

Errata

Elementary Statistics for Geographers, 3rd Edition

Chapter 1

p. 31: 1st paragraph: 1st line: “20” should be “22”

Chapter 2

p. 41: Example 2-1: 1st paragraph: last line: “Chapters 2, 3, and 4 and in Chapter 14” should be “Chapters 2 and 3 and in Chapter 14”

p. 49: Replace second equation and following sentence with the following:

$$h = 3.5 s n^{-1/3}$$

where h is the histogram bin width, and s is the standard deviation of the data (see Chapter 3).

p. 54: Last paragraph: 4th line from bottom: “DO data in Figure 2-6” should be “DO data in Figure 2-4”

p. 59:

a: 1st paragraph: 7th line: “\$5,000” should be “\$50,000”

b: 2nd paragraph: last line: “the forth column is 50.” should be “the fourth column is 50.”

p. 69: Last line: “Unlike the quartile plot” should be “Unlike the quantile plot”

p. 70:

a: Example 2-7: 2nd paragraph: first line: “shown in the top” should be “shown in the left”

b: “ : “ “ : third line: “The bottom” should be “The right”

c: “ : “ “ : fifth line: “in the lower part of the figure” should be “in the right part of the figure”

p. 84: Figure 2-25: Legend: 2nd line: “0.4-0.4” should be “0.4-0.5”

Chapter 3

p. 100: Equation at bottom of page: “= 40” should be “= 41”

p. 100, formulas in numbered list should be:

1. First quartile rank: $(n+1)/4$
2. Second quartile (median) rank: $2(n+1)/4$
3. Third quartile rank: $3(n+1)/4$

p. 100, table formulas should be:

$$(n+1)/4 = 13$$

$$2(n+1)/4 = 25$$

$$3(n+1)/4 = 38$$

p. 102: Next-to-last paragraph: 5th line: “all N observations in the population” should be “all N elements in the population”

p. 106: Last line: “Appendix 3b” should be “Appendix 3a”

p. 107: 4th line (not counting equations): “and Equation 3-5 can be rewritten as” should be “and Equation 3-4 can be rewritten as”

p. 110: Last paragraph: 2nd line: “The second column” should be “The third column”

p. 113: Equation 3-11: upper limit of summation should be N , not n

p. 114: Equation 3-14: upper limit of summation should be N , not n

p. 115: Equation 3-17: upper limit of summation should be N , not n

p. 116: Last line: “small changes in s ” should be “small changes in \bar{X} ”.

p. 122: First full paragraph: 6th line: “from 67 to vehicles” should be “from 67 to 8 vehicles”

p. 128: First full paragraph: 3rd line: “There are two other ways” “other” should be omitted.

p. 132:

a: Figure 3-12: The triangle symbol should be lower, so that it is in line with point 8.

b: Figure 3-12: The open square symbol should be lower, so that it is in line with $y = 42.05$.
(See p. 136.)

p. 136:

a: Equation 3-25: “ \bar{X} ” should be “ X_e ”.

b: Equation 3-25: “ \bar{Y} ” should be “ Y_e ”.

c: Below the Definition section: 2nd line: “Appendix 3A” should be “Appendix 3b”

p. 141: Last full paragraph: 8th line: “ $\pi(4^4)$ ” should be “ $\pi(4^2)$ ”.

p. 142: Fig. 3-21 (b): On the X-axis, “44” should be “4”.

p. 144: Last full paragraph: 6th line: “75” should be “7.5”.

p. 146:

a: Fig. 3-25 (a): The number in the last rectangle (bottom, right) is 9. It should be 6.

b: Fig. 3-25 (b): The number in the last rectangle (bottom, right) is 9. It should be 6.

p. 148: Second full paragraph: 7th regular line: “= 36” should be “= 33”.

p. 149: Rule 3: Last two lines: Need a multiplication dot at end of next-to-last line (for clarity).

p. 151:

a: #4: 2nd line: “ $Y^t = Y^{t1}$ ” should be “ $Y^t = Y^{t+1}$ ”

b: Last line of text before the Table: Change “TOL = 0.10” to “TOL = 0.50.”

Chapter 4

p. 161: Figure 4-1, caption, 4th line: A black dot needs to be inserted before the words “denotes outside values”

p. 162: Last paragraph: First line: “As Figure 4-2 shows, the...” should be “As Figure 4-2 shows, as the...”

p. 167: 2nd paragraph: 4th line: Need an opening parenthesis at the start of the line.

p. 168: Equation 4-3: Denominator’s first term under the first square root sign: “ X_i^{22} ” should be “ $\sum X_i^{22}$ ”

p. 171: Table 4-6: Last equation: The “5283.8” should be “5267.4”

p. 177: Last sentence: “we can substitute (4-11) into...” should be
“we can substitute (4-10) into...”

p. 179: Figure 4-12: Y-axis: Tick mark for 20 appears to be extension of dashed line for $y = 19.653$. The tick mark should just be a tick mark, and the dashed line should hit a little below the tick mark.

p. 181: Sentence below Equation 4-14: “and $y_i = Y_i = \dots$ ” should be “and $y_i = Y_i - \dots$ ” (that is, the second equals sign should be a minus sign).

