

1, 88:  $\text{Prob}[N(t+h) - N(t) = 1] = \lambda h + o(h)$ .

1, p.654, Q. 21.46: •  $P_{i, i+1} = 0.94$  for  $i = 1, 2, \dots, 24$

2, p. 114: A coinsurance factor is the proportion of any loss that is paid by the insurer after any other modifications (such as deductibles or **maximum covered losses**) have been applied.

3, page 70, solution 2.94:

Second moment =  $(2,000^2 + 17,000^2 + 271,000^2 + 10,000^2)/4 = 18,458,500,000$ .

Final answer is okay.

3, p.252, sol. 5.160:  $\alpha = \frac{N}{\sum \ln[x_i] - N \ln[\theta]}$ .

3, p.531, sol. 11.13: 80% confidence interval is:  $11 \pm (1.282)(2) / \sqrt{8} = (10.093, 11.907)$ .

3, p.615, Q. 15.35:  $\sigma = 1.7$ .

3, p.619: Use the following grouped data for the next three questions:

<u>Bottom of Interval</u>	<u>Top of Interval</u>	<u># claims in the Interval</u>
0	2.5	2625
2.5	5	975
5	10	775
10	25	500
25	Infinity	125
Total		5000

3, p.1145, Q. 29.5, choice B is equivalent to choice D. Change choice B to:

B.  $\bar{X} \geq 5 + k$ , for some  $k > 0$

3, p.1299, solution 31.76, the correct solutions for parts (a) and (b) are switched:

(a) The series system functions only of all of the components function.

Thus the survival function of the system is  $S(x)^N$ .

(b) The parallel system fails only if all of the components fail.

Thus the distribution function of the system is  $F(x)^N$ .

Its survival function is:  $1 - F(x)^N = 1 - \{1 - S(x)\}^N$ .

3, p.1433, solution 33.45:  $f(x) = e^{-0.1(x+\delta)}$

3, p.1447, solution 33.86:  $MSE[\gamma] = Var[\gamma] + Bias[\gamma]^2 = 1.6875 + 0.15^2 = 1.71$ .

$|MSE[\mu] - MSE[\gamma]| = |0.26 - 1.71| = 1.45$ .

3, p.1570, solution 38.21: The sample variance is:

$$\frac{(1.16 - 1.39)^2 + (-6.78 - 1.39)^2 + (4.04 - 1.39)^2 + (7.68 - 1.39)^2 + (0.85 - 1.39)^2}{5 - 1} = 28.42.$$

Final answer is okay.

4, p.106: **Model SS** is the amount of variation explained by the model.

Thus in this example, (**Model SS**) / (Total SS) =

4, p.301:

Then if  $H_0$  is true, where  $D_0$  and  $D_1$  are the deviances of the two models:

$$F = \frac{(D_0 - D_1) / (k_0 - k_1)}{D_1 / (N - k_1 - 1)} = \frac{(RSS_0 - RSS_1) / (k_0 - k_1)}{RSS_1 / (N - k_1 - 1)},$$

has an F-Distribution with  $k_0 - k_1$  and  $N - k_1 - 1$  degrees of freedom.

4, p.663: Added variable plots and partial residual plots are no longer on the syllabus.

5, p.64, Q. 4.4: The  $m$  in the denominator should be  $\mu$ .  $\exp[-5(x-\mu)^2 / (x\mu^2)]$

5, p.283, Q. 12.30:  $\ln(Y_i) = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + \beta_4 x_{4i}$

5, p.412, Q. 18.3 (also solution):

An otherwise similar GLM excluding 2 parameters has a deviance of 2132.

6, pages 11 and 241: Expected Test MSE =  $E[(y_0 - \hat{f}(x_0))^2]$

Usually more flexible methods have a larger variance but **a lower bias than less flexible methods.**

6, page 32: From **least to most** computationally intense:  
validation set approach, k-fold validation ( $k < n$ ), LOOCV.

6, Section 4: the header should read **§4 Subset Selection**

6, page 81, in both text and footnote:  $\hat{Y} = 35.25$ .

6, p.117, Q. 5.5, in Statement B:  $\hat{\beta}_p^R$  rather than  $\hat{\beta}_3^R$ .

6, p. 244, question 12.4: The first column should be headed **number of spline knots.**

6, p. 294:  $\ln\left[\frac{\text{Prob}[Y = 1 | X]}{1 - \text{Prob}[Y = 1 | X]}\right] = \beta_0 + f_1(X_1) + f_2(X_2) + \dots + f_p(X_p)$ .

This is equivalent to:  $\text{Prob}[Y = 1 | X] = \frac{\exp[\beta_0 + f_1(X_1) + f_2(X_2) + \dots + f_p(X_p)]}{1 + \exp[\beta_0 + f_1(X_1) + f_2(X_2) + \dots + f_p(X_p)]}$ .

6, p. 307:  $\text{Prob}[Y = 1 | X] = \frac{\exp[\beta_0 + f_1(X_1) + f_2(X_2) + \dots + f_p(X_p)]}{1 + \exp[\beta_0 + f_1(X_1) + f_2(X_2) + \dots + f_p(X_p)]}$ .

7, p.109-110: What is labeled as solution 8.8 goes with question 8.7.

What is labeled as solution 8.9 goes with question 8.8.

What is labeled as solution 8.7 goes with question 8.9.

8, pages 91 and 133, the formulas should have  $i = 1$  to  $n$ :

For the series system  $S(t) = \prod_{i=1}^n S_i(t)$ .

For a parallel system  $r(p) = 1 - \prod_{i=1}^n (1 - p_i)$ . Therefore,  $S(t) = 1 - \prod_{i=1}^n F_i(t)$ .

**9**, p.200 and p.316, parentheses are out of place:

$$\text{Var}[x_t] = \sigma_W^2 \{1 + (\alpha + \beta)^2 / (1 - \alpha^2)\}.$$

$$\gamma_k = \sigma_W^2 \{(\alpha + \beta)\alpha^{k-1} + (\alpha + \beta)^2 \alpha^k / (1 - \alpha^2)\}, \text{ for } k > 1.$$