In the following listing, line count includes equation lines, but does not include the line on which the page number appears.

I-14, lines 11-12 under the heading "Hypothesis tests ..."

The t-distribution and other statistical tables were not included in the 2000 edition of the manual

I-42, lines 9 and 10 should be

Let $c = \frac{12}{\bar{z}_1 + \bar{z}_2 + \cdots + \bar{z}_{12}}$. The seasonal indices are then

$\bar{z}_1 = c\bar{z}_1, \bar{z}_2 = c\bar{z}_2, \ldots, \bar{z}_{12} = c\bar{z}_{12}$ and the seasonally adjusted series is

$y^a_1 = \frac{y_1}{\bar{z}_1}, y^a_2 = \frac{y_2}{\bar{z}_2}, \ldots, y^a_{12} = \frac{y_{12}}{\bar{z}_{12}}, y^a_1 = \frac{y_1}{\bar{z}_1}, y^a_{14} = \frac{y_{14}}{\bar{z}_2}, \ldots$

I-42, the final sentence should be replaced by

Let $c = \frac{4}{\bar{z}_1 + \bar{z}_2 + \bar{z}_3 + \bar{z}_4}$. The seasonal indices are then

$\bar{z}_1 = c\bar{z}_1, \bar{z}_2 = c\bar{z}_2, \bar{z}_3 = c\bar{z}_3, \bar{z}_4 = c\bar{z}_4$ and the seasonally adjusted series is

$y^a_1 = \frac{y_1}{\bar{z}_1}, y^a_2 = \frac{y_2}{\bar{z}_2}, y^a_3 = \frac{y_3}{\bar{z}_3}, y^a_4 = \frac{y_4}{\bar{z}_4}, y^a_5 = \frac{y_5}{\bar{z}_1}, y^a_6 = \frac{y_6}{\bar{z}_2}, \ldots$

I-50, ARMA models, line 10

the lag 1 covariance $\gamma_1$ should have the factor $\sigma^2_\epsilon$ (not $\sigma_\epsilon$)

I-85, #10, final line before the list of answers

should be " $Y = \beta_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$"

I-86, #12, line 3

should be " $(X_2, Y)$ : " (the first coordinate is $X_2$ and the second is $Y$)

I-87, #15, lines 1 and 2

should read "in the models 2 and 3" not "in the models 1 and 2"

I-89, #6, line 1

should read "weighted moving average model" instead of "weighted smoothing model"
A time series data set is being analyzed, and it is assumed that the underlying model is AR(3). The sample autocorrelations estimates are found to be $$\hat{\rho}_1 = -\frac{1}{7}, \hat{\rho}_2 = -\frac{1}{2}$$ and $$\hat{\rho}_3 = \frac{1}{7}$$. Use the Yule-Walker equations to estimate the partial autocorrelation at lag 3.

Then $$c = \bar{z}_1 + \bar{z}_2 + \bar{z}_3 + \bar{z}_4 = 3.9833$$, and $$c = \frac{4}{\bar{z}_1 + \bar{z}_2 + \bar{z}_3 + \bar{z}_4} = 1.00419$$, so that the seasonal indices are $$\bar{z}_1 = c\bar{z}_1 = 1.0931$$, $$\bar{z}_2 = c\bar{z}_2 = .9996$$, etc., and $$y_{10}^2 = \frac{y_{10}}{\bar{z}_2} = \frac{110}{.9996} = 110.04$$. Answer: B

"and there are no"

.4170 should be .4114

.4748 should be .4701 and .8785 should be .8801

the summation should be to upper limit $$D$$, "$$\sum_{i=1}^{D}$$"

"is a live at time $$L$$, where $$L < t.$$"

$$Y_j$$ should be

<table>
<thead>
<tr>
<th></th>
<th>160</th>
<th>140</th>
<th>100</th>
<th>50</th>
<th>10</th>
</tr>
</thead>
</table>
II-23, 3rd line from bottom of page, should be

\[ p_{41} = \frac{S_0(t_0) - S_0(t_1)}{1 - S_0(t_4)} \]

