Real Analysis, H.L. Royden and P.M. Fitzpatrick

Errata/Comments on Fourth Edition, First Printing

The Second Printing will appear in Spring, 2011, with these errata corrected.

Last Edited on January 15, 2011

Preamble, Preface, and Preliminaries

(Preamble) On the dedication page, include ‘To John Slavins, H.L. Royden’
This was inadvertently omitted.

(Table of Contents) in the title of 15.1 change Helley to Helly
(Table of Contents) in the title of 19.2 change $p \leq \infty$ to $p < \infty$
(Table of Contents) in the title of 19.4 change $p < 1$ to $p < \infty$

(Preface; page X; line -12) Replace ‘1998’ by ‘1990’
(Preface; page X1) Replace ‘Helley’ by ‘Helly’, twice

Chapter 1

(Chapter 1; page 12; line -4) Replace “natural” by “rational”

(Chapter 1; page 13) In part (iii) of Problem 13, replace $r^{n-1}$ by $r^{n+1}$

(Chapter 1; page 14; line -8, -9) The image of $g$ is contained in the integers, not the natural numbers. So redefine $g$ as follows: define $g(x) = 2((p + q)^2 + q)$ for $x = p/q > 0$, $g(x) = g(-x) + 1$ for $x = p/q < 0$, and $g(0) = 1$.

(Chapter 1; page 35; line 5) replace Constantine by Constantin

(Chapter 1; page 23; last line) Replace the lim inf by lim sup

(Chapter 1; page 24) In Problem 42, replace $a_n > 0$ by $a_n \geq 0$

(Chapter 1; page 24) In Problem 44, replace $0 < x < 1$ by $0 \leq x \leq 1$ and replace $q/p^n$ by $q/p^n, 0 < p < q$

(Chapter 1; page 27) In the last paragraph, replace “sequence” by “decreasing sequence”

Chapter 2

(Chapter 2; page 31; line -2) Replace $E$ by $C$.

(Chapter 2; page 39; line 2) Change the second $A_1$ to $A_2$

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1I thank Richard Hevener for almost all the typos in Part I—pmf
(Chapter 2; page 43) Problem 18 is incorrect. Replace it with the following: Let $E$ have finite outer measure. Show that there is a $G_\delta$ set $G$ for which $E \subseteq G$ and $m^*(E) = m(G)$. Use this to show that $E$ is measurable if and only if there is an $F_\sigma$ set, $F$, for which $F \subseteq E$ and $m(F) = m^*(E)$.

(Chapter 2; page 48) As Matt McCutchen has pointed out, the proof of Theorem 17 can be shortened. Once $E_C$ is shown to have measure zero, the observation that $E$ is contained in the union of translates of $E_C$ by rational numbers and the countable monotonicity of outer measure lead to a contradiction.

Chapter 3

(Chapter 3; page 55) In the statement of Proposition 2, insert real-valued before function.

(Chapter 3; page 63; line 2 and 6) Change $\psi_n$ to $\phi_n$

(Chapter 3; page 65) In the last two line of the proof of Lemma 10, change $\epsilon$ to $\delta$, twice. Also, replace $E_n$ by $E_N$.

(Chapter 3; page 67) On the first line, replace $\leq$ by $<$

Chapter 4

(Chapter 4; page 86; line 7) Remove the first comma

(Chapter 4; page 89) In formula (22) replace $f'(x)$ by $f'(x) < \infty$

(Chapter 4; page 95) On the line after (30), remove “23 and”

Chapter 5

(Chapter 5; page 98) In the definition of tight, remove an $a$.

(Chapter 5; page 99) Interchange Problems 1 and 2.

(Chapter 5; page 101; line 5) Replace $f_{n_k}$ by $f_{n_k}(x)$

(Chapter 5; page 101) In displayed equation (6), replace 0 by $f \equiv 0$

(Chapter 5; page 103; line 4) Replace ‘real-valued’ by ‘real’

(Chapter 5; page 104; line -16) Insert the word “are” before the word “upper”

Chapter 6

(Chapter 6; page 110; line 2) Replace $\infty$ by $n$

(Chapter 6; page 113; line 7) Relace “mathematics” by “mathematical”

(Chapter 6; page 113) In equation (15) interchange the limits of integration

(Chapter 6; page 113) In the footnote, change 8 to 9
(Chapter 6; page 115) In Problem 19, replace the upper derivative by the lower derivative.