p. 185:

a: Table 4-10: Next-to-last column heading: The superscripted 2 should be after the closing parenthesis.

b: Table 4-10: Last line of equations: “ $r =$ ” should be “ $r^2 =$ ”

p. 187: 2nd to last line: “ $CV = 100.$ ” . $S_{y,x} = S_y$, not $S_{y,x}$ equal to the mean of y .

p. 190: Equation 4-27: There are four instances where commas are needed in the subscripts:

a: Two instances of “ $_i$ ” that should be “ $_{,i}$ ”

b: Two instances of “ $_{-i}$ ” that should be “ $_{-,i}$ ”

p. 191:

a: Table 4-11: Equation below caption: First number in denominator is “187391” (but it should be “187319”).

b: Table 4-11: Equation below caption: The square root signs on the numbers 35.195 and 35.199 should be removed. Just leave $(35.195)(35.199)$ in the denominator.

c: Last equation: There are four instances where commas are needed in the subscripts:

i. Two instances of “ $_i$ ” that should be “ $_{,i}$ ”

ii. Two instances of “ $_{-ki}$ ” that should be “ $_{-,ki}$ ”

p. 192: Equation 4-29: $(Y-a)/(X-0) = a$ should be $(Y-a)/(X-0) = b$

p. 193: Figure 4-17: On Y-axis: “ Y_1 ” should be “ Y_2 ”.

p. 194: Appendix 4b; 2nd line after Equation 4-30: “by differentiating Equation (4-39)” should be “by differentiating Equation (4-30)”

Chapter 5

p. 208: Equation in middle of page: “39/62” should be “39/52”

p. 214: Figure 5-2: vertical axis should be labeled “ $F(x)$ ”

p. 214: Equation 5-17: “ $P(x_2)$ ” should be “ $P(x_1)$ ”

p. 221: First paragraph, last line: “card selection and coin toss” should be “coin toss and card selection”

p. 223: Table 5-7: (4 blocks of letters to move in this table): There should be 9 columns of TH-

combinations in this table. Currently column 8 is missing, which should go in the blank area between the current last two columns. As for letters to move:

a: In column 4, the 2-line block on the bottom (HTHT and HHTT) should be moved straight to the right into column 5.

b: In column 5, the 2-line block that includes HTH and HHT should be moved up by 3 lines and right by one column to take their place just above THH in column 6.

c: In column 7, the top line of letters, HH, should be moved up by one line.

d: In column 7, the next line of letters, HHH, should be moved up 4 lines and over to the right into column 8 (which is currently empty).

The final result should look something like this:

| | | | | | | | |
|-------|------|------------------------------|--|--|--|------------------------------|------|
| n = 1 | | T | | H | | | |
| n = 2 | | TT | | TH HT | | HH | |
| n = 3 | | TTT | | TTH THT HTT | | HTH HHT THH | HHH |
| n = 4 | TTTT | TTTH TTHT THTT HTTT | | TTHH THTH HTTH THHT HTHT HHTT | | THHH HTHH HHTH HHHT | HHHH |

p. 224: Next-to-last line: Omit “and $x = 2$,”

p. 225: 4th-to-last line: “fair coin, then $\pi > 0.5$ ” should be “fair coin, then $\pi = 0.5$ ”

p. 227:

a: Equation 5-28: “ $(1 - \pi)^{n-x}$ ” should be “ $(1 - \pi)^{n-x}$ ”

b: Equation 5-29: “ $(1 - \pi)^{n-x}$ ” should be “ $(1 - \pi)^{n-x}$ ”

c: Equation 5-29: Need a closing square bracket as in “ $E(X)]^2$ ”

d: Equations at bottom of page: First equation: “0.264” should be “0.0264”

p. 228: First full paragraph:

a: 4th line: “What if they are not known?” should be “What if π is not known?”

b: 5th line: “these parameters” should be “this parameter”

p. 229:

a: First full paragraph: First line: “0.25-mi squares.” should be “0.25-mi² squares.”

b: Line just below Equation 5-30: “ $\pi \frac{1}{4}$ ” should be “ $\pi = \frac{1}{4}$ ”

p. 232: Last equation: “0.821” should be “0.0821”.

p. 234:

a: Equation (5-38) should be Equation “(5-36)”

b: Equation that should be 5-36: Need a minus sign in front of the opening square bracket of the exponent:

$$e^{-1/2(\dots)}$$

p. 235:

a: Equation (5-36) should be Equation “(5-37)”

b: Equation (5-37) should be Equation “(5-38)”

c: First paragraph: first line: “ μ is” should be “ μ is”

p. 236:

a: First paragraph: fifth line: “ $\sigma_1 = 100$ ” should be “ $\sigma_1 = 10$ ”

b: Equation 5-40: In the exponent following the e, need a minus sign:

$$e^{-1/2\dots}$$

c: Last paragraph: 2nd line: “68.26%” should be “68.27%”

d: Last paragraph: 3rd line: “0.6826” should be “0.6827”

e: Last paragraph: Next-to-last line: “68.26%” should be “68.27%”

p. 237:

a: Figure 5-12 (c) Number at near bottom: “.6826” should be “.6827”

b: Figure 5-12 (c) Number at bottom: “.9544” should be “.9545”