II-30, Example 4 (v), bottom line

should read

\[ = 8 + \frac{(5471 - .5)(7 - 6)}{.5471 - .2736} = 8.18 \]  

II-32, bottom line of page

there should be a decimal point in front of 0769

II-35, bottom line of page

near the end of the line, the numbers inside the brackets should be

[.00448 + \cdots + .00153] instead of .00481 \ldots .00159

II-41, expressions in lines 8 and 10 under the heading "Partial likelihood ..."

the expressions should use partial derivative notation \( \frac{\partial}{\partial \beta_h} \) instead of \( \frac{d}{d \beta_h} \)

and \( \frac{\partial^2}{\partial \beta_g \partial \beta_h} \) instead of \( \frac{d^2}{d \beta_g d \beta_h} \)

II-41, lines 19, 20 and 24

\( d \) should be \( d_1 \)

II-41, equation in bottom line

should be

\[ I(\beta) = - \frac{d^2}{d \beta^2} \quad LL(\beta) = - \frac{d}{d \beta} \]

\[ U(\beta) = \sum_{i=1}^{D} \left[ \frac{-Y_{1i}e^{\beta}}{Y_{1i} + Y_{i}e^{\beta}} - \frac{Y_{1i}^2 e^{2\beta}}{(Y_{1i} + Y_{i}e^{\beta})^2} \right] \]

the changes are the negative signs after the first and second equality, and the exponent of \( 2\beta \) in the numerator of the final fraction
II-44, Example 9, expression in line 16
expression should be
$$\frac{e^{2\beta}}{[28 + 30e^\beta - 0] \cdot [28 + 30e^\beta - \frac{1}{3}(1 + 2e^\beta)] \cdot [28 + 30e^\beta - \frac{2}{3}(1 + 2e^\beta)]}$$
the changes are in the last factor of the denominator,
the numbers 27 and 28 are changed to 28 and 30

II-46, line 10, parenthetical remark
should read "(exp(\(\theta^T Z_j\)) = exp(\(\sum_{k=1}^{p} \theta_k Z_{jk}\)) is the acceleration factor)"

II-46, 4th line from bottom, 2nd line from bottom and bottom line
"<" signs should be reversed

II-47, 3rd line
"<" sign should be reversed

II-63, line 4 should be
- grouped data likelihood function: 
$$L(\theta) = \prod_{j=1}^{n} [F(c_j; \theta) - F(c_{j-1}; \theta)]^{n_j}$$

II-66, line 7 (final line of Example 22) should be
$$\theta^* = \theta + [I(\theta)]^{-1} S(\theta) = \begin{bmatrix} 15 \\ 1 \end{bmatrix} + \begin{bmatrix} 58.99 & 4.54 \\ 4.54 & .473 \end{bmatrix} \times \begin{bmatrix} -.0981 \\ 2.1171 \end{bmatrix} = \begin{bmatrix} 18.8 \\ 1.56 \end{bmatrix} = \begin{bmatrix} \theta^* \end{bmatrix}.$$ 

II-85, line 1 and line 15
the word "indivisibility" should be "divisibility"

II-87, #3, Answers should be
A) - .002  B) - .001  C) 0  D) .001  E) .002

II-87, #5, line 3 should read
Find \(C - D\) to the nearest .005.
II-89, #3 Solution should be as follows

