

Errata

Preface

- ▷ p.ix – line 12. Replace many on occasions with on many occasions

Chapter 1

- ▷ p.2 – line 6 from bottom. Replace hold with holds
- ▷ p.8 – line 8. Delete “a” [Let \approx be an equivalence...]
- ▷ p.9 – line 4 from bottom. Replace has lower with has a lower
- ▷ p.10 – line 5 (above Section 1.6). Insert after “Note that”
if for every pair x_1, x_2 in X either $x_1 \leq x_2$ or $x_2 \leq x_1$, then
- ▷ p.12 – line 3 (Proof of Theorem 1.2). Replace $x \in A_0 A$ with $x \in A_0$
- ▷ p.12 – line 23 (above Section 1.7). Insert (equipped with its natural ordering)
[... integers (equipped with its natural ordering) is well-ordered.]
- ▷ p.18 – lines 18, 19 (between Proposition 1.8 and Theorem 1.9). Replace twice nonempty set with set with more than one element
- ▷ p.18 – line 23 (between Proposition 1.8 and Theorem 1.9). Replace nonempty sets with sets with more than one element
- ▷ p.19 – line 16. Replace , where $\emptyset \neq A_0 \subseteq X$ with so that $A_0 \subseteq X$
- ▷ p.19 – line 19 (Proof of Theorem 1.9). Replace which implies that the nonempty set A_0 is an infinite set. with where A_0 is an infinite (at least countably infinite) set.
- ▷ p.24 – line 6 from bottom (Problem 1.2(a)). Replace $=$ with \supseteq
- ▷ p.26 – line 18 (Problem 1.12). Insert after “proper subset of Y .”
Apply this to show that a finite set has no proper equivalent subset.
- ▷ p.26 – lines 1–4 from bottom. Displayed formulas in Problem 1.13 should read:
 $A R_1 B$ if $A \nabla B = \emptyset$ (i.e., if $A = B$),
 $A R_2 B$ if $A \nabla B$ is finite,
 $A R_3 B$ if A and B are singletons,
 $A R_4 B$ if $A \subseteq B$ or $B \subseteq A$ (i.e., if $A \setminus B = \emptyset$ or $B \setminus A = \emptyset$),
 $A R_5 B$ if $A \subseteq B$ (i.e., if $A \setminus B = \emptyset$).
- ▷ p.28 – line 15 (Problem 1.17(b)). Replace $F \wedge G$ on \mathcal{F} with $F \wedge G$ in \mathcal{F}
- ▷ p.32 – lines 4, 5 (Problem 1.26). Replace nonempty sets with sets with more than one element
- ▷ p.32 – lines 7, 8 (Problem 1.26(a)). Replace (nonempty) finite sets with finite sets with more than one element

Chapter 2

- ▷ p.54 – line 10 from bottom (Example 2K). Replace $A \setminus \{s\}$ with $A \setminus \{x_s\}$
- ▷ p.61 – line 17 (Example 2K, 5th displayed equation). Replace y_j with y_i
- ▷ p.64 – line 11. Replace denotes with denote
- ▷ p.65 – line 8. Replace such the diagram with such that the diagram

- ▷ p.67 – line 6 from bottom. Replace \mathcal{M} and \mathcal{M} with \mathcal{M} and \mathcal{N}
- ▷ p.79 – line 18 (Problem 2.19, first line). Replace let with Let

Chapter 3

- ▷ p.88 – line 9 (Proposition 3.2). Replace Let S be set with Let S be a set
- ▷ p.90 – line 4 from bottom (Example 3D). Replace d_∞ with $d_\infty(x, y)$
- ▷ p.93 – line 4 from bottom. Replace equip with equips
- ▷ p.93 – line 3 from bottom. Replace rule with role
- ▷ p.94 – last line (Example 3F). Replace converges with converge
- ▷ p.96 – lines 1 to 6 (Example 3G). Replace these 6 lines with the next 2 lines.
for every $p \geq 1$. Indeed, take any $\varepsilon \in (0, \frac{1}{2}]$ and note that $g_n(\frac{1}{n} + \varepsilon) \rightarrow 0$ and $\int_0^1 |g_n(s)|^p ds \leq \frac{1}{n} + \varepsilon + g_n(\frac{1}{n} + \varepsilon)^p$. Hence $\int_0^1 |g_n(s)|^p ds \rightarrow 0$, and therefore
- ▷ p.101 – line 6 (below Definition 3.9). Replace x_0 with u
- ▷ p.101 – line 7 (below Definition 3.9). Replace exist with exists
- ▷ p.117 – line 11 from bottom. Replace be open ball with be an open ball
- ▷ p.122 – line 5 from bottom. Replace (a'),(a),(b) and (c) with (a'),(b),(c) and (d)
- ▷ p.123 – line 12 from bottom (Example 3P). Replace 3.44(c) with 3.44(b)
- ▷ p.124 – line 14. Insert if the subcollection is nonempty
[... a member of any base for X if the subcollection is nonempty.]
- ▷ p.124 – line 11 from bottom (Proof of Proposition 3.34). Replace X with x
- ▷ p.125 – Proposition 3.37 items (b), (c), (d). Replace three times \cup with \cap
- ▷ p.128 – line 15. Replace in it with in them
- ▷ p.129 – line 6 (Example 3R). Insert space after “metric”
- ▷ p.129 – line 6 (Example 3R). Insert . after “complete”
- ▷ p.132 – line 14 (first displayed formula in Example 3T). Replace d_X with d_Y
- ▷ p.135 – line 6 from bottom (Theorem 3.45). Replace 3.14(a) with 3.14(b)
- ▷ p.138 – line 3 (Corollary 3.47). Delete . after “ X ”
- ▷ p.141 – line 14 (Theorem 3.50). Delete of after “ F ” and before “over”
- ▷ p.142 – line 6 (displayed formula). Replace $F\tilde{J}$ with $FJ\tilde{J}$
- ▷ p.142 – line 9. Delete a after “another” and before “continuous”
- ▷ p.143 – last line. Replace meagre with meager
- ▷ p.144 – line 2. Replace comeagre with comeager
- ▷ p.144 – line 3. Replace nonmeagre with nonmeager
- ▷ p.145 – line 4 from bottom (Theorem 3.57). Insert complete before “metric”
- ▷ p.146 – line 2 (Proof of Corollary 3.57). Replace $A \setminus X$ with $X \setminus A$
- ▷ p.146 – line 10. Replace second category in x with second category in X
- ▷ p.147 – line 19 (Example 3W(a), line 2). Replace 3.56 with 3.57
- ▷ p.148 – line 14 (above Section 3.10). Replace Dually, A with Dually, a
- ▷ p.148 – line 19 (Section 3.10, line 3). Replace of A with of A
- ▷ p.153 – line 10 (Example 3X). Replace $\aleph_0 \leq A_\varepsilon$ with $\aleph_0 \leq \#A_\varepsilon$

