

Exam #9, solution 17:

April 1, 2020 + 6 months = **October** 1, 2020.

The average date of loss under the new rates (annual policies) is:

October 1, 2020 + 6 months = April 1, 2021.

Final solution is okay.

Exam #11, solution 1:

$\beta^8 \exp[-\beta \{2.5 + \ln[1.8] + \ln[2.9] + \ln[3.2] + \ln[4.6] + \ln[7.4]\}] / \{(18)(29)(32)(46)(74)\}$

Final solution is okay.

Exam #11, solution 33:

Similar to Q. 13.26 in "Mahler's Guide to Frequency Distributions."

Exam #12, question 20: Estimate β via the method of maximum likelihood.

Exam #12, solution 1: $\theta' = \theta / (1 + E\theta)$. Final solution is okay.

Exam #12, solution 8: $E[\beta^2] = (0.8819 + 4 E[\beta]^2 - 2E[\beta]) / 6$. Final solution is okay.

Exam #13, solution 3: Mean of X is: $24N + 2N - 5N - 30N = -9N$.

The variance of X is equal to the variance of the losses which is 17,400N.

$\text{Prob}[X > 0] \cong 1 - \Phi\{0 - (-9N) / \sqrt{17,400N}\} = 1 - \Phi[0.06823 \sqrt{N}]$.

Final solution is okay.

Exam #13, solution 27: $\text{Var}[S] = 137 - 7.7^2 = 77.71$. Final solution is okay.