MTH225 Spring2017 Final Problem 18

The file `MTH225_Spring2017_Problem18.csv` contains the times to burnout from two lots of light bulbs.

Compare the mean time to failure for the two lots, assuming that the burnout time has an exponential distribution.

- 2 points: Write R code to read the data and convert it to an R data frame.
- 1 point: Write the data block of a STAN model file that extracts the data from the R workspace.
- 1 point: Write the parameters block of a STAN model file that declares the paramter(s) of your model.
- 2 points: Write the model block of a STAN model file that specifies the priors and likelihood for your model.
- 1 point: Write R code to apply the `extract` function to the data structure output from the `stan` function.
- 1 point: Use the `extract()` function of the RSTAN package to obtain the values for the parameters from the posterior draw.
- 1 point: Use the posterior draw to produce point estimates of the parameters for the two lots.
- 1 point: Use the posterior draw to estimate the probability that the parameter for the first lot is the larger of the two.

(10 points possible)