

2, p.115, in the Exercise: \$25,000 **maximum covered loss**

2, p.148, 7 lines from the bottom: $E[(X - d)_+] - E[(X - u)_+] =$

2, solution 38.9 (the solution shown is for instead Q.38.2):

E. The contribution in each case is the distribution at 1500 of a Normal Distribution with $\sigma = 1000$ and mean equal to the given data point.

The first contribution is: $\Phi\left[\frac{1500 - 100}{2000}\right] = \Phi[0.7] = 0.7580$.

The second contribution is: $\Phi\left[\frac{1500 - 500}{2000}\right] = \Phi[0.5] = 0.6914$.

The third contribution is: $\Phi\left[\frac{1500 - 1000}{2000}\right] = \Phi[0.25] = 0.5987$.

The fourth contribution is: $\Phi\left[\frac{1500 - 2000}{2000}\right] = \Phi[-0.25] = 0.4013$.

The fifth contribution is: $\Phi\left[\frac{1500 - 5000}{2000}\right] = \Phi[-1.75] = 0.0401$.

Thus the kernel smoothed distribution at 1500 is:

$(0.7580 + 0.6914 + 0.5987 + 0.4013 + 0.0401) / 5 = \mathbf{0.4979}$.

3, sol. 6.122: $(100 + 200 + 400)/3 = \mathbf{233.3}$.

3, Q. 15.50: Use the original four group; do not regroup the data.

3, sol. 24.51: $1/16 = \mathbf{0.0625}$.

4, sol. 3.20: $\{\sum X_i Y_i / N - \sum X_i / N \sum Y_i / N\} / \{\sum X_i^2 / N - (\sum X_i / N)^2\}$ The final solution is okay.

5, sol. 2.6a: $U = \frac{\partial \text{loglikelihood}}{\partial \tau} = \sum_i \{1/\tau - \ln[x_i] x_i^\tau + \ln[x_i]\}$.

5, sol. 12.35: $\text{StdDev}[Y_i] = \mathbf{E}[Y_i]$

6, pages 187 and 343: such that $\frac{1}{n} \sum_{i=1}^n z_{i1}^2$ is **maximized**,

8, sol. 6.8: The probability that an individual component is still working for $t > 80$ is: $(\mathbf{80/t})^4$.

The probability that the system is still working for $t > 80$ is: $\{(\mathbf{80/t})^4\}^3 = (\mathbf{80/t})^{12}$.

The final solution is correct.

9, p.172 and p.318:

$$\text{Variance} = \sigma_W^2 (1 + \beta^2).$$

$$\gamma_1 = \sigma_W^2 \beta.$$

9, p. 207, Sol. 11.2:

$$\text{Var}[x_t] = \sigma_W^2 \{1 + (\alpha + \beta)^2 / (1 - \alpha^2)\} = (11) \{1 + (0.4 - 0.7)^2 / (1 - 0.4^2)\} = 12.179.$$

$$\text{Prob}[x_t < 1] = \Phi[(1 - 4) / \sqrt{12.179}] = \Phi[-0.8596] = \mathbf{19.5\%}.$$

Also, note that the characteristic equation is: $1 - 0.4B = 0$. The root is: $B = 2.5 > 1$.
Thus this time series is stationary. $\Rightarrow E[x_t] = E[x_{t-1}]$.

10, page 141, second line from the bottom:

then apply the **maximum covered loss** of 10,000.

10, Q. 11.4: a **maximum covered loss** of 50