrt{y^2 + z^2}) \in E \right\}$$

(i.e., the set obtained rotating E around the x -axis).

by

$$E_{\text{rot}} = \left\{ (x, y, z) \in \mathbb{R}^3 : (\sqrt{x^2 + z^2}, y) \in E \right\}$$

(i.e., the set obtained rotating E around the y -axis).

3. page 122, exercise 3: replace

“What is its value?”

by

“What is its value if $\alpha = 2$?”

4. page 150, exercise 2: replace $\gamma(t) = (t, t^2, t^3)$ by $\gamma(t) = (t, 2t, 3t)$

5. page 150, exercise 3: replace

$$\left\{ (x, y, z) \in \mathbb{R}^3 : \frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1 \right\}.$$

by

$$\left\{ (x, y, z) \in \mathbb{R}^3 : x^2 + y^2 + \frac{z^2}{4} = 1 \right\}.$$

6. page 150, exercise 4: replace

$$\sigma(u, v) = (u \sin v, v \sin u, \cos(uv)).$$

by

$$\sigma(u, v) = (u^2, v^2, u^2 - v^2).$$

7. page 150, exercise 5: replace

$$\mathcal{M} = \{(x, y, z) \in \mathbb{R}^3 : x^2 + 4y^2 + 9z^2 = 1\},$$

by

$$\mathcal{M} = \{(x, y, z) \in \mathbb{R}^3 : z = x^2 + y^2 \leq 1\},$$

8. page 150, exercise 5: replace

$$f(x, y, z) = xyz .$$

by

$$f(x, y, z) = 1 + 4x^2 + 4y^2 .$$

9. page 162, line -5: replace $F(b_1, u_2, u_3)$ by $F(\sigma(b_1, u_2, u_3))$

10. page 162, line -4: replace $\int_{\beta_1^+}$ by $\int_{\sigma \circ \beta_1^+}$

11. page 166, exercise 4: replace

“Compute $\int_{\sigma} \operatorname{div} F dx \wedge dy \wedge dz$, both directly and by the use of the Gauss–Ostrogradski formula.”

by

“Compute $\int_{\partial\sigma} \langle F, dS \rangle$.”