

HW 10

Due Wednesday, Dec. 10

To use R, download it here:

<http://cran.cnr.berkeley.edu>

Click on the download link for Mac or Windows users, as appropriate

Mac users can download by clicking R-3.1.2-snowleopard.pkg

Windows users can click on base, then click on Download R 3.1.2 for Windows

You may also use R on any computer lab which has it

The dataset town_data.csv is located on blackboard under course documents, in the folder 'R files'

The dataset contains data from several neighboring towns. At each town, we interviewed all farmers within that town, and asked them how many acres of land they owned, and whether or not they grew wheat. If they did grow wheat, we recorded the observation with a '1', if they did not grow wheat, we recorded the observation with a '0'.

Also in the folder 'R files' is the file 'sample R code'. This shows the code that was used to do a similar problem using the dataset 'School_data.csv', and output from R which was copied and pasted into the document.

You can mimic the code here in order to complete the assignment.

For the assignment, do the following:

First download the file 'town_data.csv' to your computer, and put it somewhere where you can easily access it. Then using R:

- 1) Take a stratified sample of acres of land owned, taking a simple random sample of size 25 from each strata. Find the estimate of mean acres of land owned.
- 2) Take a stratified sample of wheat, taking a simple random sample of size 30 from each strata. Find the estimate of proportion of farmers that grow wheat.
- 3) Take a cluster sample, randomly selecting 4 clusters, and estimate the mean acres of land owned.
- 4) Take a cluster sample, randomly selecting 4 clusters, and estimate the proportion of farmers that grow wheat.

Copy and paste any and all R code and R output that you use onto a word document. You must do this to show how you obtained your statistics. The work that is done by hand can be written on the same word document or on a separate piece of paper. You may organize your work however you feel is appropriate.

Next week is just review, so if you do not wish to attend class, you may turn it in early by sliding it under my office door in GMCS 566.