

Assignment #10 contains problems about paired samples. Problems which require the use of R have the symbol **(R)**.

Please include **your name** and **the discussion section (day/time) that you attend** on your homework. This assignment is worth 50 points in total. If you feel challenged by these problems, I encourage you to do additional problems on your own. Many problems have answers in the back of the textbook.

Your assignment must be turned in during lecture or to your TA's mailbox by 5pm on the due date. We will not grade late homework. If there are special circumstances, please speak to Professor Larget, preferably in advance, for consideration.

1. *[10 points]* Do Exercise 10.10.
2. *[10 points]* Do Exercise 10.24.
3. **(R)** *[10 points]* Do Exercise 10.45 using the R function `fisher.test`. Write the actual data matrix and all of the more extreme data matrices. Describe the p-value as equal to the probability of drawing some number of colored balls or more from a bucket (as in the notes).
4. **(R)** *[10 points]* Do Exercise 10.50 by hand. Then, verify the calculations using the R function `chisq.test`.

```
> x = matrix(c(8,2,7,9,4,9,1,20,7),3,3)
> chisq.test(x,correct=F)
```

5. *[10 points]* Do Exercise 10.59.