René L. Schilling: **Measures, Integrals, and Martingales (2nd edn)**

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Misprints and smaller changes. Updated: February 8, 2024.

Page, Line	**Reads**	**Should Read**
p. 22, Prob. 3.14	which contains X	which contains $\emptyset, X$
p. 28, Lemmas 4.8, 4.9	measure space (*twice*)	measurable space (*twice*)
p. 29, Prob. 4.6	assigns to every interval $[a, b)$ with $b - a > 2$ finite mass	assigns to every interval $[a, b)$ with $b - a > 2$ infinite mass
p. 29, Prob. 4.8	finitely additive	is finitely additive
p. 38, Prob. 5.13	which contains X	which contains $\emptyset, X$
p. 38, Prob. 5.13(i)	formation of complements.	formation of complements and finite intersections.
p. 43, line 4 below	$\mu(S_n)$	$\mu(S_i)$
p. 47, line 1,2 above	On the other hand, monotonicity ... entail ... $\leq \lambda[a, b)$,	On the other hand, for each I_n, $n = 1, \dots, N$ there is some $I'_n \in \mathscr{J}$ such that $I_n \subset I'_n$ and $\dot{\bigcup}_{n=1}^N I'_n = [a, b)$. Monotonicity and finite additivity of λ entail $\sum_{n=1}^N \lambda(I_n) \leq \sum_{n=1}^N \lambda(I'_n) = \lambda\left(\dot{\bigcup}_{n=1}^N I'_n\right) = \lambda[a, b)$,
p. 50, Prob. 6.4	Recall from Problem 9.14	Recall from Problem 4.15
p. 54, line 2 above	Theorem 5.6	Theorem 5.8
p. 57, line 5 below	linear	affine linear
p. 58, line 4 above	$\tau_x(\lambda^n) \overset{7.10}{=} \lambda^n$	$\tau_x(\lambda^n) \overset{7.8}{=} \lambda^n$
p. 59, Prob. 7.12	$C_2 = J_2^{00} \cup J_2^{01} \cup J_2^{10} \cup I_2^{11}$	$C_2 = J_2^{00} \cup J_2^{01} \cup J_2^{10} \cup J_2^{11}$
p. 62, line 5 below	$\sum_{j=m}^M$	$\sum_{j=0}^M$ *where:* $A_0 := (A_1 \cup \dots \cup A_M)^c$
p. 79, Problem 9.5	$\int u_n \, d\mu \uparrow \int u \, d\mu$	$\int u_{n+K} \, d\mu \uparrow \int u \, d\mu$
p. 91, line 12 above	Corollary 11.3	Theorem 10.3(iv) together with Corollary 11.3
p. 92, line 8 below	Theorem 9.6(i)	Theorem 11.2(i)
p. 93, Prob. 11.3(vi)	$\mathbb{V}\xi = \int (\xi - \mathbb{E}\xi)^2 \, dP$	$\mathbb{V}\xi = \int (\xi - \mathbb{E}\xi)^2 \, d\mathbb{P}$
p. 98, line 1/2 above	Corollary 11.4(iv)	Corollary 11.4
p. 105, line 10 below	Appendix G	Appendix E
p. 120, line 7 above	$\frac{1}{n^p}$	$\frac{1}{n}$
p. 137, line 6 above	und	and
p. 147, line 8 above	Theorem 12.9(ii)	Theorem 12.9
p. 153, Prob. 14.19(ii)	$\int_{\mathbb{R}} \cdots$	$\int_X \cdots$
p. 185, Ex. 16.11	Euler's Inegrals.	Euler's Integrals
p. 187, Caution	Lemma 17.3 does not hold for $p = \infty$	Lemma 17.2 does not hold for $p = \infty$ if we want that the supports of the simple functions have finite μ-measure.
p. 192, line 13 above	compact sets	open balls
p. 194, line 11 above	$\\|u\\|_\infty \mathbb{1}_{\mathrm{supp}\,u}(x) e^{-\|z\|^2/2}$	$\\|u\\|_\infty \mathbb{1}_{\mathbb{R}^n}(x) e^{-\|z\|^2/2}$
p. 200, line 12 below	$\sum_{i=1}^\infty \mu_\epsilon^*(A_i) \leq \mu^*(A)$	$\sum_{i=1}^\infty \mu_\epsilon^*(A_i) \leq \sum_{i=1}^\infty \mu^*(A_i)$
p. 208, line 5 below	$\pi^{n/2}/\Gamma\big(\frac{1}{2} + 1\big)$	$\pi^{n/2}/\Gamma\big(\frac{n}{2} + 1\big)$