- ▷ p.156 – line 2 from bottom. Replace (Theorem 3.20) with (Theorem 3.30)
- ▷ p.157 – line 5 from bottom. Replace then $\mathcal{B}' \in \dots$ with then $B' \in \dots$
- ▷ p.160 – line 9 from bottom (Example 3Z(i)). Delete a after “is”
- ▷ p.161 – line 10 from bottom. Replace according o with according to
- ▷ p.162 – line 20. Replace $d_Y((f_n^{(n)}(a), f_n^{(n)}(x)) < \varepsilon$ with $d_Y(f_n^{(n)}(a), f_n^{(n)}(x)) < \varepsilon$
- ▷ p.165 – line 14 (Problem 3.4). Replace $p + 1$ with $p - 1$
- ▷ p.167 – line 6 (Problem 3.8(b)). Replace $R^p(S) \subset R^q(S)$ with $R^p(S) \subset R^r(S)$
- ▷ p.167 – line 7 (Problem 3.8(b)). Replace $\text{diam}(S)^{\frac{p-r}{r}}$ with $\text{diam}(S)^{\frac{p-r}{pr}}$
- ▷ p.167 – line 13 (displayed formula). Replace d_∞ with $d_\infty(x, y)$
- ▷ p.167 – line 13 (displayed formula in Problem 3.9). Replace d_k with d_i
- ▷ p.171 – line 2 from bottom. Replace $\rightarrow (C[0, 1], d)$ with $\rightarrow (C[0, 1], d_\infty)$
- ▷ p.172 – line 7 from bottom. Replace $(C[0, 1]d_\infty)$ with $(C[0, 1], d_\infty)$
- ▷ p.172 – lines 4, 6 from bottom. Replace twice $(C[0, 1]d_p)$ with $(C[0, 1], d_p)$
- ▷ p.176 – line 16 (Problem 3.30). Insert continuous before “mapping”
- ▷ p.181 – lines 7, 6 from bottom. Items (b), (c) in Problem 3.42 should read:
 - (b) $B_\rho(x) \subseteq B_\rho[x]^\circ$ and $\partial B_\rho[x] \subseteq \{y \in X : d(y, x) = \rho\}$.
 - (c) $B_\rho(x)^- \subseteq B_\rho[x]$ and $\partial B_\rho(x) \subseteq \{y \in X : d(y, x) = \rho\}$.
- ▷ p.181 – line 2 from bottom (Problem 3.43(a)). Replace second = with \geq
- ▷ p.183 – line 18 (Problem 3.48(a)). Replace $\#A \leq \#B$ with $\#B \leq \#A$
- ▷ p.183 – line 18 (Problem 3.48(a)). Replace Problems with Problem
- ▷ p.184 – line 8 from bottom (Problem 3.50). Insert space after “topological”
- ▷ p.188 – line 5 (Hint to Problem 3.56(c)). Replace $\{v_n^{(k)}\}_{i \in \mathbb{N}}$ with $\{v_n^{(k)}\}_{k \in \mathbb{N}}$
- ▷ p.192 – lines 7, 8 (Hint to Problem 3.62(b)). Replace twice $\frac{1}{2}$ with $(\frac{1}{2})^{\frac{1}{p}}$
- ▷ p.192 – line 12 (Hint to Problem 3.62(b)). Replace $k \geq 1$ with $k \geq m$
- ▷ p.192 – last line (Hint to Problem 3.63). Replace $m \in \mathbb{N}$ with $n \in \mathbb{N}$
- ▷ p.193 – line 3 (Hint to Problem 3.63). Replace $V_n^- \rightarrow 0$ with $\text{diam}(V_n^-) \rightarrow 0$
- ▷ p.193 – line 11 (Problem 3.64(a)). Replace Problems with Problem
- ▷ p.194 – line 6 (Problem 3.66(b)). Replace Problems 3.42(a), Theorems 3.40 and 3.81, with Corollary 3.81