(Chapter 6; page 119) Change the first TV to V Problem 32

(Chapter 6; page 119) Change the conclusion of Problem 36 to: “on closed intervals that contain $x_0$ and have arbitrarily small length.”

(Chapter 6; page 121; line 4) Replace TV by V.

(Chapter 6; page 122) Remove the second comma in equation (26)

(Chapter 6; page 123; line 2) replace 7 by 8

(Chapter 6; page 123) In the displayed equation of Problem 38, replace the first ‘$<$’ with ‘$< \epsilon$’ if ‘’

(Chapter 6; page 123) In Problem 39, insert “and continuous ” after “increasing”

(Chapter 6; page 124) Interchange the limits of integration in (28)

(Chapter 6; page 124; -4) Replace 95 by 94

(Chapter 6; page 129) In part (vi) of Problem 56 replace 0 by $g(0)$

(Chapter 6; page 129) In Problem 57, replace “the last part” by “part (iv)”

(Chapter 6; page 132; line -10) Interchange u and v in the quotient

(Chapter 6; page 134) In Problem 71, replace 45 by 43, twice.

Chapter 7

(Chapter 7; page 138; line 1) Replace “The positivity homogeneity properties follow” by “Nonnegativity and positive homogeneity follow”

(Chapter 7; page 138; line -3) Insert $f$ before $\in$

(Chapter 7; page 139) In Problem 2, insert “be ” after “to ”

(Chapter 7; page 139; line -4) Replace $L^1$ with $L^p$

(Chapter 7; page 140) On the line after displayed equation (3), replace $L^q(X, \mu)$ by $L^q(E)$.

(Chapter 7; page 140; line -5) Replace $g$ by $f$, twice

(Chapter 7; page 143) In the first example, replace $\alpha <$ with $\alpha \leq$

(Chapter 7; page 143) In the second example, replace $E = (1, \infty)$ by $E = (0, \infty)$ and replace $\ln x$ by $|\ln x|$ and remove “for $x > 1$”

(Chapter 7; page 143) In Problem 9, replace $a = b = 1$ by $a^p = b^q$

(Chapter 7; page 143) In Problem 12, replace $1 \leq p < \infty$ by $1 \leq p \leq \infty$
(Chapter 7; page 144) In Problem 20, replace \( p < \infty \) with \( p \leq \infty \)

(Chapter 7; page 144) In Problem 22, replace \( 1 < p < \infty \) by \( 1 \leq p < \infty \)

(Chapter 7; page 148) Richard Hevener observed that the General Dominated Converges Theorem provides a short, direct proof of Theorem 7

(Chapter 7; page 148; line -8) Replace the second and fourth \( f_n \) by \( f \)

(Chapter 7; page 149) Change \( f \) to \( f_n \) in the last line of the statement of Theorem 8

(Chapter 7; page 150; line 15) Replace \( f_k \) by \( f_n, \) twice

(Chapter 7; page 150; line -13) Replace \( f_k \) by \( f_n, \) twice

(Chapter 7; page 150; line -2) Remove the comma before “provided”

(Chapter 7; page 151; line -2) Replace “, and ” by “. We ”

(Chapter 7; page 153) In Problem 39, replace \( 1 \leq p < \infty \) by \( 1 \leq p \leq \infty \)

(Chapter 7; page 154; line -10) Replace \( \|\Phi(f) - \Phi(g)\|_p \) by \( \|\Phi(f) - \Phi(g)\|_p^p \)

Chapter 8

(Chapter 8; page 155; line -7) Replace “Helley ” by “Helly ”

(Chapter 8; page 157) In the proof of Proposition 2, replace \( q - 1 \) by \( 1 - q. \) The proof does not cover the case the case \( p = 1. \) For \( p = 1, \) argue by contradiction. If \( \|g\|_\infty > \|T\|_1, \) there is a set \( E_0 \) of finite positive measure on which \( \|g\|_\infty > \|T\|_1, \) and one gets a contradiction by choosing \( f \) to be \( 1/m(E_0) \cdot \text{sgn}(g) \cdot \chi_{E_0}. \)

(Chapter 8; page 158; line -3) Remove the second comma

(Chapter 8; page 161; line -8) Replace Lebesgue-Stieltjes by Riemann-Sieltjes

(Chapter 8; page 162) In Problem 10, replace TV(f) by TV(g).