turn over

Page, Line	Reads	Should Read
p. 236, line 4 above	$\int \lvert \mathbb{I}_A - u\rvert^2 \, d\nu$	$\int \lvert \mathbb{I}_A - u\rvert \, d\nu$
p. 237, lines 11/12 above	$(0 \vee f \wedge 1)^2 = 0 \vee f^2 \wedge 1$ $(0 \vee (1-f) \wedge 1)^2 = 0 \vee (1-f)^2 \wedge 1$	$(0 \vee f \wedge 1)^2 \le 0 \vee f^2 \wedge 1$ $(0 \vee (1-f) \wedge 1)^2 \le 0 \vee (1-f)^2 \wedge 1$
p. 238, line 14 above	$\{u \in C(X) : \lim_{\lvert x\rvert \to \infty} u(x) = 0\}$	$\{u \in C(X) : \forall \epsilon > 0 \; \exists K \subset X$ compact $\forall x \in K^c : \lvert u(x)\rvert \le \epsilon\}$
p. 241, line 10 below	*add the following sentence →*	If $p = 1$ and $q = \infty$ we use $\operatorname{sgn}(h)\mathbb{I}_{A_n}$ (A_n is an exhausting sequence) instead of $\operatorname{sgn}(h)\lvert h\rvert^q$. This gives $h\mathbb{I}_{A_n} = 0$ a.e., hence $f = g$ a.e.
p. 243, line 12 below	Yosida [59, Section IV.9, Example 3]	Dunford and Schwartz [15, Section IV.8.1]
p. 243, line 8 below	Rheorem	Theorem
p. 252, line 7 above	In particular,	If X is separable,
p. 267, line 9 below	$\int_{B^+} u \, d\mu - \int_{B^-} (-u) \, d\mu$	$\int_{B^+} u \, d\mu + \int_{B^-} (-u) \, d\mu$
p. 270, line 5 above	$\int_{K^c_{n(k)}} (-u^-_{k+1}) \, d\mu$	$\int_{K^c_{n(k)}} u^-_{k+1} \, d\mu$
p. 299, hint 24.9(iii)	with $\tau_\kappa := \inf\{n : \lvert M_n\rvert > \kappa\}$ ... $M_{\tau \wedge n_\kappa}$ ... $A_{\tau \wedge n_\kappa}$	with $\tau_\kappa := \inf\{n : \lvert S_n\rvert > \kappa\}$ ... $S_{\tau_\kappa \wedge n}$ ... $A_{\tau_\kappa \wedge n}$
p. 314, line 13 above	$\mu(Q)/\lambda^n(Q)$	$\mu(e+Q)/\lambda^n(Q)$
p. 334, line 11 below	$\lVert g - P_E g\rVert$	$\lVert g - P_E g\rVert^2$
p. 362, line 11 above	Theorem 27.19	Corollary 27.20
p. 367, Prob. 27.8	$\mathbb{E}^{\mathscr{G}} = \mathbb{E}^{\mathscr{G}}$	$\mathbb{E}^{\mathscr{G}} = E^{\mathscr{G}}$
p. 385, line 4 above	$\{\chi_{k,j} = \pm 1\}$	$\{\chi_{k,j} = \pm 2^{k/2}\}$
p. 389, line 15 above	Note that $\psi = \psi_{0,1} = \chi_{0,1}$ ... while $\psi_{0,-1}(x) = $ ...	Note that $\psi = \psi_{0,0} = \chi_{0,1}$ ... while $\psi_{-1,0}(x) = $ ...
p. 417, line 16 below	$_K \le u_\epsilon \le \mathbf{1}_{U_\epsilon}$	$\mathbb{1}_K \le u_\epsilon \le \mathbb{1}_{U_\epsilon}$
p. 417, line 14 below	$0 \le w_\epsilon \le \ _U$	$0 \le w_\epsilon \le \mathbb{1}_U$
p. 422, line 3 below	$\ldots \overset{C.3}{=} \ldots$	$\ldots \overset{7.9}{=} \ldots$
p. 442, line 10 above	Obviously ... they satisfy	If $\lvert u(x)\rvert \le M$, then they satisfy
p. 442, line 11 above	$\lvert S_\pi[u]\rvert \le S_\pi[\lvert u\rvert] \le M(b-a)$ $\lvert S^\pi[u]\rvert \le S^\pi[\lvert u\rvert] \le M(b-a)$	$\lvert S_\pi[u]\rvert \le M(b-a)$ $\lvert S^\pi[u]\rvert \le M(b-a)$
p. 465–467 References	*concerns: page numbers (given in parentheses at the end of each entry) where references are used*	*by some error, you have to add* $n \in \{2,3,4,5\}$ *to the page numbers given*

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