Chapter 5 Portfolio Contribution

Please refer to Section 5.5 of the textbook, in which the author describes how to use his R function BernGrid. Employing the same fine comb suggested by the author, create plots for the prior, likelihood, and posterior (see Figure 5.2) in each of the following situations. Display the plots, and then discuss what they are telling you. Please include an appendix with your R code; you do not need to re-print the author’s R function, but please acknowledge use of it.

Required for undergraduate and graduate students:

1. , 7 successes in 10 attempts

2. , 70 successes in 100 attempts

Remarks: You do not need to know the constant of proportionality for the prior in order to use the author’s R function. (Why not ?) However, defines the top half of a circle with radius 0.5, so you could figure out the constant of proportionality if you wanted to do so.

Required for graduate students only:

3. for , otherwise, 50 successes in 100 attempts

Remarks: Although a large volume of data will often overcome a bad prior, this example shows a prior which is so goofy that it cannot be overcome.