

Typos in “Essentials of Stochastic Processes” by R. Durrett

(Page numbers are on the left; the arrows $A \rightarrow B$ means that B should replace A .)

vi Family Update: out \rightarrow our

vii 3. Poisson Process: Compund \rightarrow Compound

16 Solution to Ex 2.11 : “we must have $V \leq 1$, so that $U \geq x - 1$ ”. Also, the lower limit on the integral is $x - 1$ instead of $1 - x$.

24 $Z \rightarrow X$ in the last display.

41, line 2: properly \rightarrow property

44 Not all the arrows in the diagram are correct.

45 Line 13. (3.3) \rightarrow (3.4).

45 proof of theorem: $x \rightarrow y, y \not\rightarrow x$

47 proof of Lemma 3.9: $\rho_{xy}^{k-1} \rightarrow \rho_{yy}^{k-1}$

48 Here N_y is used for $N(y)$.

50, Exercise 4.1: $i, j \rightarrow i + j$.

50, line 6. $i \rightarrow x$.

52 225 \rightarrow 210

53, line 3. $I_x \rightarrow I_y$.

53 Ex 4.6: go to the left from 1 \rightarrow go to the left from 0

53 definition of stationary dist: add in the fact that it sums to 1. Also, n means different things in $p^n(x, y)$ and in $1 \times n$ matrix.

55 very top: 4.4 \rightarrow 4.5

58 very top: always start with day \rightarrow always start every day

58, line after the first matrix: states 2,3,4 should be 1,2,3.

59 $I_n = 2$ and $D_n = 3$ in line 4 are not defined here. Actually, $I_n = X_n$ is the chain (I stands for inventory) and D was defined on page 32 (D stands for demand).

60 Example 5.2: For a new of example \rightarrow For a new example

60 Exercise 5.1: even \rightarrow odd

61 top: lim should be in Roman

62, diagram: the probabilities are not right.

63, (5.5): $c \rightarrow \pi(l)$.

64 Example 5.5: Denominator of $\pi(3)$ should be 116, not 176

66 Ex 6.1: win with \$1 \rightarrow win \$1 with

67 Solution to Ex 6.2: 6.2 \rightarrow 6.1

67 Middle: (6.1) \rightarrow (*)

68 Statement of Ex 6.3: 20/18 \rightarrow 20/38. Also, .005127 \rightarrow .005128.

71 top and 86 middle: Do not need aperiodicity here.

72 Back to TT: it take longer \rightarrow it takes longer

73 end of Ex 6.8: are TH... are TT \rightarrow are TT... are TH
 73 Third line of Example 7.1. $p \rightarrow 1 - p$.
 73 Bottom line: $i + 1 \rightarrow i$ in one place.
 74 I. When $p < 1/2$: One the other hand \rightarrow On the other hand
 77 Ex 7.2: there were are \rightarrow there we are
 79 Proof: 7.8 \rightarrow 7.6
 85 Theorem 4.7: remove comma after S , or add one before S .
 86 Theorem 7.2: remove “then”
 90 Ex. 9.9 spelling: “likley”
 91 9.12b: stationary distribution of p or p^2 ? (One might as well compute both.)
 95 Exercise 34. “if we each time” should be fixed. Also $n \rightarrow N$.
 97 Problem 9.41. The ” after $\frac{2}{3}$ is misplaced.
 97 Problem 9.42. Example 6.2 \rightarrow Example 6.3.
 98 Problem 9.49. The probabilities do not add up to 1.
 98 Problem 9.51. Assume infinitely many p_i ’s are > 0 . Also, there is a typo in “probabil-
 ity”.
 130, top display: Some n ’s should be $n + 1$ ’s, etc.
 130, Definition: of \rightarrow be
 130, diagram: $S \rightarrow s$
 130 3 lines from the bottom: $s < T_{n-1} \rightarrow s < T_{n+1}$
 132 line 6: fourth \rightarrow fifth
 135, middle: (i) is a very strong assumption...
 153 7.13: The problem has an (a) but no (b).
 153 7.16(b): Unclear wording.
 154 7.21: $\frac{2}{3}$ of a vehicle... Also passes in an hour?
 163, top line: $P_1(T_\infty < \infty) = 1$.
 167, line 3: $t - s \rightarrow t + s$.
 168 display 2.9. The binomial coefficient should be $\binom{j-1}{j-i}$. In the proof, $n_k \geq 0$ should be
 $n_k \geq 1$.
 200 bottom line: $p_{i,j}(t) \rightarrow p_t(i, j)$ Same comment about the answer on page 276.
 201 8.5: sales may reduce the inventory to 0....
 273 1.25: Ans. = $2/n$ (By the way this page is unnumbered)
 273 2.17: $m \rightarrow n - 2$; also reverse the roles of p and $1 - p$.
 274 9.7: 5 is not recurrent
 274 9.9a: J, T, and H \rightarrow J, T, and M
 275 9.33b: 13.7 \rightarrow 14.7
 275 7.15(b): There is a missing $\frac{1}{8}$.