(Chapter 8; page 163; line 4) Replace Radamacher by Rademacher

(Chapter 8; page 167) Change the font on the last line of Theorem 11

(Chapter 8; page 167) In the Riemann-Lebesgue Lemma, replace “corollary” by “theorem”. Also, extend the lemma to \( p = 1 \) by using Theorem 10, the density of the simple functions in \( L^\infty, \) and Theorem 12 of Chapter 2.

(Chapter 8; page 167; line -3) Replace the second 1 by 0

(Chapter 8; page 168; line 15) Replace 11 by 10.

(Chapter 8; page 170) In Problem 17 (iii) replace the second \( f_n \) by \( f \)

(Chapter 8; page 170) In Problem 19, replace \( 1 \leq p < \infty \) by \( 1 < p < \infty \)
(Chapter 8; page 171) Replace Helley by Helly, twice

(Chapter 8; page 172; line 9) Replace the second “is” by “in”

(Chapter 8; page 172; line -9) Replace 6 by 7 and Helley by Helly

(Chapter 8; page 173; line 11) replace 5 by 6

(Chapter 8; page 173) In the Remark, remove the comma in the first line. Also, add the assumption that $m(E) < \infty$, which is necessary in this version of the Dunford-Pettis Theorem. In the case $m(E) = \infty$, one needs to assume tightness and uniform integrability.

(Chapter 8; page 174) In Problem 33, replace $1 \leq p$ by $1 < p$

(Chapter 8; page 174) In Problem 36, replace Helley by Helly

(Chapter 8; page 176) In the first Example, replace “Let” by “For” and insert “a ” before “non-negative”

(Chapter 8; page 176) In the third Example, replace “a measurable set ” by “of finite measure”

(Chapter 8; page 178; line -6) replace the first “in ” by “on”

(Chapter 8; page 178; line -2) replace “$L^q$ ” by “$L^p$”

(Chapter 8; page 178; last line) Replace 
\[ \sum_{n=1}^{\infty} |f_n| + \sum_{n=1}^{\infty} |f_{n+1} - f_n| \]

(Chapter 8; page 179; line 1) Replace “It is clear that” by “Since $f_n = f_1 + \sum_{k=1}^{n-1} [f_{k+1} - f_k]$, by the triangle inequality, “

(Chapter 8; page 179; line 3) Replace 32 by 33

(Chapter 8; page 179) In Problem 41, change $1 \leq p$ to $1 < p$ and, in the last line, $\geq$ to $\leq$

(Chapter 8; page 180) In Problem 42, replace “a measurable set ” by “of finite measure” and remove “Let \{f_n\} be a sequence in $L^p(E)$.”

(Chapter 8; page 180) In Problem 43, change $1 \leq p$ to $1 < p$

Chapter 9

(Chapter 9; page 192; line 6) Remove the first comma

(Chapter 9; page 194; line 10) Replace “is ” by “it”

(Chapter 9; page 198; line 7,8) Replace “nonempty” by “empty” on each line

(Chapter 9; page 199; line -9) Replace “the Cantor Intersection Theorem” by “Proposition 14”
(Chapter 9; page 201; line -9) Remove the last comma

(Chapter 9; page 201; line -2) Remove the first comma in the statement of the Lemma

(Chapter 9; page 203) Problem 65 should be put in Section 9.2

(Chapter 9; page 203) In Problem 67, replace “Prove” by “Is it true” and insert question mark.

Chapter 10

(Chapter 10; page 207) Replace “The” by “the” in the statement of the lemma

(Chapter 10; page 207; line 10) Replace $x = 0$ by $x = 1$

(Chapter 10; page 209; line -8) Insert “in ” after “point ”

(Chapter 10; page 210; line 2) Replace 7 by 8, and replace Helley by Helly

(Chapter 10; page 211; line -18) remove the first “of”

(Chapter 10; page 213) Extra right parenthesis in displayed equations (9) and (10)

(Chapter 10; page 213) In the line after (9), replace $E_{m, N}$ by $E(m, N)$

(Chapter 10; page 214) In Problem 20, insert “is ” before “a piecewise”

(Chapter 10; page 215; line 2) Insert a space before uncountable

Chapter 11

(Chapter 11; page 223; line 9) Replace second X by E

(Chapter 11; page 226) In Problem 2, replace “discrete ” with “trivial ”

(Chapter 11; page 228; line 11) Replace Tychoneff by Tychonoff

(Chapter 11; page 231; line -14) Remove “$\mathcal{F} =$”

(Chapter 11; page 236) Problem 45, part (ii). As Bruce Blackadar observed, it is necessary to also assume that the function $f$ is continuous. Without this assumption, the result is false.