c: Only paragraph: First line: “95.44%” should be “95.45%”

d: Only paragraph: Sixth line: “99.72%” should be “99.73%”

p. 238:

a: Example 5-3: 3rd line: “distances” should be “times”

b: Example 5-3: 8th line: “Using the third column” should be “Using the fourth column”

p. 242: Table 5-12: 3rd column: 2nd number: “0.79” should be “0.78”

p. 243:

a: Equation 5-45: Omit the extra middle segment. Should be “ $P(x, y) = P(x)P(y)$ ”

b: First full paragraph: Last sentence: “...covariance $COV(X, Y)$ yet” should be:
“...covariance $COV(X, Y) = 0$ yet”

p. 246:

a: 3rd line: “ $\rho_{xy} > 0$ ” should be “ $\rho_{xy} < 0$ ”

b: 5th line: “eight cases” should be “six cases”

Chapter 6

p. 266: First full paragraph: 4th line: “83rd individual” should be “individual 83”

p. 274: Equation 6-9: The second x with the bar over it should be subscripted.

p. 281: Figure 6-11: Labels along x-axis: “z” should be “ \bar{z} ”

p. 284: First line in text: “16.4a” should be “6.14a”

p. 286:

a: Figure 6-16: Top right corner: “ C_{INW} ” should be “ C_{INW} ”

b: Figure 6-16: 4th line segment (the one with NW and 7 and 3): “NW” should be “W”

c: Figure 6-16: Last row of numbers that has: 10 0 7 200 78 122:

The “0” and “7” need to be transposed.

p. 291: #1: “Finite population correction factor” (9th entry in left-hand column in this list) is not referenced elsewhere and should be deleted.

p. 292: #11: 4th line: “space (0)” should be “space (O)” (that is, this should be a capital letter “oh,” not a zero).

Chapter 7

p. 298: Equation near top of page: A closing square bracket is needed: Should be:

$$\text{MSE} = E(\theta_{\text{hat}} - \theta)^2 = [E(\theta_{\text{hat}}) - \theta]^2 + \dots$$

p. 301: Table 7-1: Last equation: Need parentheses around the “n – 1” to get “.../(n – 1)”

p. 302: Equation in middle of page: “S²” should be lower case “s²”.

p. 305: About 5th line from bottom at end: “0.25” should be “0.025”.

p. 307: Table 7-2:

a: Upper bound column: First row of three: The minus sign should be a plus sign.

b: Upper bound column: Second row of three: “1.65” should be “1.96”.

c: Values of bound...Lower column: First row of three: “14.688” should be “14.680”.

d: Values of bound...Upper column: First row of three: “17.312” should be “17.320”.

e: Interval width column: First row of three: “2.624” should be “2.640”

p. 311:

a: Second paragraph: 3rd line: “t-corresponding” should be “t corresponding”.

b: Table: Second column: First row: “12.806” should be “12.706”.

p. 312: First paragraph after Definition box: Second line: “7-4” should be “7-3”.

Chapter 8

p.329: Equation 8-4: The second statement: “P(-P > A₂)...” should be “P(P > A₂)...”

- p. 330:
- a: Third regular line: “Using column 6 of Table...” It should read column 5.
 - b: Fifth line: The **comma** immediately after the z in “The other z -score, $Z_{.975}$,” should be omitted.
 - c: Sixth line: “(see Table A-3, column 3)”: column 3 should be column 4.
 - d: Equation 8-5: Second line of the 3-line equation: “ $A1 - 0.2 = 0.0784$ ” should be
“ $A1 - 0.2 = - 0.0784$ ”
- p. 336: Equation at bottom of page: More space is needed between the first 0.2 and the H_A . There are two separate statements here and they are run together.
- p. 339: Third-to-last line: “Using column 7...” should be “Using column 3...”
- p. 340: Case2: 2nd line: “Chapter 8” should be “Chapter 7”.
- p. 341: first text line: “From Table A-6” should be “From Table A-5”.
- p. 342: Bottom of page: Diagram should be two-tailed, similar to the diagram in Table 8-7 on p. 346. The right shaded tail should have a “ z ” below the boundary and a “ t ” below the z . Both shaded tails should be labeled on top with “ $PV/2$ ”.
- p. 344:
- a: Last paragraph: First line: “Table A-2” should be “Table A-1”.
 - b: Equation at bottom of page: Last number: “0.1970” should be “0.1798”.
- p. 345:
- a: First line: “a 20%” should read “an 18%”.
 - b: Section 8.4: Line 6: “Example 8-1” should be “Example 8-2”.
 - c: Section 8.4, Line 8: “is 0.0124.” should be “is 0.012.”
 - d: First equation in middle of page: “[3.28, 3.91]” should be “[3.29, 3.91]”
 - e: Section 8.4: 3rd paragraph: 2nd line: “0.0124” should be “0.012”.
- p. 347:
- a: In Figure 8-9, the lower bound 3.28 should be 3.29.
 - b: Figure 8-9: Caption: “Example 8-1.” should be “Example 8-2.”
- p. 349:
Further Reading: 3rd line: “Chapter 2” should be “Chapter 3”.