Chapter 4

- ▷ p.198 – line 1. Replace incorporate with incorporates
- ▷ p.199 – line 1 (Definition 4.1). Replace x and y in X with x and y in \mathcal{X}
- ▷ p.199 – line 23 (Proof of Proposition 4.2). Insert (iii) after “symmetry”
- ▷ p.204 – line 16. Replace $0 \leq \|\alpha u\| \leq |\alpha| \|u\| = 0$ with $\|\alpha u\| = |\alpha| \|u\| = 0$
- ▷ p.206 – line 5. Replace dicuss with discuss
- ▷ p.210 – line 12. Insert . at the end of the displayed line
- ▷ p.211 – line 9. Insert Similarly, $\alpha x \in \mathcal{M}^-$ for every scalar α .
 [(see Proposition 3.27 again). Similarly, $\alpha x \in \mathcal{M}^-$ for every scalar α .]
- ▷ p.212 – line 3 from bottom. Replace $\bigvee(\bigcap_{\gamma \in \Gamma} \mathcal{M}_\gamma)$ with $\bigvee(\bigcup_{\gamma \in \Gamma} \mathcal{M}_\gamma)$

- ▷ p.218 – lines 1 and 2 (far above Example 4H). Delete $\leq |\alpha| \|T\| \|x\|$
- ▷ p.218 – line 4 (displayed). Replace $\|\alpha T\| \leq |\alpha| \|T\|$ with $\|\alpha T\| = |\alpha| \|T\|$
- ▷ p.222 – line 3. Replace $1 \leq \|P_i\|_\infty$ and $1 \leq \|P_i\|_\infty$ with $1 \leq \|P_i\|_\infty$ and $1 \leq \|P_i\|_p$
- ▷ p.222 – line 3 (Example 4I). Replace $P_k \neq O$ with $P_i \neq O$
- ▷ p.224 – line 1. Insert $T \in \mathcal{B}[\mathcal{X}, \mathcal{Y}]$ and after “Moreover, if”
- ▷ p.225 – line 11 from bottom (above Theorem 4.21). Replace into with onto
- ▷ p.225 – line 6 from bottom (Proof of Theorem 4.21). Replace de with be
- ▷ p.226 – line 7 from bottom (Proof of Theorem 4.21). Replace Tx_n with Tx_k
- ▷ p.229 – line 11 from bottom (above Theorem 4.25). Replace if with of
- ▷ p.233 – line 9 (Proof of Theorem 4.27). Replace $\|\mathbf{a}\|_\infty$ with $\|\mathbf{a}\|_\infty = 1$
- ▷ p.235 – line 7 from bottom. Replace 4.30(b) with 4.30, part(b)
- ▷ p.237 – line 10 (Proof of Corollary 4.34). Replace $\mathcal{B}_1[0]$ with $B_1[0]$
- ▷ p.238 – lines 5 and 4 from bottom. Replace twice W with \widehat{W}
- ▷ p.240 – line 6 (above Theorem 4.39). Replace arrises with arises
- ▷ p.240 – line 9 from bottom (Proof of Theorem 4.40). Replace \mathcal{M} with \mathcal{N}
- ▷ p.241 – line 9 from bottom (after Theorem 4.41). Replace $\mathcal{B}[\widetilde{\mathcal{X}}, \widehat{\mathcal{Y}}]$ with $\mathcal{B}[\widetilde{\mathcal{X}}, \widehat{\mathcal{Y}}]$
- ▷ p.243 – lines 14, 16 (Proof of Theorem 4.43). Replace twice $B_\rho(x_0)$ with $B_{2\rho}(x_0)$
- ▷ p.243 – line 16 (Proof of Theorem 4.43). Replace $B_\rho(0)$ with $B_{2\rho}(0)$
- ▷ p.245 – line 4 (Proof of Proposition 4.46). Replace $e_i \in \mathcal{B}$ with $e_i \in B$
- ▷ p.245 – line 10 from bottom. Replace an operator with a transformation
- ▷ p.248 – line 4 (Example 4L). Replace $S_- =$ with $S_- x =$
- ▷ p.250 – line 15 (Example 4M). Replace $\sum_{k=0}^{\infty} |\xi_k|^k$ with $\sum_{k=0}^{\infty} |\xi_k|^p$
- ▷ p.251 – line 13 (Proof of Proposition 4.50). Replace 4.30 with 4.32
- ▷ p.254 – line 5 from bottom (Example 4N). Replace Problem with Example
- ▷ p.255 – lines 9–12 (Example 4O). 4 lines with 3 displayed formulas should read:

