**P. 331**, solution 6.9:

| | Subject Loss Cost | EER | LDF | Expected Unreported |
|---|---|---|---|---|
| Latest | 180,960 | 0.963 | 0.519 | 90,443 |
| 2nd Latest | **160,740** | 0.963 | 0.338 | 52,320 |
| 3rd Latest | 141,570 | 0.963 | 0.198 | 26,994 |
| | | | | 169,757 |

Including the adjustment to reflect the ultimate level of losses, the total ratable losses are:
120,000 + 220,500 + 169,757 = $510,257.
AER = 510,257/483,270 = 1.056.

**P. 335**, solution 6.15: I should have used the EER of 0.9**4**8.

| | Subject Loss Cost | EER | LDF | Expected Unreported | |
|---|---|---|---|---|---|
| 2009 | 5,301 | 0.948 | 0.473 | 0 | no provision; it is a claims made policy |
| | 12,509 | 0.948 | 0.728 | 0 | no provision; it is a claims made policy |
| 2008 | 59,509 | 0.948 | 0.300 | 16,924 | |
| | 132,002 | 0.948 | 0.585 | 73,206 | |
| 2007 | 53,093 | 0.948 | 0.177 | 8,909 | |
| | 112,445 | 0.948 | 0.480 | 51,167 | |
| Total | 374,859 | | | **150,206** | |

AER = (569,800 + 150,206)/374,859 = 1.921.
M = (0.57) (1.921 - 0.948)/0.948 = **58.5% debit**.

**P. 377**

| Risk | Experience Modification P | Q | Subsequently Observed Manual Loss Ratio Relativity |
|---|---|---|---|
| 1 | 0.75 | 0.86 | **0.71** |
| 2 | 0.80 | 0.90 | **0.79** |
| 3 | 0.91 | 0.94 | **0.94** |
| 4 | 1.05 | 1.02 | **1.14** |
| 5 | 1.44 | 1.26 | **1.42** |

**p. 538**, sol. 8.54, top of page: (**1/3**)(0.5) + (**2/3**)(0.8) = 0.7

**p. 1359**: S(x) = G'(**x**) / G'(0).

**p. 1629-1630**, in four places: 3**9**,797 should be 36,797

**p. 2067**, exercise at the of the page: is **$900,000** excess of $300,000.
(so that the reinsurance treaty covers the layer from 300,000 to 1,200,000.)
.

**p. 2068**: In the latter case, the average payment per loss is:
$E[X \wedge PL] - E[X \wedge 0] = E[X \wedge PL]$.
Thus the average payment per loss for the umbrella policy is approximately:
$(2/3)(E[X \wedge (UL + PL)] - E[X \wedge UL]) + (1/3) E[X \wedge \mathbf{PL}] =$
$(1 - \phi) (E[X \wedge (UL + PL)] - E[X \wedge UL]) + \phi E[X \wedge \mathbf{PL}]$.
This will be the denominator of the exposure factor.
As discussed, when the umbrella acts as excess above the occurrence limit of the CGL,
the average payment per loss for the excess treaty is:
$E[X \wedge Min[UL + PL, UL + AP + Lim]] - E[X \wedge Min[UL + PL, UL + AP]]$.
When due to the drop down provision the umbrella acts as primary,
the average payment per loss for the excess treaty is:
$E[X \wedge Min[\mathbf{PL}, AP + Lim]] - E[X \wedge Min[\mathbf{PL}, AP]]$.
Thus the numerator of the exposure factor is:
$(1-\phi) (E[X \wedge Min[UL + PL, UL + AP + Lim]] - E[X \wedge Min[UL + PL, UL + AP]])$
$+ \phi (E[X \wedge Min[\mathbf{PL}, AP + Lim]] - E[X \wedge Min[\mathbf{PL}, AP]])$.

**p. 2069-2070, footnote on page 2280, Q. 26.2, sol. 26.2**: A**A**D not ADD.

**p. 2071**: More rather than Mo**t**e

**p. 2190**, sol. 26.39: **Reinsurer** loss ratio: 300,000/45,000 = 666.7%.

**p. 2197**, sol. 26.56:

| Midpoint | Portion Retained | 1000K / (midpoint times portion retained) | Exposure Factor |
|---|---|---|---|
| 175K | 100% | 5.714 | 100% |
| 375K | 2/3 | **4** | 100% |
| 750K | 1/3 | **4** | 100% |
| 1250K | 0.2 | **4** | 100% |
| 1750K | 2/7 | 1.5 | 100% |

| Range of Insured Value | Net Premium ($ million) | Expected Ceded Losses |
|---|---|---|
| 100 to 250 | (20)(100%) = 20 | (64%)(100% - 100%)(20) = 0 |
| 250 to 500 | (40)(2/3) = 26.667 | (64%)(100% - 96%)(26.667) = 0.683 |
| 500 to 1000 | (25)(1/3) = 8.333 | (64%)(100% - 96%)(8.333) = 0.213 |
| 1000 to 1500 | (10)(0.2) = 2 | (64%)(100% - 96%)(2) = 0.051 |
| 1500 to 2000 | (5)(2/7) = 1.429 | (64%)(100% - 81%)(1.429) = 0.174 |

Expected ceded losses = 0 + 0.683 + 0.213 + 0.051 + 0.174 = **$1.121 million**.

**p. 2198**, sol. 26.58: **False**. It would be true for surplus share.

**p. 2202**, sol. 26.77: (1.10)(1.25)($120,000) / $10,000,000 = **1.65%**.

**p. 2237**, sol. 26.169: Under the $400,000 xs $100,000 per-risk excess of loss:

| Risk | Loss | Amount Ceded | Amount Retained |
|---|---|---|---|
| A | **$120,000** | **20,000** | 100,000 |

**p. 2242**, solution 26.173d: 180,000 + 26**4**,000 + 132,000 = 57**6**,000.

**p. 2260**: Although it not clear from the syllabus reading, based on the CAS errata and 8, 11/13, Q.24, the PML is usually calculated from the **Occurrence** Exceedance Probability rather than the Aggregate Exceedance Probability.
If there is a 2% chance that during a year at least one occurrence will exceed $800 million, then a one-in-50 year Probable Maximum Loss (PML) would be $800 million.