- p. 350: #6:
a: "Table A-6" should be "Table A-5"
b: "Table A-5" should be "Table A-6"

Chapter 9

- p. 361:
a: 4th line from bottom: "Using this t-table and the row for 40 degrees of freedom" should be "Using this t-table and the row for 30 degrees of freedom"
b: 2nd line from bottom: "in the range [.005, .01]." should be "in the range [.009, .011]."
- p. 362:
a: First paragraph: Next-to-last line: " $60/24.456 = 1.636$ " should be " $40/42.456 = 1.636$ "
b: Last equation: " $= 211397.851/7373.966$ " should be " $= 211397.85/7373.966$ "
c: After last equation: 2nd line: "for a one-tailed test and 28 df," should be "for a one-tailed test and 20 df,"
d: After last equation: 2nd line: "we find the PROB-VALUE to be $< .005$." should be "we find the PROB-VALUE to be $< .007$."
- p. 364:
Last paragraph: First line: "Equation 9-9 estimates..." should be "Equation 9-8 estimates..."
- p. 365:
a: Second paragraph: 4th line:
"Our null hypothesis is that the before-traffic volumes are either lower or ..." should be "Our null hypothesis is that the before-traffic volumes are either higher or ..."
b: The equation that starts with H_A : The " $<$ " should be " $>$ ".
c: The last equation: The " S_d " should be " s_d ". (lowercase s.)
- p. 366: Figure 9-3:
a: The "2.136" should be "2.3136".
b: The " t_{calc} " with the arrow is pointing to "153". It should point to "2.3136".
- p. 367: First paragraph: 4th line: "0.016" should be "0.018".
- p. 368: Last equation: "4.079" should be "4.081".
- p. 372:

a: Last paragraph: 8th line from bottom: “four different α levels: 0.10, 0.05, 0.025, and 0.01.” should read: “six different α levels: 0.20, 0.10, 0.05, 0.02, 0.01, and 0.001.”

b: Last paragraph: 4th line from bottom: “for $\alpha = 0.025$.” should be “for $\alpha = 0.05$.”

Chapter 10

p. 381:

a: Last paragraph: First line: “minus signs” should be “plus signs”

b: Last paragraph: Third line: “ $b = 9$ ” should be “ $b = 11$ ”

c: Last paragraph: Last line: “negative sign” should be “plus sign”

p. 382: Under Hypotheses section: Right column: In H_A statements: *two* cases where

“ \neq ” should be “ \neq ”.

p. 386:

a: The subscripts x and y that go with n and η should be consistently capitalized:

(i) Second paragraph, third line: “a sample of size n_y ” should be “a sample of size n_Y ”

(ii) Second paragraph, 7th line: “from 1 to $n_x + n_y$ ” should be “from 1 to $n_X + n_Y$ ”

(iii) Heading of table near bottom of page: First line:
On **BOTH** left and right sides:

“Ranks when η_x ” should be “Ranks when η_X ”

p. 387: Last line: “ h_y ” should be “ η_Y ”

p. 388: Background section: First line: Need to capitalize the subscripts, x and y :
“samples of size n_x and n_y ” should be “samples of size n_X and n_Y ”

p. 390: Two-Sample Number-of-Runs Test section: 3rd paragraph: 4th line:
“ $n_X = 4, n_Y = 5$.” should be “ $n_X = 5, n_Y = 4$.”

p. 391:

a: Last equation: “3.64” should be “3.58”

b: Paragraph after last equation: 1st line: “3.64” should be “3.58”

c: Paragraph after last equation: 1st line: “-1.181” should be “-1.201”

d: Paragraph after last equation: 2nd line: “-1.181” should be “-1.201”

e: Paragraph after last equation: 2nd line: “0.119.” should be “0.159.”

p. 392: Table 10-5: PROB-VALUE section: First line: The last R should be subscripted:

“ H_0 is rejected only if R is smaller than μ_R , ...” should be

“ H_0 is rejected only if R is smaller than μ_{R_s} , ...”

p. 395:

a: First full paragraph: 5th line: “15.3, 21.0, and 10.2.” should be “14.75, 20.75, 11.0.”

b: First full paragraph: 6th line: “16.5” should be “15.5”

c: Equation in middle of page: The NUMERATOR should be:

$$10(14.75 - 15.5)^2 + 10(20.75 - 15.5)^2 + 10(11.0 - 15.5)^2$$

d: Equation in middle of page: Right side: “= 7.5” should be “= 6.24”

e: First line below the big equation: “about .02.” should be “less than .05.”

p. 397:

a: Table 10.9 has numerical errors.