$\mathcal{B}_0[\mathcal{X}, \mathcal{Y}]^-$ lies in $\mathcal{B}_\infty[\mathcal{X}, \mathcal{Y}]$,
 and
 $\mathcal{B}_\infty[\mathcal{X}, \mathcal{Y}]$ is closed in $\mathcal{B}[\mathcal{X}, \mathcal{Y}]$,
- ▷ p.255 – line 18 (Example 4O). Insert after “.” and before “Conclusion:”
 Moreover, strong convergence to compact diagonals was shown in Problem 4.53.
- ▷ p.255 – line 20 (Example 4O). Replace which implies that with and
- ▷ p.256 – line 1 (Proof of Proposition 4.56). Replace 4.52(b) with 4.52(f)
- ▷ p.259 – line 9 from bottom (Proof of Lemma 4.59). Replace $f(x)$ with $f_1(x)$
- ▷ p.262 – line 9 (Proof of Theorem 4.61). Replace $ig(x)$ with $ig(ix)$
- ▷ p.267 – line 10 from bottom (Example 4Q). Replace **3Q** with **4Q**
- ▷ p.268 – line 18 (Example 4S, line 4). Replace space with spaces
- ▷ p.269 – line 19 (Problem 4.1(a)). Replace each α with each nonzero α
- ▷ p.270 – line 10 from bottom (Problem 4.3(iii')). Replace $\alpha \leq 1$ with $|\alpha| \leq 1$
- ▷ p.276 – line 10 from bottom (Problem 4.11). Replace $\sum_{i=1}^n$ with $\sum_{i=0}^n$
- ▷ p.281 – line 15 (Problem 4.19). Replace if the identity with of the identity

- ▷ p.288 – line 2 (Problem 4.31). Replace $L \in \mathcal{L}[\mathcal{X}, \mathcal{Y}]$ with $L \in \mathcal{L}[\mathcal{M}, \mathcal{Y}]$
- ▷ p.288 – line 11 (Hint to Problem 4.31). Insert \mathcal{Y} after “ \mathcal{Y} ” and before “.”
- ▷ p.290 – line 14 (Problem 4.35). Replace Theorem 2.12 with Theorem 2.19
- ▷ p.290 – line 4 from bottom (Problem 4.35). Replace \subset with \subseteq
- ▷ p.293 – last line (Problem 4.40). Replace This called with This is called
- ▷ p.294 – line 4 (displayed formula, Problem 4.41). Replace

$$\begin{aligned} \|TV\| = \|T\| \quad \text{and} \quad \|VS\| = \|S\| & \quad \text{with} \\ \|VS\| = \|S\| \quad \text{and} \quad \|TV\| = \|T\| & \quad \text{if } V \text{ is surjective} \end{aligned}$$
- ▷ p.294 – line 4 from bottom (Problem 4.43). Replace X with \mathcal{X}
- ▷ p.296 – line 5 from bottom. Replace von Newman with Newman
- ▷ p.299 – line 12 (Problem 4.52). Replace $B[\ell_+^p]$ with $\mathcal{B}[\ell_+^p]$

Chapter 5

- ▷ p.312 – line 19 (above Definition 5.1). Replace $v \in \mathbb{F}$ with $v \in \mathcal{X}$
- ▷ p.314 – line 2 from bottom. Replace inner space with inner product space
- ▷ p.319 – line 9 (Example 5B). Replace \langle , \rangle with $\langle ; \rangle$
- ▷ p.319 – last line (Example 5C). Replace Example 3D with Example 4D
- ▷ p.321 – line 12 (Example 5D). Replace since every with for every
- ▷ p.324 – line 14 (displayed formula below Definition 5.7). Replace $=$ with \subseteq
- ▷ p.326 – line 14 from bottom. Replace and with And
- ▷ p.326 – lines 3 and 2 from bottom. Replace three times

$$(\mathcal{M}\langle ; \rangle) \quad \text{with} \quad (\mathcal{M}, \langle ; \rangle) \quad \text{and} \quad (\mathcal{M}\langle ; \rangle_M) \quad \text{with} \quad (\mathcal{M}, \langle ; \rangle_M)$$
- ▷ p.327 – line 5. Replace Proposition 4.4 with Proposition 4.7
- ▷ p.332 – line 5 (above Corollary 5.14). Replace in x in \mathcal{H} . with x in \mathcal{H} .
- ▷ p.332 – lines 12 and 5 from bottom. Replace twice $M^{\perp\perp}$ with $\mathcal{M}^{\perp\perp}$
- ▷ p.333 – line 16 (Example 5H, line 6). Replace $\{x\}^\perp$ with $\{z\}^\perp$
- ▷ p.333 – line 25 (Example 5H, line 15). Replace scalar with nonzero scalar
- ▷ p.336 – line 4. Replace Corollary 5.10 with Corollary 5.11
- ▷ p.339 – line 5 (Proof of Proposition 5.19). Replace v is \mathcal{N} with v in \mathcal{N}
- ▷ p.341 – line 1 (Statement of Theorem 5.23). Delete operator
- ▷ p.342 – line 1 (Proof of Proposition 5.24). Delete . after “equivalent”
- ▷ p.346 – line 8 (Proof of Corollary 5.28). Replace \cup with \cap
- ▷ p.347 – line 4 from bottom (displayed formula, line 2). Replace $=$ with \leq
- ▷ p.349 – line 10 (Proof of Proposition 5.31). Replace Suppose with suppose
- ▷ p.349 – line 10 (Proof of Proposition 5.31). Replace $\sum_{N \in \Gamma}$ with $\sum_{k \in N}$
- ▷ p.349 – line 11 (Proof of Proposition 5.31). Replace $< \alpha - \varepsilon$ with $> \alpha - \varepsilon$
- ▷ p.352 – line 17 (Proof of Proposition 5.33). Replace $\langle x_0; x_i \rangle$ with $\langle x_i; x_0 \rangle$
- ▷ p.356 – line 20 (Proof of Theorem 5.42). Replace basis with bases
- ▷ p.357 – line 18 (Proof of Proposition 5.43). Replace an with a smallest
- ▷ p.359 – line 13 from bottom (Example 5.L). Replace basis with bases

