Errata Sheet

Abbreviations: P=page; L=Line; Q=Question; E=Example; S=Solution

Study Manual

P46, Q2.3 solution: Replace "0.55" by "0.74162". Replace "12,705,000" with "12,532,542".

P48, Q2.11 solution: "$Z_x - X_p$" in the last line should be "$Z_x - Z_p$".

P83, L4: Replace "$Z = 40,0009/14$" by "$Z = 40,000$".

P85, E4.3: Replace "$ZX + (1-Z)\mu_X = \frac{57}{61}(3) + \frac{4}{61}(5) = \frac{191}{61}$" by

$$ZX + (1-Z)\mu_X = \frac{513}{517}(3) + \frac{4}{517}(5) = \frac{1559}{517},$$

and "$44(\frac{191}{61}) = 137.77$" by $44(\frac{1559}{517}) = 132.68$

P90, Q4.8: Replace "Year" in the table by "Month".

P93, Q4.9: Replace "90/675" by "90/765". Replace "0.09843" by "0.09608". Replace "(250)(0.09843)=24.6" by "(250)(0.09608)=24.02".

P95, L2: Replace "$Z = m/(n+k)$" by "$Z = m/(m+k)$".

P99, Q5.8 (v): Replace "0.01" by "0.02".

P151, Q8.8: Add "Type A claim sizes follow a normal distribution with mean 3,000 and variance 1,000,000".

P203, Q10.16: The answers should be:

A. I only

B. II only

C. III only

D. I, II, and III

E. The answer is not given by (A), (B), (C), or (D)

P217, E11.1: ligsize should be litsize. Also, the example does not include Model 3.2A. The word "Model 3.2A" should be removed.

P249, Q11.13: The answers should be:

A. I only

B. II only

C. III only

D. I, II, and III

E. The answer is not given by (A), (B), (C), or (D)

P250, Q11.14: The answers should be:

A. I only

B. II only

C. III only

D. I, II, and III

E. The answer is not given by (A), (B), (C), or (D)

P302, Q12.13 (iv): Replace "conditional" by "unconditional".

P338, Model 5.2: Replace "u_{3j}" by "u_{3i}".

P350, Q14.3: Replace "-0.5" by "0.5" (two places). Replace "-107.7810" by "107.7810".

P351, Q14.3: Replace "562.71" by "526.71". Replace "$562.71 \pm (1.96)(113) = (341, 784)$" by "$526.71 \pm (1.96)(113) = (305, 748)$".

P462, Q17.6 Replace the solution by:

$$Y_{tij} = b_{0i|j} + b_{1i|j}\, T_t + \epsilon_{tij} \qquad \text{(Level 1 Model)}$$

(Time level indexed by tij)

$$b_{0i|j} = b_{0j} + \beta_2\, G_i + \beta_3\, A_i + \beta_7\, G_i\, B_i + b_{1j}\, B_i + \beta_8\, A_i\, B_i + u_{0i|j} \qquad \text{(Level 2 Model)}$$

$$b_{1i|j} = \beta_1 + \beta_6\, B_i \qquad \text{(Student level, nested within classroom, indexed by } i|j\text{)}$$

$$b_{0j} = \beta_0 + \beta_4\, E_j + u_{0j} \qquad \text{(Level 3 Model)}$$

$$b_{1j} = \beta_5 + \beta_9\, E_j \qquad \text{(Classroom level indexed by } j\text{)}$$

P519, Q19.11: Matrix (A) should be:

$$\begin{bmatrix} 36.00 & 27.00 & 20.25 \\ 27.00 & 36.00 & 27.00 \\ 20.25 & 27.00 & 36.00 \end{bmatrix}$$

P519, Q19.11 solution: Replace all ρ_1 with ρ.

P520, Q19.13 solution: The text below the text statistics formula should be:

The p-value is $(0.5)\Pr(\chi^2_1 > 131.636) + (0.5)\Pr(\chi^2_2 > 131.636)$. From the Chi-square table we have $\Pr(\chi^2_1 > 7.88) = 1 - 0.995 = 0.005$ and $\Pr(\chi^2_2 > 10.6) = 0.005$. Thus, the p-value is far less than 0.0025.

P529, E20.1, part (2) solution: Replace

$$L(\alpha, \beta) = \exp\Big(-\sum_{i=1}^{n} \frac{\big(y_i - (\alpha + \beta x_i)\big)^2}{2\sigma^2}\Big)$$

with

$$L(\alpha, \beta, \sigma) = \frac{1}{(\sqrt{2\pi}\sigma)^n} \exp\Big(-\sum_{i=1}^{n} \frac{\big(y_i - (\alpha + \beta x_i)\big)^2}{2\sigma^2}\Big)$$

P546, Q20.17: Replace "μ¿1000" in statement II with: "$\mu > 1000$".

P582, Q21.24 solution: Remove the $_*$ after $E(\mu|x)$

P649, the formula of R^2: "var" should refer to the "variance explained", instead of the conventional variance. In the calculation, var(residuals) should be set to the sum of squares of residuals, and var(outcome) should be set to the total sum of squares.

P650, E25.2: R^2 should be:

$$1 - \frac{199521}{103844 \times 6} = 0.68$$

P694, E26.2: Last line, $\hat{R}$ should be 1.009:

P867, First block, last line: Replace "31" by "42.67".

P963, Q15 AIC: Replace "2781.737" by "2785.738"

P968, Q28 Choice A: Replace "0.73" by "0.68"

P984, Q28 Replace "-0.3(1)" by "-0.3(2)" (2 places). Replace "0.5744" by "0.5" (3 places). Replace "0.7310" by "0.6839".

Formula Card

Conjugate Dist., Gamma-exponential: In 2nd column, replace "$\theta_* = \theta + \sum x_i$" by "$\theta_* = 1/(1/\theta + \sum x_i)$". In 3rd column, replace "θ_*" with "θ_*^{-1}".