\[ Y_1 = 25, \ Y_2 = 24, \ Y_3 = 21, \ Y_4 = 15, \ Y_5 = 13, \ Y_6 = 8, \ Y_7 = 7, \ Y_8 = 6, \ Y_9 = 4 \]
\[ d_1 = 1, \ d_2 = 2, \ d_3 = 4, \ d_4 = 2, \ d_5 = 3, \ d_6 = 1, \ d_7 = 1, \ d_8 = 1. \]
\[
\sum_{t_i \leq 11} \frac{d_i}{Y_i(Y_i - d_i)} = \frac{1}{(25)(24)} + \frac{2}{(24)(22)} + \frac{4}{(21)(17)} + \frac{2}{(15)(13)} + \frac{3}{(13)(10)} + \frac{1}{(8)(7)} + \frac{1}{(7)(6)} + \frac{1}{(6)(5)} = .1250. 
\]
Greenwood - \[ \hat{V}[\hat{S}(11)] = [\hat{S}(11)]^2(1.1229) = (0.2968)^2(1.1250) = .0110. \]
\[
\sum_{t_i \leq 11} \frac{d_i}{Y_i^2} = \frac{1}{(25)^2} + \frac{2}{(24)^2} + \frac{4}{(21)^2} + \frac{2}{(15)^2} + \frac{3}{(13)^2} + \frac{1}{(8)^2} + \frac{1}{(7)^2} + \frac{1}{(6)^2} = .1046. 
\]
Aalen-Johansen - \[ \hat{V}[\hat{S}(11)] = [\hat{S}(11)]^2(1.1046) = (0.2968)^2(1.1046) = .0092. \]
Answer: E

II-90, #5,6,7, Solutions should be as follows

5. \[ \sigma_S^2(11) = \sum_{t_i \leq 11} \frac{d_i}{Y_i(Y_i - d_i)} = .1250 \text{ (from Problem 3 above)}, \quad \hat{S}(11) = .2968 \]
\[ \theta = \exp \left( \frac{(1.96)\sigma_S(11)}{\ln[\hat{S}(11)]} \right) = .5653. \]
\[ C = \hat{S}(11) - (1.96)\cdot\sigma_S(11)\cdot\hat{S}(11) = .2968 - (1.96)(.1250)^{1/2}(.2968) = .0911. \]
\[ D = [\hat{S}(11)]^{1/\theta} = (.2968)^{1/5.653} = .1166. \quad C - D = -.0255. \quad \text{Answer: D} \]

6. \[ \arcsin(\hat{S}(11)^{1/2}) = \arcsin((.2968)^{1/2}) = \arcsin(.5448) = .576, \]
\[ \arcsin(\hat{S}(11)^{1/2}) - .5Z_{.975} \cdot \sigma_S(11) \left( \frac{\hat{S}(11)}{1-\hat{S}(11)} \right)^{1/2} 
\[ = .576 - (0.5)(1.96)(.1250)^{1/2}(\frac{.2968}{1-.2968})^{1/2} = .351 \]
The lower limit of the confidence interval is \[ \sin^2[max(0,.351)] = .118. \quad \text{Answer: C} \]

7. \[ a_L = \frac{n\sigma_S^2(t_L)}{1+n\sigma_S^2(t_L)} \quad \text{and} \quad a_U = \frac{n\sigma_S^2(t_U)}{1+n\sigma_S^2(t_U)} \quad \Rightarrow \quad a_L \cdot \frac{a_U}{a_U} = \frac{\sigma_S^2(9)[1+n\sigma_S^2(13)]}{\sigma_S^2(13)[1+n\sigma_S^2(9)]}. \]
\[ n = 25, \quad \sigma_S^2(9) = .0917, \quad \sigma_S^2(13) = .3750 \quad \Rightarrow \quad a_L \cdot \frac{a_U}{a_U} = \frac{951}{1.23} = .77. \quad \text{Answer: C} \]

II-91, #10, first line should be
\[ \hat{x}_{80} = \min \{ t : \hat{S}(t) \leq 1 - .8 \} = 13 \]

II-93, #8, Answers should be
A) 4.0 \quad B) 4.2 \quad C) 4.4 \quad D) 4.6 \quad E) 4.8
II-94, #5
subscript 7 should be 6

II-94, #8, solution should be
8. \( \hat{S}(3) = .88 \). We find \( j \) such that \( \hat{S}(a_j) \leq \frac{.88}{2} \leq \hat{S}(a_{j-1}) \).

Then

\[
\hat{mdrl}(3) = a_{j-1} - 3 + \frac{\hat{S}(a_{j-1})-\hat{S}(a_j)}{\hat{S}(a_{j-1})-\hat{S}(a_j)}
\]

But, \( \hat{S}(7) = [1 - \frac{1}{25}][1 - \frac{2}{24}][1 - \frac{4}{21.5}][1 - \frac{2}{16}][1 - \frac{3}{13}] = .4821 \)
and \( \hat{S}(8) = (.4821)[1 - \frac{1}{9}] = .4285 \).

