Assignment 8

For each of the questions listed below, use JAGS to obtain posterior simulations (use 2000 warm-up iterations, and then 10000 recorded iterations), construct the diagnostic plots to confirm that convergence has been reached (if it hasn't, increase the number of warm-up iterations and try again). Draw a histogram of the posterior distribution (make sure you use `freq=F`, also since you have 10000 simulations, you can use a large number of breaks), and in all cases, as you know the actual posterior distribution (due to conjugacy) overlay the 'correct' density function over the histogram to prove that you are getting the expected result. For each question, submit the appropriate R code (in a .R file), the corresponding JAGS model file, all plots, and the answers to any specific things ask for.

1. Assignment 3, Question 1.
2. Assignment 3, Question 2.
3. Assignment 3, Question 6(a), use a Gamma(1,1) prior distribution
4. Assignment 3, Question 6(c), use a Gamma(1,1) prior distribution