- ▷ p.359 – line 4 from bottom (Example 5.L). Replace e_k is an with e_k is a
- ▷ p.360 – line 7 (Example 5.L). Replace e_k is an with e_k is a
- ▷ p.360 – line 10 (Example 5.L). Replace basis with bases
- ▷ p.360 – last line (displayed formula). Replace ε with ε^2
- ▷ p.361 – line 11 (Proof of Theorem 5.48). Replace If with if
- ▷ p.361 – line 14 (Proof of Theorem 5.48). Replace $\|e\|$ with $\|e\|^2$
- ▷ p.363 – line 18 (Example 5L(b)). Replace $\{\xi_j\}_{l \in \mathbb{N}}$ with $\{\xi_j\}_{j \in \mathbb{N}}$
- ▷ p.367 – line 19 (Proposition 5.51(a)). Replace $P \in \mathcal{B}[\mathcal{H}]$ with $P \in \mathcal{B}[\mathcal{X}]$
- ▷ p.368 – line 3 from bottom. Replace orthonormal with orthogonal
- ▷ p.369 – line 12. Replace such with such that
- ▷ p.370 – line 4 from bottom. Replace of next with of the next
- ▷ p.372 – line 13 (Example 5O). Replace orthonormal with orthogonal
- ▷ p.374 – line 20 (above Definition 5.60). Replace $\{\mathcal{R}(P_k)\}_{k \in \mathbb{N}}$ with $\{P_k\}_{k \in \mathbb{N}}$
- ▷ p.376 – line 9 (Proof 5.61). Replace (c) implies (d) with (c) implies (b)
- ▷ p.378 – line 10 from bottom (Corollary 5.64). Replace $\langle \rangle_*$ with $\langle ; \rangle_*$
- ▷ p.379 – line 21 (above Proposition 5.65). Replace $|f(x)|$ with $|f_y(x)|$
- ▷ p.381 – line 24. Insert if \mathcal{X} is a Hilbert space, before “which”
- ▷ p.386 – line 25 (Proof of Theorem 5.70, line 2). Insert the after “of”
- ▷ p.387 – line 8 from bottom. Replace Theorem 5.67 with Proposition 5.67
- ▷ p.388 – line 10 from bottom (displayed formula). Replace (S^*+T^*) with $(S+T)^*$
- ▷ p.389 – line 14 (Example 5P, below displayed matrix). Replace v_n with v_m
- ▷ p.391 – line 14 (Prop. 5.72). Replace An operator with A transformation
- ▷ p.394 – line 16 (Proof of Proposition 5.77). Replace $R(T) \subseteq$ with $\mathcal{R}(T) \subseteq$
- ▷ p.395 – line 3 (Proof of Proposition 5.77). Replace 5.73(b*) with 5.76(b*)
- ▷ p.395 – line 4 from bottom. Replace $R(TT^*)^-$ with $\mathcal{R}(TT^*)^-$
- ▷ p.396 – line 3 from bottom (Proposition 5.78). Replace $\langle Tx; x \rangle$ with $|\langle Tx; x \rangle|$
- ▷ p.396 – last line (displayed formula). Replace $|\langle Tu; u \rangle$ with $|\langle Tu; u \rangle|$
- ▷ p.399 – lines 1 and 2. Replace all T with P (five times)
- ▷ p.400 – line 13 (above Example 5R). Replace 5.76(b*) with 5.76(a*)
- ▷ p.402 – line 2 from bottom (Proof of Theorem 5.85). Correct: $B_2 - B_1 = \frac{1}{8}R^2$
- ▷ p.404 – line 3 from bottom. Replace $R(P)$ with $\mathcal{R}(P)$
- ▷ p.405 – lines 11,12 (Proposition 5.88). Insert . twice at the end of the lines
- ▷ p.406 – line 17 (Theorem 5.89). Replace Corollary 5.75 with Proposition 5.76
- ▷ p.407 – line 1 (Proof of Theorem 5.89). Replace 4.30 with 4.38
- ▷ p.407 – line 15 (Proof of Theorem 5.89, displayed formula). Replace H with \mathcal{H}
- ▷ p.407 – line 10 from bottom. Replace $\mathcal{R}((T^*T)^-)$ with $\mathcal{R}(T^*T)^-$
- ▷ p.410 – last line (Problem 5.5). Replace $|x_n(x)|$ with $|x_n(y)|$
- ▷ p.411 – lines 21, 22 (Problem 5.6). Replace second $x_{1(n)}$ x_1 with $x_{2(n)}$ x_2
- ▷ p.412 – line 8 (Problem 5.8). Replace Proposition with Propositions