Chapter 12

(Chapter 12; page 245; line -7) Remove “(not necessarily closed)”; indeed, these sets are closed.

(Chapter 12; page 249; line 12) Remove “by possibly multiplying $g$ by a positive number”;

(Chapter 12; page 250; line 5) replace $n > 1$ by $n$

(Chapter 12; page 251) It should be Borsuk’s Theorem not Riesz’s Theorem

(Chapter 12; page 251) In the statement of the theorem, replace Hausforff by Hausdorff
Chapter 13

(Chapter 13; page 262; line 9 ) Replace the second $x_0$ by $x$

(Chapter 13; page 263; line 13 ) Replace $y_* = T(x_*) - y_1$ by $y_* = T(x_*) + y_1$ by

(Chapter 13; page 265; line -10 ) Remove “of ”

(Chapter 13; page 266) In the proof of Theorem 11, replace “This is a consequence of the continuity of the projection $I - P$ ” with “Indeed, this follows from Theorem 8 since if $y \in (I - P)(X)$, then $(I - P)(y) = y$ and therefore (9) holds with $M = 1$.”

(Chapter 13; page 267; line -15) Replace $y \in Y$ with $y \in T(X)$

(Chapter 13; page 268) Problem 33 should be moved to the next chapter since parts (iii) and (iv) require the Hahn-Banach Theorem

(Chapter 13; page 269; line -11) Remove the second “for all ”

(Chapter 13; page 270) In Problem 40 interchange $L^1$ and $L^\infty$. Also, remove “in”

Chapter 14

(Chapter 14; page 271; line -12) Replace “any two disjoint closed convex sets” by “any closed convex subset and point outside the subset”

(Chapter 14; page 272) On the second line of the statement of Proposition 2, insert $x \neq 0$

(Chapter 14; page 272) On the fifth line of the proof of Proposition 2, insert $x \neq 0$

(Chapter 14; page 272); line -4 Replace $\beta$, by $\beta$.

(Chapter 14; page 273; line 10) Replace $\psi_k(x)$ by $\psi(x_k)$

(Chapter 14; page 275; line -8) Replace $X^{**}$ by $X^*$

(Chapter 14; page 279) On the second line of the first example, replace $\psi(x_0)$ by $f(x_0)$

(Chapter 14; page 279) On the third line of Theorem 7, insert $x \neq 0$

(Chapter 14; page 279) On the tenth line of the proof of Theorem 7, insert $x \neq 0$

(Chapter 14; page 279) In the second Example, replace $c_0$ by $c$ throughout.

(Chapter 14; page 282) In Problem 28, replace the second “functional ” by “function”

(Chapter 14; page 283; line 10) Replace Helley by Helly

(Chapter 14; page 288; line 10) Replace $N_0$ by $N_2$

(Chapter 14; page 288; line 18) Insert “of ” after “neighborhood”
(Chapter 14; page 290) In Problem 50, part (iii) replace nonzero by nonnegative, and replace } by } in both integrals.

(Chapter 14; page 290) In Problem 50, part (iv) replace nonzero by nonnegative, and replace } by }.

(Chapter 14; page 290) In Problem 51, replace “(i), (iii), (iv) ”by “(i) and (ii)”.

(Chapter 14; page 290) on (v), replace by 

(Chapter 14; page 290) In parts (iii) and (iv) of Problem 50, replace “a nonzero function in }” by “ } with }”.

(Chapter 14; page 293) In Theorem 30, remove the assumption that } is bounded below; it is unnecessary.

(Chapter 14; page 295; line -10) replace } by }.

(Chapter 14; page 296; line 11) Replace “the Hahn-Banach Theorem” by “the Hyperplane Separation Theorem”.

(Chapter 14; page 296; line 19) Remove the comma.

(Chapter 14; page 296; line -2) Replace Weierstrass by Weierstrass.

Chapter 15

(Chapter 15; page 298 ) Replace Helley by Helly, three times

(Chapter 15; page 299; line -2 ) Replace “certainly is Hausdorff” by “we infer from Theorem 7 of Chapter 14 that } is Hausdorff. ”

(Chapter 15; page 300 ) In the Remark, replace Helley by Helly, twice, and also replace 6 by 5.

