

Everyone,

The second intellectual festival will cover all of the material in Chapters 5 through 9, but material from chapter 9 will be related only to concepts and definitions of a sampling distribution (and not any calculations).

The festival will have questions from the following list:

- 1) ~10-12 multiple choice questions. These tend to be questions related to specific facts (e.g., definitions & symbols) or very short calculations.
- 2) Four (out of six) short answer (paragraph-length) questions. These are generally related to major concepts, several of which I have rather pointedly hinted at in class.
- 3) a bivariate EDA for quantitative data.
- 4) percentage table calculations from a two-way frequency table (e.g., row, column, table percentages).
- 5) Experimental design questions (what is response, factors, etc.)
- 6) Linear regression questions (some subset of the 12 typical questions that I ask). This will require you to examine a `fitPlot()` with a best-fit line superimposed with the best-fit equation and r^2 included.
- 7) "What is the probability ..." questions (similar to chapter 8 and chapter 4 questions). This will require you to use `distrib()` in R. The following R help will be provided to you at the exam.

```
library(NCStats)
distrib(x,mean=##,sd=##,lower.tail=XXXXX,type="X")
```

where **x** is replaced with the value of the quantitative variable or the area

mean=## has ## replaced by the value of the mean

sd=## has ## replaced by the value of the standard deviation

lower.tail=XXXXX has XXXXX replaced with TRUE (the default) for a "left-of" and FALSE for a "right-of" calculation

type="X" has X replaced with p (the default) for a forward and q for a reverse question

The exam is closed book, closed notes, etc. You should bring a calculator and you **MUST** use a pencil. Exams written in red ink will not be accepted. In full disclosure -- there will be multiple versions of the exam so please do not embarrass yourself, and earn an "F" for the class, by cheating from your neighbor. Your RStudio must open with either no scripts or a blank script – i.e., the upper left pane must not have any previously entered R code in it. Opening any other software or previous script will result in an automatic "F" for the class. In addition, I will be monitoring computer usage and you will only be allowed to open RStudio.

The exam will start promptly at the beginning of class (on the hour) and will end promptly 1 hour and 50 minutes later. Please let me know ASAP if you have any conflict with staying 20 minutes past our usual class ending time.

We can discuss this more in class, but also let me know via e-mail if you have any questions.