- ▷ p.415 – line 2 (Problem 5.13). Replace $(1 - \frac{1}{k^2})^2$ with $(1 - \frac{1}{k^2})^{\frac{1}{2}}$
- ▷ p.416 – line 25 (Problem 5.17). Delete and
- ▷ p.416 – line 26 (Problem 5.17). Replace orthogonal with orthonormal
- ▷ p.419 – lines 3 and 4 (Problem 5.22). Swap converge with converges
- ▷ p.419 – lines 13 and 15 (Problem 5.23). Replace twice $\|T^n\|$ with $\|T_n\|$
- ▷ p.419 – line 14 (Problem 5.23). Replace Problems 5.5 with Problem 5.5
- ▷ p.421 – line 11 (Problem 5.28). Replace $\mathcal{B}[H_j, \mathcal{H}_i]$ with $\mathcal{B}[\mathcal{H}_j, \mathcal{K}_i]$
- ▷ p.421 – line 6 from bottom (Problem 5.29). Replace \mathcal{K}_{k+1} with \mathcal{H}_{k+1}
- ▷ p.422 – line 6. Replace matrix of operators with operator matrices
- ▷ p.422 – last line (Problem 5.30). Replace \mathcal{K}_{k+1} with \mathcal{H}_{k+1}
- ▷ p.423 – line 11. Replace matrix of operators with operator matrices
- ▷ p.423 – line 4 from bottom (Problem 5.30(c)). Replace unilateral with bilateral
- ▷ p.423 – line 3 from bottom (Problem 5.30(c)). Replace $\bigoplus_{k=-\infty}^{\infty}$ with $\bigoplus_{k=-\infty}^{\infty}$
- ▷ p.423 – line 2 from bottom (Problem 5.30(c)). Replace $\bigoplus_{k=-\infty}^{\infty}$ with $\bigoplus_{k=-\infty}^{\infty}$
- ▷ p.423 – last line and p.424 – lines 2–5 (Hint to Problem 5.30(c)). Replace all $\sum_{k=-\infty}^{-1}$ with $\sum_{k=-\infty}^{-n/2-1}$ and all $\sum_{k=0}^{\infty}$ with $\sum_{k=-n/2}^{\infty}$
- ▷ p.424 – line 3. Replace $(\sum_{k=-\infty}^{-1} \|x_{k+n}\|^2)^{\frac{1}{2}} \|x\|$ with $(\sum_{k=-\infty}^{-n/2-1} \|x_k\|^2)^{\frac{1}{2}} \|x\|$
- ▷ p.424 – line 5. Replace $\lim_n \sum_{k=-\infty}^{-1} \|x_{k+n}\|^2$ with $\lim_n \sum_{k=-\infty}^{-n/2-1} \|x_k\|^2$
- ▷ p.425 – line 5 from bottom (Problem 5.32(c) line 3). Delete n
- ▷ p.426 – line 2 (Problem 5.33). Replace Example 3L(c) with Example 5L(c)
- ▷ p.430 – line 12. Replace $\leq |\langle (Q_n - Q)x; x \rangle|$ with $= \langle (Q_n - Q)x; x \rangle$
- ▷ p.431 – line 19 (Hints to Problem 5.53). Replace 5.22(d) with 5.52(d)
- ▷ p.434 – lines 9 and 7 from bottom. Replace twice $\| -Q^{1/2} x \|$ with $\| -Q^{1/2} x \|$
- ▷ p.436 – line 8 from bottom (Hint to Problem 5.66(a)). Replace $=$ with \leq
- ▷ p.437 – line 6 from bottom. Replace $\{\langle Te_\gamma; e_\gamma \rangle\}$ with $\{\langle Te_\gamma; e_\gamma \rangle\}_{\gamma \in \Gamma}$

Chapter 6

- ▷ p.443 – line 2 should read: (c) \Leftrightarrow (d) by Propositions 4.37 and 6.1.
- ▷ p.443 – line 20 (Proposition 6.4). Replace $U: \mathcal{N}^\perp \rightarrow \mathcal{H}$ is unitary. with $U: \mathcal{N}^\perp \rightarrow \mathcal{N}^\perp \subseteq \mathcal{H}$ is unitary where \mathcal{N}^\perp is U -invariant.
- ▷ p.443 – line 24 (Proof of Proposition 6.4). Replace $= TT^*T$ with $= T^*TT$
- ▷ p.444, lines 17–20 (Proof of Proposition 6.4). Replace as follows.
 Since T is normal, T commutes with T^* and T . Hence $\mathcal{N} = \mathcal{N}(T)$ reduces T (Problem 5.34) and so does \mathcal{N}^\perp . Then \mathcal{N}^\perp is V -invariant because $T = VPQ$, and so the above inclusion holds for I and VV^* in $\mathcal{B}[\mathcal{N}^\perp]$.
- ▷ p.447 – line 4 (Proof of Lemma 6.8). Replace $p_n, q_n \in \mathbb{N}$ with $p_n, q_n \in \mathbb{N}_0$
- ▷ p.447 – lines 5 and 4 from bottom. Replace twice every with for every
- ▷ p.449 – line 8 from bottom (Corollary 6.11). Replace $d(\lambda - \zeta)$ with $d(\lambda, \zeta)$
- ▷ p.449 – line 4 from bottom. Replace von Newman with Newman

