

AIM 5009 Bayesian Statistics
Programming Task 2.1

Instructions

This programming task is designed to cover simulation approaches to Bayes's rule. These two exercises provide practice in estimating a posterior *distribution* based on a prior distribution and some simulated data.

(Note that some of these problems are tied to earlier problems where solutions are found by hand. You do not need to replicate those hand solutions here.)

Complete the following problems. Your full solutions should be submitted by the due date given in Canvas. You may submit any of a number of formats, but the submission should include both your code and your output. My suggestion is that you use RStudio, create an R Markdown file, and render a PDF file for submission.

Problems

1. Complete problem 2.18 from the textbook.
2. Complete problem 2.19 from the textbook.

Grading Rubric

For this assignment, the following rubric will be used:

Correctness of Code and Calculations	0 – 6
Clarity of Explanations of Answers	0 – 2
Clarity and Organization of Presentation	0 – 2