The body of the table should look something like this:

| | | | | | |
|----|------|----|------|----|------|
| | | | | 5 | 1 |
| | | | | 6 | 2 |
| | | | | 7 | 3 |
| | | | | 8 | 4 |
| | | 9 | 5 | | |
| 10 | 6 | | | | |
| 11 | 7 | | | | |
| 12 | 9 | 12 | 9 | 12 | 9 |
| | | 14 | 11.5 | 14 | 11.5 |
| 15 | 13 | | | | |
| 16 | 14 | | | | |
| 17 | 15.5 | | | 17 | 15.5 |
| 18 | 17 | | | 19 | 18 |
| 20 | 19 | 21 | 20 | | |
| 22 | 22 | 22 | 22 | 22 | 22 |
| | | | | 23 | 24 |
| 27 | 25 | 28 | 26 | | |
| | | 29 | 27.5 | | |
| | | 29 | 27.5 | | |
| | | 31 | 29 | | |
| | | 58 | 30 | | |

p. 400:

a: Table 10-11: PROB-VALUE section: 1st line: “Large values of χ^2 cast doubt” should be
“Large values of X^2 cast doubt”

b: Last line: “and draw no conclusion about $f(Y)$.” change “about $f(Y)$ ” to “about the underlying population”.

p. 401:

a: First paragraph: 4th line: “ $\approx .373$ ” should be “ $\approx .376$ ”

b: Example 10-8: 2nd line: “divided the study area into 100” should be
“divided the study area into 100”

p. 402:

a: 1st equation: Numerator: “ $e^{-1.5}$ ” should be “ $e^{-1.5}$ ”

b: Last paragraph: 2nd line: The lambda (λ) with the hat on it should not have a hat.

c: Last paragraph: 5th line: “0.373” should be “0.375”

p. 405:

a: Table: F(z) column: 5th entry: “0.692” should be “0.691”

b: Table: Last column: 4th entry: “0.225” should be “0.255”

c: Table: Last column: 5th entry: “0.192” should be “0.191”

d: Just below the table: 2nd line: “ ≈ 0.2 .” should be “ $= 0.156$.”

p. 407: 4th line: “ $= .278$ ” should be “ $= .277$ ”

p. 408: Table: Multiple errors:

a: Column titles: “Crop Oats” should be “Oats”

b: Doreton row: Hay column: “8.0” should be “8.04”

c: Lamoile row: Oats column: Numerator: “(18)(25)” should be “(21)(29)”

d: Lamoile row: Oats column: “ $= 5.42$ ” should be “ $= 7.34$ ”

e: Valton row: Corn column: “(18)(29)” should be “(18)(25)”

f: Valton row: Corn column: “ $= 6.29$ ” should be “ $= 5.42$ ”

g: Valton row: Oats column: Numerator: “(21)(29)” should be “(18)(29)”

h: Valton row: Oats column: “= 7.34” should be “= 6.29”

i: 4th line below table: “ $X^2 = 11.169$ ” should be “ $X^2 = 11.162$ ”

j: 5th line below table: “PROB-VALUE = 0.083,” should be “PROB-VALUE = 0.084,”

p. 417: 5th line: “bandwidth of 0.1 km.” should be “bandwidth of 1.0 km.”

p. 423: Example 10-14, first line: “Example 10-10 to” should be “Example 10-12 to”

p. 424: First line: “= 1, 2, ..., B” should be “i = 1, 2, ..., B”

p. 425: a: Line 7: “Note that column 2 of” should be “Note that column 6 of”

b: Line 10: “in column 2” should be “in column 6”

c: #2 in first set of procedures: “Draw a bootstrap sample of size B from the...” should be
“Draw a bootstrap sample of size n from the...”

d: #4 in SECOND set of procedures: SECOND p statement (p_{High}):

“ $p_{\text{High}} = \Phi(1.645 + .066) = .934$ ” should be “ $p_{\text{High}} = \Phi(1.645 - .066) = .943$ ”

e: #4 in Second set of procedures: Second θ statement (θ_{High}):

“.934” should be “.943”

Chapter 11

p. 440: 3rd regular line of text: “and therefore $\hat{\sigma}_Y^2 = 6(67) = 402.$ ”

should have an “ n ” immediately before $\hat{\sigma}_Y^2.$

p. 442:

a: Table 11-3: Last line: “= 14 + 46 + 222” should be “= 14 + 46 + 222 = 282”

b: Last paragraph: 3rd line: “the square of each observation to the grand mean” should be
“the squares of the differences between each observation and the grand mean.”

p. 443:

a: Equation 11-12: The “ σ_Y^2 ” should have a hat (rooftop symbol) over the $\sigma.$

b: Equation 11-13: The “ σ_Y^2 ” should have a hat (rooftop symbol) over the $\sigma.$

Like: $\hat{\sigma}_Y^2$

p. 450:

a: 3rd line: “for one ij pair” should be “for at least one ij pair”

b: Table: Under Hybrid 1: “78.333” should be “78.33”

p. 451:

a: BSS equations: 2nd BSS equation: “9[5.5556]” should be “9[5.5778]”

b: 2nd full paragraph: 1st line: “we must subtract each observation from” should be “we must subtract from each observation”

c: Last set of equations: 2nd line: “ $=(80 - 80)^2 + \dots$ ” should be “ $=(80 - 81)^2 + \dots$ ”

p. 452: Table 11-9: 2nd line from bottom, 3rd entry under Mean Sq: “50” should be “8”

p. 456: Homogeneity of Variances section: 2nd line: “Section 11.2” should be “Section 11.1”

p. 457: Appendix 11a: 4th line (including equation):

“tity $(a + b)^2 = a^2 + 2ab + b^2$] for the right-hand side:” should be

“tity $(a + b)^2 = a^2 + 2ab + b^2$ for the right-hand side]:”

p. 459:

a: #4: Table heading: 2nd line: “(<99,999)” should be “(\leq 99,999)”

b: #4: Table heading: 2nd line: “(>500,000)” should be “(\geq 500,000)”

Chapter 12

p. 477: 1st full paragraph: 3rd line from bottom: “sampling distribution of X...”

