

Errata and Updates for ASM Exam LTAM (Third Edition) Sorted by Date

- [7/7/2021] On page 892, in the solution to exercise 47.25, on the first two displayed lines, change p_{x+t}^{03} and p_{x+t}^{13} to p_{x+5}^{03} and p_{x+5}^{13} respectively.
- [7/7/2021] On page 911, exercise 48.3 is defective and should be skipped. It is inappropriate to use the claim acceleration method on annuities. It should only be used for insurance benefits, benefits paid upon a transition.
- [7/7/2021] On page 916, in exercise 48.12, the benefit of 20,000 at the end of the year of death from chronic illness is in lieu of the 100,000 death benefit paid if one dies from a healthy state. (This is an unusual accelerated death benefit).
- [7/7/2021] On page 921, exercise 48.23 is defective and should be skipped. The solution is incorrect, since it does not distinguish between an insurance that pays upon transition to state 3 regardless of the starting state of the transition and an insurance that pays upon transition to state 3 only if the transition starts in states 0 or 1.
- [7/7/2021] On page 925, in the solution to exercise 48.6, on the seventh and eighth lines, add “ dt ” before the first equal sign on each line.
- [7/7/2021] On page 1366, in exercise 76.3, on the last line, add “ $\hat{\mu}_{40}$ ” between “force of mortality” and “assuming”.
- [7/6/2021] On page 175, exercise 10.10 belongs at the end of the exercises for Lesson 20.
- [7/6/2021] On page 192, in the solution to exercise 11.3, on the second line, change $-c + \sigma_k Z_{11}$ to $+c + \sigma_k Z_{11}$ and change $0.01Z_{11}$ to $0.1Z_{11}$.
- [7/6/2021] On page 193, in the solution to exercise 11.10, on the last line of the page, change $0.01Z_{2017}^{(2)}$ to $0.05Z_{2017}^{(2)}$.
- [7/6/2021] On page 194, in the solution to exercise 11.11(b), on the first line, change $Z_{2019}^{(1)}$ to $Z_{2019}^{(2)}$ in two places.
- [7/4/2021] On page 893, in the solution to exercise 47.28, on the fifth through seventh lines, the (12) in the subscripts should be moved to the superscripts; change $\ddot{a}_{(12)55}^{01}$ to $\ddot{a}_{55}^{(12)01}$, $\ddot{a}_{(12)65}^{01}$ to $\ddot{a}_{65}^{(12)01}$, and $\ddot{a}_{(12)65}^{11}$ to $\ddot{a}_{65}^{(12)11}$.
- [7/4/2021] On page 926, in the solution to exercise 48.11, on the second line, change $(\bar{D}\bar{A})_{x:\overline{10}|}^{13}$ to $(\bar{D}\bar{A})_{50+t:\overline{10}|}^{13}$. Make the same change on line 6, and on lines 6–9, change all nine ts to us . On line 7, add “ du ” at the end of the line.
- [7/2/2021] On pages 890–891, make the following corrections to the solution to exercise 47.18:
- On the last line of page 890, change \bar{a}_{40}^{11} to \bar{a}_x^{11} .
 - On the third line of page 891, delete \bar{a}_{40+t}^{11} from both integrals.
 - On the seventh line of page 891, change e^1 to e^{-1} .
- [7/2/2021] On page 892, in the solution to exercise 47.22, on the last line, change ${}_5V^{(1)}$ to ${}_{10}V^{(1)}$.
- [6/28/2021] On page 183, 3 lines above Example 11D, replace the sentence beginning with “So the distribution” with
So the distribution of $1 - \phi^m(x, t)$ has a mean that is 1 minus the mean of that lognormal and variance equal to the variance of that lognormal.
- [6/28/2021] On page 194, in the solution to exercise 11.10, on the third line from the end, change $lm(80, 2017)$ to $lq(80, 2017)$. Also change “the 5th percentile of $p(85, 2017)$ ” to “the 95th percentile of $p(80, 2017)$ ”.
- [6/28/2021] On page 195, in the solution to exercise 11.13, replace all lines after “Subtract the third equation from this to eliminate $K_{2020}^{(1)}$ with

$$-2K_{2020}^{(3)} = -0.020243$$

$$K_{2020}^{(3)} = 0.010121$$

$$K_{2020}^{(1)} = -4.01946 + 142(0.010121) = -2.582232$$

$$K_{2020}^{(2)} = 4.18459 - 0.04 - 139(0.010121) - 2.582232 = 0.155484$$

Now we're ready to calculate q_{71} in 2020. The cohort factor for it is $G_{2020-71} = -0.05$.

$$lq(71, 2020) = -2.582232 + 0.155484 + (1^2 - 140)(0.010121) - 0.05 = -3.88360$$

$$q(71, 2020) = \frac{e^{-3.88360}}{1 + e^{-3.88360}} = \boxed{0.020162}$$

[6/16/2021] On page 553, in the solution to exercise 29.10, change the last line to

$$P = \frac{100,000(0.05413)}{12(7.7210)} = \boxed{58.4267}$$