Thus \( \hat{S}(8) \leq .44 \leq \hat{S}(7) \) and \( \hat{mdrl}(3) = 7 - 3 + \frac{.4821-.44)(8-7)}{.4821-.4285} = 4.78 \).

Answer: E

II-97, #10, answers should be
A) \(-.118\)  B) \(-.059\)  C) 0.000  D) .059  E) .118

II-102, table for #10
the second last row of the table should be
14  1  0  1  2  0  2
the change is in the 4th column, the 2 should be 1

II-102, 2nd line after the table
the value \(-.154\) should be \(-.293\)

II-102, end of 3rd line after the table
should read "\( \sqrt{6.189} = 2.49 \)" instead of "\( \sqrt{6.05} = 2.46 \)"

II-102, final 3 lines should be
points). The value of \( Z = -\frac{293}{2.49} = - .118 \). If alternative hypothesis is \( H_A : h_1(t) \neq h_2(t) \) (two-sided test) then the \( p \)-value of \( |Z| = .118 \) is .91 (for the two-sided test, the \( p \)-value is 2 times that probability that the standard normal is > .118).

Answer: A
II-103, #1, answers should be
A) $-6.00$   B) $-6.13$   C) $-6.26$   D) $-6.39$   E) $-6.52$

II-103, #3, answers should be
A) $.00152$   B) $.00157$   C) $.00162$   D) $.00167$   E) $.00172$

II-104, #5, answers should be
A) $.00173$   B) $.00179$   C) $.00185$   D) $.00191$   E) $.00197$

II-105, #1, lines 2, 3 and 6
$d$ should be $d_1$

II-105, #1, last line before the answer is written
$-4.26$ should be $-6.26$

II-106, #3, last line should read
Then, $L_1(\beta) = \frac{e^0}{[5+5e^\beta]^1} \cdot \frac{e^\beta}{[4+5e^\beta]^2}$, and $L_1(-1) = .00157$.

Answer: B
changes are multiplication of the two factors instead of addition, and the .00157 instead of .157

II-106, #5, 4th line from bottom
delete " $\sum_{k \in D_i} \exp(\beta^t Z_k) = \" at the start of the line

II-107, #5, 2nd line
delete " $\sum_{k \in D_i} \exp(\beta^t Z_k) = \\" at the start of the line

II-107, #5, end of 3rd line
.1584 should be .00179
II-110, just before question 10,  
"Questions" should be "Questions"

II-115, 116
Question numbers 6 to 14 should be 5 to 13 (question numbered 6 is actually with question and based on the question 5 data).

V-3, #2, Answers should be
(A) $\frac{3}{13}$  (B) $\frac{4}{13}$  (C) $\frac{5}{13}$  (D) $\frac{6}{13}$  (E) $\frac{7}{13}$

V-7, #19, Answers should be
(A) 1.000  (B) 1.008  (C) 1.016  (D) 1.024  (E) 1.032

V-14, #2, last line should be
$\hat{Z}_1 = \frac{2}{2+\frac{3.5}{1.5}} = \frac{6}{13}$. Answer: D

V-20, #19, line 5
change .08475 to .08209

V-20, #19, last line should be
The ratio is $\frac{.08338}{.08209} = 1.016$. Answer: C

V-54, #22, Answers should be
(A) 14  (B) 15  (C) 16  (D) 17  (E) 18

V-60, #4, last line should be
Then, $S_1(10) \quad S_2(10) = [S_0(10)]e^{0.02} - [S_0(10)]e^{0.07} = (.5)^{1.0202-1.0725} = 1.037$. Answer: E

V-64, #22, lines 2 and 3 should be
Set 1 - 2, 4, 5, 8, 9, 10, 13 rank sum 51
Set 2 - 1, 3, 6, 7, 11, 12, 14, 15 rank sum 69. Answer: E