- ▷ p.450 – line 7 (displayed formula, above Proposition 6.13). Replace \mathcal{R} with R
- ▷ p.450 – line 9 from bottom (Proposition 6.13). Insert [Claim 1. If $\sigma(T)$ is empty, then $\varphi \circ R : \rho(T) \rightarrow \mathbb{C}$ is bounded.]
- ▷ p.450 – line 5 from bottom. Insert if $\sigma(T)$ is empty after “Theorem 3.86”
- ▷ p.452 – Diagram. — First row: Insert vertical line between $\mathcal{R}_\lambda^- = \mathcal{X}$ and $\mathcal{R}_\lambda^- \neq \mathcal{X}$
— Forth row: Replace $T_\lambda^{-1} \in \mathcal{B}[\mathcal{R}_\lambda, \mathcal{X}]$ with $T_\lambda^{-1} \notin \mathcal{B}[\mathcal{R}_\lambda, \mathcal{X}]$
- ▷ p.452 – line 10 from bottom (Proposition 6.14). Replace $\{\alpha_k\}_{i=1}^n$ with $\{\alpha_i\}_{i=1}^n$
- ▷ p.453 – line 9 from bottom (Proof of Proposition 6.16). Replace 3.32 with 3.27
- ▷ p.454 – lines 11 and 12 (Proof of Proposition 6.16). Replace as follows.
Moreover, since $\lambda \in \mathbb{C} \setminus \sigma_{AP}(T)$ if and only if $\lambda I - T$ is bounded below, the same argument of Proposition 6.11 shows that $\mathbb{C} \setminus \sigma_{AP}(T)$ is open. \square
- ▷ p.454 – lines 7 and 5 from bottom. Replace twice spectrum with spectra
- ▷ p.455 – line 13 (Proof of Proposition 6.17). Replace $\sigma_{AP}(T^*)$ with $\sigma_{AP}(T^*)^*$
- ▷ p.456 – line 12 from bottom. Replace $\sigma(R) \in [0, 1]$ with $\sigma(R) \subseteq [0, \infty)$
- ▷ p.456 – lines 9, 8, 6 from bottom. Replace three times $\sigma_P(T)$ with $\sigma_P(P)$
- ▷ p.456 – line 4 from bottom. Replace $\rho(T)$ with $\rho(P)$
- ▷ p.457 – line 3. Replace $\sigma_P(T)$ and $\rho(T)$ with $\sigma_P(J)$ and $\rho(J)$
- ▷ pp.457,458 (Proof of Theorem 6.19) Replace nine times α_n^{-1} with $(-1)^{n+1}\alpha_n$
- ▷ p.458 – line 3 (Proof of Theorem 6.19). Replace $\mu \in \rho(T)$ with $\mu \in \rho(p(T))$
- ▷ p.460 – line 11. Replace von Newman with Newman
- ▷ p.460 – line 10 from below (Proof of Proposition 6.21). Replace \mathcal{R} with R
- ▷ p.461 – line 10 (above Proposition 6.22). Delete the
- ▷ p.462 – line 6. Replace von Newman with Newman
- ▷ p.462 – line 11 (Corollary 6.23). Delete , and $\|(\lambda I - T)^{-1}\| \leq (|\lambda| - \|T\|)^{-1}$
- ▷ p.463 – line 24 (Proof of Proposition 6.24). Insert , after “that is”
- ▷ p.464 – line 16 (Proof of Proposition 6.25). Replace $W(T)$ with $W(T)^-$
- ▷ p.466 – lines 4 and 5. Replace $\|T\| = \langle Tx; x \rangle$ with $\|T\| = |\langle Tx; x \rangle|$
- ▷ p.466 – line 23 (Example 6B). Replace $T \in \mathcal{B}[\mathcal{H}]$ with $T \in \mathcal{B}[\mathcal{X}]$
- ▷ p.466 – line 24 (Example 6B). Replace manifolds with linear manifolds
- ▷ p.467 – line 15 (Example 6C). Replace $\sigma_R(T^*)^*$ with $\sigma_P(T^*)^*$
- ▷ p.469 – line 10 (Example 6E – displayed). Replace $\bigoplus_{k=-\infty}^{\infty}$ with $\bigoplus_{k=-\infty}^{\infty}$
- ▷ p.470 – line 11 (Example 6C). Replace $(\{\alpha_k\}_{k=-\infty}^{\infty})$ with $\text{shift}(\{\alpha_k\}_{k=-\infty}^{\infty})$
- ▷ p.470 – last line (Example 6F). Replace $\|y_k\|^2$ with $\|y_{k+1}\|^2$
- ▷ p.471 – line 6 from bottom (Example 6G). Replace \subseteq with \in
- ▷ p.472 – line 8 from bottom (Example 6G). Replace $0 \neq \sigma_R(T)$ with $0 \notin \sigma_R(T)$
- ▷ p.473 – line 2. Replace matrix of operators with operator matrices
- ▷ p.473 – line 3 from bottom (Example 6H). Replace $\lambda \neq \sigma_P(T)$ with $\lambda \notin \sigma_P(T)$
- ▷ p.474 – line 12 (Example 6H). Replace Example 6E with Example 6D
- ▷ p.474 – line 15 (Example 6H – displayed formula). Swap $\sigma_R(T)$ with $\sigma_P(T)$
- ▷ p.474 – lines 19,20 (Example 6H). Replace