The “X” should have a bar over it.

p. 478: Equation 12-4: Denominator: “ $\sum S_i^2$ ” should be “ $\sum X_i^2$ ”

p. 484: After Equation 12-10: 1st line: “The standard error of $S_{\hat{Y}_0}$ ” should be

“The standard error of $S_{\hat{Y}_0}$ ”

(Note that the zero is a subscript of a subscript.)

p. 485:

a: 2nd line: “0.1118” should be “0.1118X”

b: 1st set of equations: 3rd line: “ $= 0.7527(0.288) = .217$ ” should be

“ $= 0.7527(0.2887) = .217$ ”

c: 2nd set of equations: 1st line: Two subscripts need a space for clarity:

“ $n-2df$ ” should be “ $n-2 df$ ”

d: 2nd set of equations: 1st line: The first incidence of “ $S_{\hat{Y}_0}$ ” should be “ $S_{\hat{Y}_0}$ ”.

e: Table 12-5: This table was mistakenly duplicated from Table 12-6.
The correct Table 12-5 follows:

| income | estimated_mean_trips | lowbound | up-bound | difference |
|--------|----------------------|----------|----------|------------|
| 30 | 4.157 | 3.388 | 4.926 | 1.538 |
| 36 | 4.828 | 4.206 | 5.449 | 1.243 |
| 42 | 5.499 | 4.982 | 6.016 | 1.034 |
| 47.25 | 6.086 | 5.602 | 6.570 | 0.968 |
| 54 | 6.840 | 6.303 | 7.378 | 1.075 |
| 63 | 7.847 | 7.117 | 8.576 | 1.459 |
| 66 | 8.182 | 7.372 | 8.992 | 1.620 |

p. 486: 1st line after Equation 12-11: “This standard error is almost identical to $S_{\hat{Y}_0}$.” should be

“This standard error is almost identical to $S_{\hat{Y}_0}$.”

p. 488: Table 12-7: Column headings: The second and third headings need to be switched (Y_i and X_i).

p. 488: Table 12-7: Column headings: “ X_i ” should be “ X_i ”

Chapter 13

p. 503:

a: Table 13-2: ANOVA section: MS column: 2nd number: “0.6985” should be “0.06985”

b: Last paragraph: 2nd line: “+0.0081” should be “+0.8031”

p. 509: 2nd paragraph: 5th line: “problem with only two variables.” should be
“problem with only two independent variables.”

p. 514: 1st line: “X levels are those” should be “X level is that”

p. 515:

a: Table: 3rd column: “1.658” should be “1.732”

b: Table: 3rd column: “1.703” should be “2.000”

- p. 519:
- a: Second paragraph: 3rd line: “function of Equation 13-10” should be “function of Equation 13-9”
 - b: Equation 13-11: The “*i*” at the end of the equation should be subscripted.
- p. 525: Equation 13-13: The numbers “0.2667” and “0.2925” should be switched.
- p. 526: 1st line of text: “0.5221” should be “0.5210” (See Table 13-5.)
- p. 527:
- a: Table 13-7: 1st line (the R line): “0.9153” should be “0.8748”
 - b: Table 13-7: ANOVA section: 3rd line: SS column: “2.6339” should be “2.6329”
 - c: 1st line of text: “Equation 13-10” should be “Equation 13-12”
 - d: 3rd line of text: “90%” should be “75%”
 - e: 7th line of text: “has declined while” should be “has increased while”
 - f: 8th line of text: “has increased.” should be “has declined.”
- p. 528:
- a: Equation in middle of page: “= -0.04” should be “= -0.0414”
 - b: 1st full paragraph: 1st line: “by $0.1239 - (-0.04) = 0.1639$.” should be “by $0.1239 - (-0.0414) = 0.1653$.”
 - c: 1st full paragraph: 2nd line: “square all these differences and divide” should be “square all these differences, sum the squares and divide”
 - d: 1st full paragraph: 4th line: “predicted value of -0.04” should be “predicted value of -0.0414”
 - e: 1st full paragraph: 5th line: “ 10^{-04} ” should be “ 10^{-0414} ”
 - f: 1st full paragraph: 2nd line from bottom: “MSE of 0.0257” should be “MSE of 0.0258”

Chapter 14

- p. 539: Example 14-1: 4th line: “Quadrats of uniform” should be “Quadrats of roughly uniform”

pp. 549-553: Example 14-4: This example has some errors in the beginning that get carried through the computations:

