Hyndman and Athanasopoulos – chapter 7 answers

1. PIGS series analysis.
   1. The data shows no signs of a trend or of a seasonality. Alpha is roughly equal to 0.3, while the initial state is calculated as 77,260. The standard deviation of the residuals is equal to 10,308.58 pigs slaughtered.
   2. The 95% prediction interval for Sep-1995 was [78,199 - 119,433]. It is wider than the interval produced by R.
      * From Gelman: the residual standard deviation, sigma, can be thought as a measure of the average distance each observation falls from its prediction from the model.
2. Done exclusively in R. There is some difference, but I suspect it is a product of rounding the initial conditions and the alpha. For all intents and purposes, they are the same.
3. The results are the same as obtained with SES. There is a small difference, but again I think this is a consequence of rounding.