- is not included in the boundary of the spectrum *with* has nonempty interior
- ▷ p.477 – line 12 (displayed). Replace at the end of the line , with .
 - ▷ p.477 – line 9 from bottom. Replace Theorem 3.30 with Corollary 6.31
 - ▷ p.478 – lines 19, 20, 21 (Proof of Proposition 6.33). Replace as follows.
compact, then Theorem 4.52 ensures that $\{\lambda_n^{-1}y_n\}$ has no bounded subsequence. That is, $\sup_k |\lambda_k|^{-1} = \sup_k \|\lambda_k^{-1}y_k\| = \infty$, and so $\inf_k |\lambda_k| = 0$ for every subsequence $\{\lambda_k\}$ of $\{\lambda_n\}$. Thus $\lambda_n \rightarrow 0$. □
 - ▷ p.479 – line 9 from bottom. Replace exists with exist
 - ▷ p.479 – line 7 from bottom. Replace basis with bases
 - ▷ p.481 – line 13 (Proposition 6.36). Replace $\langle P_\gamma x; P_\gamma x \rangle$ with $\langle P_\gamma x; P_\gamma y \rangle$
 - ▷ p.481 – line 2 from bottom (displayed). Replace $\lambda \in \Gamma$ with $\gamma \in \Gamma$
 - ▷ p.481 – line 2 from bottom (displayed). Replace $\sigma_R(T) \neq \emptyset$ with $\sigma_R(T) = \emptyset$
 - ▷ p.481 – last line (displayed). Replace $\lambda \in \Gamma$ with $\gamma \in \Gamma$
 - ▷ p.482 – lines 1 and 3 (Proposition 6.37). Replace twice $\sum_{\gamma \in \Gamma}$ with $\sum_{\gamma \in \Gamma}$
 - ▷ p.482 – line 21 (Proposition 6.37). Insert x after “ P_β ” and after “ P_γ ”
 - ▷ p.482 – line 27 (Proposition 6.37). Replace $\rho(T) \setminus \sigma_P(T)$ with $(\mathbb{C} \setminus \rho(T)) \setminus \sigma_P(T)$
 - ▷ p.483 – line 8 from bottom. Replace Definition 4.45 with Corollary 4.55
 - ▷ p.487 – line 7 from bottom. Replace Corollary 6.40 with Proposition 6.40
 - ▷ p.490 – line 4 from bottom. Replace Since with since
 - ▷ p.491 – last line. Replace Nikodýn with Nikodým
 - ▷ p.492 – line 5 (Theorem 6.47, displayed formula). Replace , with .
 - ▷ p.499 – line 6 from bottom. Delete , at the end of the line
 - ▷ p.492 – line 13 (below Theorem 6.48). Replace $R(P(\Lambda))$ with $\mathcal{R}(P(\Lambda))$
 - ▷ p.501 – line 12. Replace $\mathcal{H} \neq \{0\}$ with \mathcal{H} of dimension greater than one
 - ▷ p.502 – line 3 from bottom. Replace XX^* with $X^*X + Y^*Y - YY^*$
 - ▷ p.502 – line 2 from bottom (Problem 6.16). Replace X^*x with X^*u
 - ▷ p.503 – line 2 from bottom. Replace Problem 6.17 with the above result
 - ▷ p.504 – line 7 from bottom (Problem 6.23). Replace $\mathcal{M}^\perp = \emptyset$ with $\mathcal{M}^\perp = \{0\}$
 - ▷ p.506 – line 5 from bottom. Replace , with . before “Moreover”
 - ▷ p.507 – lines 2–14 (Hint to Problem 6.27(b)). Replace as follows.
Hint: Take any $0 \neq \alpha \in \mathbb{R}$. Since $\alpha i \in \rho(T)$ and $(\alpha i I - T)$ is hyponormal, $\|(\alpha i - T)^{-1}\| \leq |\alpha|^{-1}$ (Problem 6.14). Hence $\alpha^2 \|(\alpha i I - T)^{-1}(\alpha i I - T)x\|^2 \leq \alpha^2 \|x\|^2 + \|Tx\|^2 - 2\operatorname{Re} \langle \alpha i x; Tx \rangle$. Thus $2\alpha \operatorname{Im} \langle Tx; x \rangle \leq \|Tx\|^2$ and $\operatorname{Im} \langle Tx; x \rangle = 0$.

References & Index

- ▷ p.511 – line 12 from bottom. Replace Notes in with Notes on
- ▷ p.513 – line 13. Replace Rolt with Holt
- ▷ p.515 – last line. Replace 6nd with 6th
- ▷ p.518 – line 23, right column. Replace comeagre with comeager
- ▷ p.522 – line 23, right column. Replace meagre with meager
- ▷ p.523 – line 7, left column. Replace nonmeagre with nonmeager

- ▷ p.524 – line 5 from bottom, right column. Replace Nikod'yn with Nikodým
- ▷ p.525 – line 20, left column. Delete restriction of a function, 5
- ▷ p.527 – lines 6 and 7 from bottom, left column. Insert page number 412