As of autumn 2019, the second printing is available. To check whether a copy of the book is the second printing, see if it has the first few additions and corrections to the first printing.

Chapter 2
• Page 53: A variant proof of Proposition 2.4.7 is as follows: “Let \( \{x_\nu\} \) converge to \( p \). Note that \( \{x_\nu\} \) is the translate of the null sequence \( \{y_\nu\} = \{x_\nu - p\} \) by \( p \). The triangle inequality shows that every translate of a bounded sequence is again bounded, and so it suffices to show that every null sequence \( \{y_\nu\} \) is bounded. Given such a sequence, there exists a starting index \( \nu_0 \) such that \( |y_\nu| < 1 \) for all \( \nu > \nu_0 \). For any real number \( R > \max\{|y_1|, \ldots, |y_{\nu_0}|, 1\} \), we have \( \{y_\nu\} \subset B(0, R) \) as a set. Thus \( \{y_\nu\} \) is bounded, as desired.”

Chapter 4
• Page 148: The conditions for the normalized proof of the chain rule should include \( g(f(a)) = 0 \) along with \( a = 0 \) and \( f(a) = 0 \). This change needs to be made twice on this page.
• Page 149: The proof of Lemma 4.4.4(1) is more tidily concluded by noting that \( hk \) is a twofold product of linear functions and therefore is \( o(h, k) \) by Proposition 4.2.6.
• Page 155, line 9: Change “\( f_i(a) \)” to “\( f_i(a) \)”.
• Page 165, beginning of five-line display: Change \( \frac{dF(x, y)}{dx} \) to \( \frac{dF(x)}{dx} \).
• Page 173: In the last sentence of exercise 4.6.3(b), change \( F \) to \( F(x + ct) \) twice and change \( G \) to \( G(x - ct) \) twice.

Chapter 5
• Page 212: In exercise 5.2.8(a), change the prompt to, “(Because this is a one-dimensional problem, you may verify the old definition of derivative rather than the new one; alternatively, note that \( f = T + g \) where \( T \) is linear and \( g(h) = o(h) \).)”

Chapter 6
• Page 280: A tidier proof of Theorem 6.4.3 is, “Define \( F_2 : [a, b] \to \mathbb{R} \) by \( F_2(x) = \int_a^x F' \). Then \( F_2' = F' \) by the preceding theorem, so (Exercise 6.4.3) there exists a constant \( c \) such that \( F_2(x) = F(x) + c \) for all \( x \in [a, b] \). Thus, because \( F_2(a) = 0 \),

\[
\int_a^b F' = F_2(b) - F_2(a) = F(b) + c - F(a) - c = F(b) - F(a).
\]
Page 282: Replace the paragraph after Corollary 6.4.4 by, “The formula in the corollary is the formula for integration by inverse substitution. To obtain it from (6.4), substitute \( f \cdot (\phi^{-1})' \) for \( f \) in (6.4) to get
\[
\int_a^b (f \circ \phi) \cdot ((\phi^{-1})' \circ \phi) \cdot \phi' = \int_{\phi(a)}^{\phi(b)} f \cdot (\phi^{-1})'.
\]
By the chain rule, \( ((\phi^{-1})' \circ \phi) \cdot \phi' = (\phi^{-1} \circ \phi)' = 1 \), and so we have the result.”

Page 313, fourth display: “\( R \geq 0 \)” should be “\( R \geq 0 \)”.

Exercise 6.7.15: Add part (d) as follows. “(d) Use various exercises from this section to show that the centroid of the upper half \( n \)-ball has last coordinate
\[
x_n = \frac{2^{n+1}}{\pi (n+1)} \cdot \frac{(n/2)!^2}{n!},
\]
and then use Stirling’s formula to show that asymptotically, as \( n \) grows,
\[
x_n \sim \sqrt{\frac{2}{\pi n}}.
\]
Thus the \( n \)-ball is concentrated ever more toward its center.”

Section 6.8: This section can be omitted if we strengthen the hypotheses of the change of variable theorem to assume that \( \Phi(K) \) has boundary of volume zero. For all 2-dimensional and 3-dimensional examples in a calculus class, one can see this to be the case.

Page 328, line (−3): Change “that that” to “that”.

Chapter 9

Page 443, line (−4): Change “consisted only in” to “consisted only of”.

Page 459: A better end to the proof of Theorem 9.10.1 is
\[
\int_{\Phi} f \, dx_I = \int_D (f \circ \Phi) \det \Phi' \quad \text{by definition, as in (9.14)}
\]
\[
= \int_{\Delta^D} (f \circ \Phi) \det \Phi' \, du_1 \wedge \cdots \wedge du_k \quad \text{by Exercise 9.5.4}
\]
\[
= \int_{\Delta^D} \Phi^* f \cdot \Phi^* \, dx_I \quad \text{by Theorem 9.9.3}
\]
\[
= \int_{\Delta^D} \Phi^*(f \, dx_I) \quad \text{by Theorem 9.9.4(2)}.
\]