

## Typos in Probability: Theory and Examples, 3rd Edition

This list covers only math errors, not spelling, punctuation, or incorrect headers which are caused by the way TeX makes pages.

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Page 4, part (iv) of (1.1):  $F(x-) = P(X < x)$

Page 4, line -3:  $\{X \leq y\} \downarrow \{X \leq x\}$

Page 8, Exercise 1.10: 1. for  $x \in (g(\alpha), g(\beta))$  [missing ]  
2. the answer is  $(1/a)f((y-b)/a)$

Page 12, (3.1a): superfluous "If".

Page 14, Exercise 3.5: Suppose  $0 < b \leq a$

Page 15, (ii) should assume  $g \geq 0$  and  $g(x) \rightarrow \infty$  as  $|x| \rightarrow \infty$ .

Page 16, line (b):  $Y > M$  should be  $|Y| > M$ .

Page 24, lines 2–4 of proof. It is trivial to check that  $\Omega \in \mathcal{L}$ . The facts being quoted here are relevant when checking  $\mathcal{L} \supset \sigma(\mathcal{A}_1)$  implies (4.2').

Page 27, line -3:  $\prod_{i=m}^n |X_i|$ , line -1: general case should be case (\*b)

Page 42, third display from bottom:  $E(\bar{X}_{n,1}^2/n)$  [bar is missing]

Page 43: reference to exercise 3.10 of Chapter 2 (two thirds of the way down the page) should be to Exercise 3.8.

Page 44, next to last display:  $E\bar{X}_{n,k} = \sum_{j=1}^{m(n)} 2^j 2^{-j} = m(n)$ .

Page 44, line -8: Using (5.5) now [not (5.6)]

Page 61, line 9: (4.5) should be (4.4)

Page 66, lines 11, 12:  $dx$  should be deleted

Page 67, Exercise 8.7. Suppose the  $X_n$  are independent

Page 70, second line after (H1). Missing subscripts on  $\mu = EX_i^+ - EX_i^-$

Page 85, lines -5 to -4:  $g(Y_n) \rightarrow g(Y_\infty)$ , i.e., no  $f$

Page 95 line 1: add "for  $x \in hZ$ " at the end of first line.

Page 102, Exercise 3.21: 8.11 should be 8.10, and 8.10 should be 6.5

Page 118, line -7: Example 4.8 not 4.9

Page 137, it is better to define  $\|\mu - \nu\| = \frac{1}{2} \sum_x |\mu(x) - \nu(x)|$

Page 147, line -5:  $P(|\bar{X}_1(\epsilon)| > y)$

Page 155, line 4: this “stable law” and the “stable laws” on Pages 156, line -2 should not be in bold because the definition is given on page 156, line -1

Page 158: Example should be numbered 7.5, not 7.4.

Page 158 in (7.17): “ $t^{3/2}$ ” should be “ $t^{2/3}$ ”.

Page 160, last line:  $-\epsilon^2$  should be  $-\epsilon^{-2}$ .

Page 175, (1.3). We need to suppose  $P(N < \infty) > 0$

Page 175, line -2: Superscript  $N$  should be  $\{1, 2, \dots\}$

Page 198: the sentence just before (3.6) should go just before Theorem (3.7).

Page 198, line -6: in  $\{(x, y) : y \geq 0\}$

Page 200, fourth line of the proof:  $1 < k < n$  should be  $1 \leq k < n$ .

Page 222, line 9:  $\int_A g(X) dP$ , not  $g(Y)$

Page 231, definition of  $(H \cdot X)_n$ , when  $n = 0$  the sum is empty so  $(H \cdot X)_0 = 0$

Page 233, line 2:  $E(K \cdot Y)_n \geq 0$ , i.e.,  $Y$  not  $X$

Page 239, line 3. Second fraction should be:

$$\frac{(m+1)!(n-m)!}{(n+2)!/2}$$

page 242 top:  $\sum_{m=1}^{\infty} \log(q_m) > -\infty$  is a tail event so Kolmogorov’s inequality implies  $\nu(X = 0) \in \{0, 1\}$

Page 243, top:  $X_n$  converges to  $X$  in  $L^1(\nu)$ , so  $\nu(X = 0) < 1$  and the application of Kolmogorov’s 0-1 law cited before the proof implies  $\nu(X = 0) = 1$ .

Page 243, line 1 of subsection d:  $i, n \geq 1$ , not  $\geq 0$

Page 248. The remark should refer to Exercise 4.5.

Page 250, line 9:  $\left(\frac{p}{p-1}\right)^p$

Page 253: Reference to Kronecker’s Lemma at the end of the proof of (4.10) should be to (8.5) of Chapter 1, not (8.1) of Chapter 1.

Page 265, line 5:  $P(G|B \text{ gets } r \text{ votes})$ , i.e.,  $B$  not  $A$

Page 269, last sentence of proof of (7.1): Since  $E|X_N| < \infty$  and  $X_n$  is uniformly integrable.

Page 270, (7.5): If  $N$  is a stopping time with  $EN < \infty$  then

Page 306, Example 4.7: the exercise referred to should be 3.10, not 3.9.

Page 337, Exercise 1.7.  $\nu$  should be independent of  $Y$ .

Page 359, Exercise 6.1: The application does not work since (c) does not hold. As a counterexample consider  $\xi_1$  uniform on  $\{0, 1, 2, 3\}$  and  $\chi_{n+1} = \chi_n + 1 \pmod{4}$ .

Page 359, line -1:  $L_{0,m} + L_{m,n} \leq L_{0,n}$

Page 360, Exercise 6.2:  $EL_1$  and  $EL_2$  should be  $EL_{0,1}$  and  $EL_{0,2}$ .

Page 392, last equation in proof of (4.6):  $E_0(1/2; T_a < t)$

Page 397, line -3:  $h_k(\theta, t)$  should be  $f_k(x, t, \theta)$

Page 430, equation (8.11): a factor of  $2 \cdot (-1)^m$  is missing from the summand.

Page 434:  $M(t) \leq \sup\{|B(s) - B(t)| : t_{k-1} \leq s, t \leq t_{k+2}\}$

Page 442, lines -4:  $F_i(x)$  should be  $F_i(x_i)$

Page 443, line 4:  $(a, b]$  is shorthand for  $(a_1, b_1] \times (a_d, b_d]$

Page 459, in Exercise 4.3:  $j_m$  should be  $a_j$ .

Page 467, just before Fubini. The measures should be  $\mu_1$  and  $\mu_2$  not  $\mu$  and  $\nu$ .

Page 494: the change of variables formula is on page 17, not page 16.

Page 495: Law of the iterated logarithm page 435 not 129.