(Chapter 15; page 300; line 14 ) Replace 6 by 5

(Chapter 15; page 301; line 16 ) Replace } by }.

(Chapter 15; page 305) Remove the comma in the first line of Problem 15.

Chapter 16

(Chapter 16; page 308) Change Helley to Helly

(Chapter 16; page 311; line -6) Replace } by } twice

(Chapter 16; page 313; line 24) Change } to }

(Chapter 16; page 314) Change Helley to Helly

(Chapter 16; page 318) In problem 21, insert “ } is bounded and” after the second “if ”

(Chapter 16; page 319; line -2) Replace } by }.
(Chapter 16; page 320; line 9) Replace \( \|h\|^2 \) by \( c \cdot \|h\|^2 \)

(Chapter 16; page 322; line 1) Insert an absolute value before “by”

(Chapter 16; page 322) In Problem 30, replace \( h \) by \( H \)

Chapter 17

(Chapter 17; page 340; line -7) Replace 52 with 53

(Chapter 17; page 341) In Problem 4 (i) replace \( \mathcal{M} \) by \( \mathcal{B} \). In Problem 5 (ii) remove “and \( E_2 \sim E_1 \in \mathcal{M} \)”

(Chapter 17; page 349; line -9) Replace 6 by 7

(Chapter 17; page 351; line 3) Replace “integrals” by “intervals”

(Chapter 17; page 355; line -10) Replace \( S \) by \( S' \)

Chapter 18

(Chapter 18; page 359; line -14) Remove the comma after “continuity”

(Chapter 18; page 365) Replace Problem 11 by: Prove Corollary 7.

(Chapter 18; page 365) Before the second 1/2” insert \( \leq \)

(Chapter 18; page 366; line 19) In the definition: First, replace \( E \) by \( X \) under the second integral. Second, replace \( f \) by \( \psi \) in the last integral

(Chapter 18; page 368; line 19)

(Chapter 18; page 368) In the second displayed equation, replace \( E_n \) by \( X_n \)

(Chapter 18; page 372; line -8) Replace “\( (X, \mathcal{M}) \) be a measurable space” with “\( (X, \mathcal{M}, \mu) \) be a measure space”

(Chapter 18; page 372; line -2) Insert a period before “Conversely”

(Chapter 18; page 377; line -9) Integrate over \( X \), not over \( E \), twice

(Chapter 18; page 384) On the last line, replace \( X_0 \) by \( X_+ \), the second time it occurs

(Chapter 18; page 387; line -1) Insert \( f \) after the integral sign

(Chapter 18; page 388; line -14) Insert “continuous” after “of”

(Chapter 18; page 390; line -2) Interchange \( \mu \) and \( \nu_n \)

(Chapter 18; page 391; line 11) Replace \( \frac{d\mu}{d\nu_n} \) by \( \frac{d\nu_n}{d\mu} \)

(Chapter 18; page 391; line -1) Replace \( \mathcal{M} \) by \( \mathcal{M}/ \sim \)

(Chapter 18; page 392) In the first displayed equation, replace \( \mu \) by \( \nu \), twice.
(Chapter 18; page 392) In the second displayed equation: replace \( p_\mu \) by \( \mu \) and replace \( \mu \) by \( \nu \).

(Chapter 18; page 393) In Problem 61, also assume \( \mu(A \cup B) < \infty \) and the two sets are equivalent not equal.

(Chapter 18; page 393) In Problem 66, also assume \( \nu(X) < \infty \).

Chapter 19

(Chapter 19; page 394) In the title of Section 19.2 and the corresponding page headings replace \( 1 \leq p \leq \infty \) by \( 1 \leq p < \infty \).

(Chapter 19; page 394) In the title of Section 19.4 and the corresponding page headings replace \( 1 < p < 1 \) by \( 1 < p < \infty \).

(Chapter 19; page 394) In the preamble, interchange the fifth and sixth sentences and replace “third” by “fourth”.

(Chapter 19; page 395; line 8) Insert “For \( 1 \leq p < \infty \),” before “Let”.

(Chapter 19; page 395; line 15) Replace \( \alpha \) with \( |\alpha| \).

(Chapter 19; page 395; line 24) Replace \( \alpha \) with \( |\alpha| \).

(Chapter 19; page 396; line 9) Replace \( fg \) by \( f \cdot g \).

(Chapter 19; page 397; line 1) Replace “Minkowski” by “Holder”.