- a: p. 550: 1st and 2nd lines: “30 are black, $n_B = 30$, and 18 are white, $n_W = 18$ ” should be “29 are black, $n_B = 29$, and 19 are white, $n_W = 19$ ”
- b: p. 550: 1st paragraph: 2nd to last line: “map is 26.” should be “map is 27.”
- c: p. 550: 1st paragraph: 2nd to last line: “Republican is 0.625,” should be “Republican is 0.604,”
- d: p. 550: 1st paragraph: Last line: “Democrat is 0.375.” should be “Democrat is 0.396.”
- e: p. 551: Table 14-3: WW column: MO row: The “2” should be shifted right, so that it is in the BW column.
- f: p. 551: Table 14-3: Totals Row: “ $n_B = 30$ ” should be “ $n_B = 29$ ”
- g: p. 551: Table 14-3: Totals Row: “ $n_W = 18$ ” should be “ $n_W = 19$ ”
- h: p. 551: Table 14-3: Totals Row: “46” should be “44”.
- i: p. 551: Table 14-3: Totals Row: “52” should be “54”.
- j: p. 551: Table 14-3: Section at bottom: “ $p = 30/48 = 0.625$ ” should be “ $p = 29/48 = 0.604$ ”
- k: p. 551: Table 14-3: Section at bottom: “ $q = 18/48 = 0.375$ ” should be “ $q = 19/48 = 0.396$ ”
- l: p. 551: Table 14-3: Section at bottom: “ $WW = (0.5)(46) = 23$ ” should be “ $WW = (0.5)(44) = 22$ ”
- m: p. 551: Table 14-3: Section at bottom: “ $BW = (0.5)(52) = 26$ ” should be “ $BW = (0.5)(54) = 27$ ”
- n: p. 552: Equation 14-3: The subscript w in the numerator should be capitalized (but still subscripted).
- o: p. 553: Equation in middle of page: Numerator: “ $2(107)(30)(18)$ ” should be “ $2(107)(29)(19)$ ”
- p: p. 553: Equation in middle of page: “ $= 51.223$ ” should be “ $= 52.267$ ”
- q: p. 553: Second equation in middle of page: Under square root sign: “ $51.223 + 205.851 + 2390.191 - 2623.796$ ” should be “ $52.267 + 210.044 + 2493.313 - 2731.837$ ”

r: p. 553: Second equation in middle of page: “= 4.844” should be “= 4.877”

s: p. 553: Last equation in middle of page: Numerator: “26 – 51.223” should be
“27 – 52.267”

t: p. 553: Last equation in middle of page: Denominator: “4.844” should be “4.877”

u: p. 553: Last equation in middle of page: “= - 5.207” should be “= - 5.181”

v: p. 553: After last equation in middle of page: 1st line of text: “score |-5.207|” should be
“score |-5.181|”

p. 554: Equation near bottom of page: There should be a summing over j in the numerator, resulting in a double summation as in 14-7.

p. 555:

Last equation on page: This should be:
$$B = 0.5 \sum_{i=j}^n \sum_{j=1}^n (w_{ij} + w_{ji})^2$$

p. 555:

a: First equation on page: This should be:
$$C = \sum_{i=1}^n \left(\sum_{j=1}^n w_{ij} + \sum_{j=1}^n w_{ji} \right)^2$$

p. 555:

b: 2nd equation on page: This should be:
$$K = \frac{\sum_{i=1}^n (X_i - \bar{X})^4}{n\sigma^4}$$

p. 557:

a: The online data set, caprecip, is missing the longitude column.

b: Table 14-4: Last column: 4th to last number: “34.1” should be “33.8”

c: Table 14-4: Last column: Last number: “33.8” should be “32.7”

d: Equation 2/3 down the page: There should be a summation over j in the denominator.

p. 558: Equation 1/3 of the way down the page: Denominator: “0.446” should be “0.0446”

p. 559:

a: Case 1: Last equation: “= 3.793” should be “= 3.789”

b: Case 2: Last equation: “= 2.523” should be “= 2.5”

p. 562: Table 14-6(a): Right lower corner: “= 2.799” should be “= 2.80”

p. 565:

a: Equation in middle of page: “103,349/1,783,445 = 0.0574” should be

$$“102,349/1,756,093 = 0.0583”$$

b: Line below the equation in middle of page: “and where these values” should be
“and these values”

c: Equation 2/3 down on page: Numerator: “0.0574” should be “0.0583”

d: Equation 2/3 down on page: Denominator: “0.0047” should be “0.0035”

e: Equation 2/3 down on page: “= 1.894” should be “= 2.229”

p. 568: Line below Equation 14-16: “(0.0000014)(0.000458)” should be

$$“(0.0000014) (0.000458)”$$

(Shift the left number about 3 spaces to left to line it up under the 0.000005X above it.)

Chapter 15

p. 582: Equation 15-2: After the first “ σ ”:

The superscripted “2” should be shrunk since it’s an exponent, AND the subscripted “Y” (with a bar over it), should also be shrunk, since it’s a subscript.

p. 587: Figure 15-5: Equation at top of figure: “- .5a_t” should be “- .5a_{t-1}”

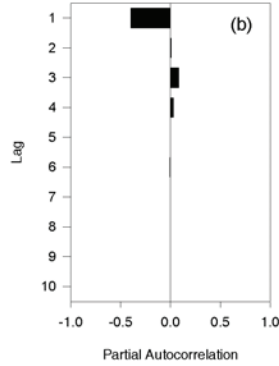
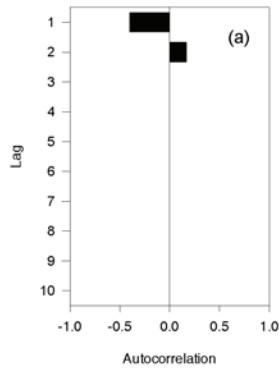
p. 593: First full line of text: End of line: “+...+ ϕ_p .” should be “+...+ $\phi_p\rho_{k-p}$.”

