Exercise 3.6 – Trigram Probability with Add-One Smoothing

To estimate a trigram probability with add-one (Laplace) smoothing:

* [P(w\_3 | w\_1, w\_2) = {c(w\_1, w\_2, w\_3) + 1} {c(w\_1, w\_2) + V}]

Where:

* + ( c(w\_1, w\_2, w\_3) ): count of trigram (w1, w2, w3)
  + ( c(w\_1, w\_2) ): count of bigram (w1, w2)
  + ( V ): vocabulary size (number of word types in the corpus)