

Errata: Advanced Calculus: Differential Calculus and Stokes' Theorem

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- (1) Example 1.5.8, third line. Should be: “as seen from Figure 1.24”
- (2) Section 2.1, Exercise 1(e). The domain should be: “ $t \in [-1, 1]$ ”.
- (3) Definition 3.2.2, starting in the displayed equation: “where $v = he_1$ ” and the line that follows should read “and $A = \mathcal{I}'(t)$.”
- (4) Page 106: Definition of *centre of mass*, the third formula should be

$$\bar{z} = \frac{1}{m} \int_C z \rho(x, y, z) ds.$$

- (5) Definition 4.1.6: In the definition of pullback, it should be: $\mathbf{r}^* \omega$.
- (6) Section 4.2.2: Exercise (5): The domain should be $t \in [0, 1/4]$.
- (7) Chapter 5, page 142: Exercise (1a), the point must be $p = (1, -1, 1, 1)$.
- (8) Chapter 7 (page 210) - Equation (7.7): A closing parenthesis is missing in the first and third equations before the derivatives $g'_1(t)$ and $g'_2(t)$.
- (9) 7.3: Proof of Green's theorem, one integral missing for split domain in the last calculation of the proof. It should be on the third line

$$= \int_{\partial D_i \setminus C_{i\ell}} \omega + \int_{C_{i\ell}} \omega + \int_{\partial D_\ell \setminus -C_{i\ell}} \omega + \int_{-C_{i\ell}} \omega.$$

- (10) p. 219: region E just below Figure 7.20 should have $v_1(y, z) \leq x \leq v_2(y, z)$.
- (11) p. 220: Three lines below Figure 7.21. The right-hand side of the triple integral of x^2 : it should be a double integral over D .
- (12) page 231 Exercise (3): “...in terms of...”
- (13) subsection “Exercises” title missing in 9.3.2.
- (14) $A(P)$ formula on page 253: There is an extra parenthesis in front of $dy \wedge dz$.
- (15) p.268, Fig 9.9: axes should be u and v .