(Chapter 19; page 397) Remove the word “converging” in the footnote.

(Chapter 19; page 399; line 6) On line 7 and 17, replace \( |f|^p \) by \( |f_n|^p \).

(Chapter 19; page 399) In Problem 3, replace \( |f|^p \) by \( |f_n|^p \).

(Chapter 19; page 399) In the title of Section 19.2, replace \( \leq \infty \) by \( < \infty \) in the section title.

(Chapter 19; page 399; line 3) Replace “of” by “to”.

(Chapter 19; page 403; line 11) Replace \( L^p(X, \mu) \) by \( L^p(X, \mu) \).

(Chapter 19; page 403; line 5) Replace \( L^p(X, d\mu) \) by \( L^p(X, \mu) \).

(Chapter 19; page 407) In the title of Section 19.4 and the corresponding page headings replace \( 1 < p < 1 \) by \( 1 < p < \infty \).

(Chapter 19; page 407; line 4) Replace \( \int_a^b g \cdot h \) by \( \int_a^b g \cdot h \, d\mu \).

(Chapter 19; page 408) In Problem 16, replace \( l \) by \( \ell \).

(Chapter 19; page 409) In Problem 18, remove “Banach-Saks Theorem”.

(Chapter 19; page 413; line 5) replace \( h_n \) by \( |h_n| \).

(Chapter 19; page 413; line 3) insert signed before measure.
(Chapter 19; page 413; 11) Insert “(suitably extended to signed measures)” after “Theorem”

Chapter 20

(Chapter 20; page 414; line 9) Replace ‘measurable rectangle’ by ‘measurable rectangle’ provided $\mu(A) < \infty$ and $\nu(B) < \infty$.

(Chapter 20; page 416; line 11) Replace $X$ by $E_x$

(Chapter 20; page 417; line 8) Replace (5) by (2)

(Chapter 20; page 418; line 8) Replace (5) by (2)

(Chapter 20; page 419; line 6) Replace $E \sim A$ by $A \sim E$

(Chapter 20; page 419; line 4) Replace “proposition” by “theorem”

(Chapter 20; page 420; line 1) Remove the comma

(Chapter 20; page 420; line 15) Put $X \times Y$ under the integral sign

(Chapter 20; page 420; line 2) Replace “in” by “is”

(Chapter 20; page 420; line 8) Insert “on” before $X \times Y$

(Chapter 20; page 422) In the first line of Problem 4, replace “general” by “complete”

(Chapter 20; page 423) In Problem 6: (i) Remove “(is an $\mathcal{R}_{\sigma \delta}$, in fact)”; (ii) Replace “D” by “$\Delta$”, then “

(Chapter 20; page 423) In Problem 7, replace “general” by “complete”

(Chapter 20; page 423) In Problem 10, replace “, then” by “and”

(Chapter 20; page 425; line 6) Replace “on” by “of”

(Chapter 20; page 425; line 3) Replace “vol” by “$\mu$-integral”

(Chapter 20; page 427; line 3) At the end of the first proof replace $I_{k,n}$ by $I_{k,m}$, four times.

(Chapter 20; page 427) In the statement of Theorem 13, replace “of” by “be”

(Chapter 20; page 429; line 16) Insert “bounded” before “intervals”

(Chapter 20; page 431; line 13) Insert “bounded” before “interval”

(Chapter 20; page 430; line 10) Replace $\mathcal{L}(\mathbb{R}^n)$ by $\mathbb{R}^n$

(Chapter 20; page 432; line 3) Replace $1/|\alpha|$ by $\alpha$

(Chapter 20; page 432; line 13) Replace $1/|c|$ by $|c|$

(Chapter 20; page 438) On the line before (30), replace $\int_a^b$ by $\int_{a,b}$
(Chapter 20; page 440) Problem 41: remove the first “bounded”

(Chapter 20; page 441) Insert a period at the end of the second displayed equation.

Chapter 21

(Chapter 21; page 447) In the footnote, replace ‘our view ’ by ‘view of ’

(Chapter 21; page 460; line -9) Insert with $0 \leq f \leq 1$ before Fix

(Chapter 21; page 461) Remove the first comma in the statement of Problem 40

(Chapter 21; page 465) In view of the brief historical remarks on the last paragraph of page 465, what in this Chapter is called the Riesz Representation Theorem should properly be called the Riesz-Kakutani Representation Theorem.

Chapter 22

(Chapter 22; page )