p. 594:

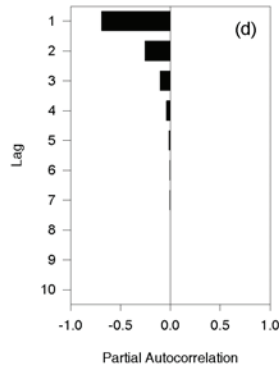
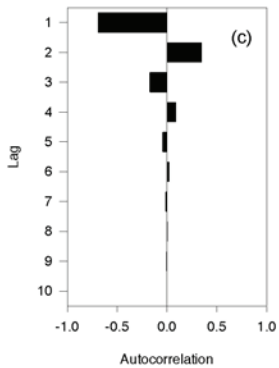
a: Figure 15-8(a): There be a second rectangle, pointing in the positive direction. (This is an MA(2) model.) The values for rho1 and rho2 are -0.4 and 0.1667

b: Figure 15-8(d): The diagram should be:

MA(2)



ARMA(1,1)



p. 596:

a: First equation near the top of the page: “RSS” should be “ESS” following chapter 4 definition.

b: Last equation: “ $= n \ln(\text{RSS})$ ” should be “ $= n \ln(\text{ESS})$ ”, following chapter 4 definition.

p. 597:

Fifth line from bottom: “about 35 times larger” should be “about 34 times larger”

p. 607: Next-to-last paragraph: Last line: “(see Problem 15.5)” should be deleted because the current problem does not actually apply here.

Appendices:

Appendix A-1:

p. 622: The equation at the top of the first page of Table A-1 should read:

$$\text{Entry is probability } P(X = x) = \binom{n}{x} \pi^x (1 - \pi)^{n-x}$$

pp. 622-625: The header and footer on all four pages of Table A-1 should be a lowercase Greek pi (π), not lowercase p .

p. 622:

a: Formula at top of table header: “p” should be “ π ” (2 occurrences)

b: Column .03: n=9: x=2: “0.1262” should be “0.0262”

p. 623:

a: Column .10: n=5: x=1: “0.3280” should be “0.3281”

b: Column .10: n=5: x=4: “0.0004” should be “0.0005”

c: Column .30: n=5: x=1: “0.3601” should be “0.3602”

d: Column .30: n=5: x=4: “0.0283” should be “0.0284”

e: Column .40: n=4: x=4: “0;0256” should be “0.0256”

f: Column .50: n=5: x=0: “0.0312” should be “0.0313”

g: Column .50: n=5: x=1: “0.1562” should be “0.1563”

h: Column .50: n=5: x=4: “0.1562” should be “0.1563”

i: Column .50: n=5: x=5: “0.0312” should be “0.0313”

j: Column .50: n=6: x=5: “0.0938” should be “0.0937”

k: Column .50: n=8: x=1: “0.0312” should be “0.0313”

l: Column .50: n=8: x=7: “0.0312” should be “0.0313”

p.625: The column headings should be:

.1 .15 .20 .25 .30 .35 .40 .45 .50

p. 625: The column footers should be:

.90 .85 .80 .75 .70 .65 .60 .55 .50

Appendix A-2

p. 626:

a: Top table: Heading Row: The numbers 0.01 through 1.0 should be:

.10 .20 .30 .40 .50 .60 .70 .80 .90 1.0

b: Top table: Column .30: X=4: “.0002” should be “.0003”

c: Bottom table: Column 7.0: X=12: “.0264” should be “.0263”

d: Footnote should say “Table entries are $P(X = x)$ for various values of x .”

Appendix A-3

p. 627: Next-to-last column: 3rd entry: “0.760” should be “0.758”

Appendix A-4

p. 628: Heading Row: 2nd number: “.05” should be “.05”

Appendix A-5

p. 630: Column under 100: 5th entry: “.395” should be “.185”

Appendix A-6

p. 631: Column under 1: 7th entry: “.470” should be “.470”

Appendix A-7

p. 633:

a: Equation 2/3 down page: “ $H_A: s_1^2 > s_2^2$ ” should be “ $H_A: s_1^2 \neq s_2^2$ ”

b: Last line: “(see page 000)” should be “(see page 637)”

p. 634:

a: Column under 5: 6th entry: “2,305,620” should be “2,305,619”

b: Column under 8: 2nd group of numbers: Last number: “1,999.38” should be “1,999.37”

c: Column under 9: 6th entry: “2,409,138” should be “2,409,137”

p. 635:

a: Column under 24: 5th entry: “24,939.56” should be “24,939.57”

b: Column under 24: 6th entry: “2,493,990” should be “2,493,991”

c: Column under 30: 6th entry: “2,504,396” should be “2,504,397”

d: Column under 60: 6th entry: “2,525,348” should be “2,525,347”

e: Column under 120: 6th entry: “2,535,890” should be “2,535,891”

Appendix A-8

pp. 640-641:

a: Table Heading: First line: “ $P(\chi^2 > \chi^2)$ ” should be “ $P(\chi^2 > X^2)$ ”

b: First column heading: “ χ^2 ” should be “ X^2 ”