**Bayesian Homework Points**

You will get points for providing all of the below. The number of points per section has not yet been determined.

1. “Run the Bayesian analyses and report the results”
   1. Steps of the analysis to show
      1. equation
      2. likelihood
      3. data and sample size
      4. parameters and priors
   2. Code, including the .txt model file
   3. Results
      1. Full sentence(s)
         1. # of chains and if they converged
         2. # of iterations (at least 15000)
         3. thinning and burn in values
         4. lag-1 autocorrelation (<0.1 for all parameter posterior samples)
      2. Table(s)
         1. posterior mean and 95% credible interval for each parameter
         2. correlation between posterior parameter samples
         3. DIC: this will require running the model with different combinations of independent variables.
      3. Graph(s): 2 dimensional Y vs Xi.
2. Prediction
   1. For your given values of **X**, and the posterior samples of the parameters, what is the distribution on **Y**?
   2. Is **X** point(s) or distribution(s)?
   3. Report means and 95% posterior interval(s) of **Y**.