

Assignment #12 contains a few textbook problems from Chapters 11 and 12 and some associated R problems.

If you turn the assignment in by Friday, Steve will return it to you on Monday. If instead you turn in the assignment on Monday, Steve will get it back to you by the last day of class. We will post solutions sometime next week prior to the last exam.

- Exercises 11.19–11.21 contain data from a clinical trial to compare two drugs for treating high blood pressure. A partial ANOVA table is here.

| Source      | df | SS       | MS | F | p-value |
|-------------|----|----------|----|---|---------|
| Drugs       |    | 69.22    |    |   |         |
| Dose        |    | 330.00   |    |   |         |
| Interaction |    | 31.33    |    |   |         |
| Within      |    | 30648.81 |    |   |         |
| Total       |    |          |    |   |         |

Complete the ANOVA table. Use R to find exact p-values. (For example, the area to the right of 10.2 under a F distribution with 2 and 17 degrees of freedom is found as below.)

```
> 1 - pf(10.2, 2, 17)
```

```
[1] 0.001228591
```

Summarize the results of the three hypothesis tests in the context of the problem.

- Do Exercise 12.9.
- Use R to find the least squares regression line for the data in Exercise 12.9. Here is the sample code that will do this.

```
> bullfrog = read.table("ex12-9.txt", header = T)
> attach(bullfrog)
> fit = lm(jump ~ length)
> summary(fit)
```

- Construct a 95% confidence interval for the slope of the regression line in the previous two exercises.

This assignment has 4 problems and is worth 20 HW points.

For the semester, the 12 assignments had a total of 445 points. This table shows the break down for the course.

| Homework Total | Course Points |
|----------------|---------------|
| 401-445        | 10            |
| 356-400        | 9             |
| 312-355        | 8             |
| 267-311        | 7             |
| 223-266        | 6             |
| 178-222        | 5             |
| 134-177        | 4             |
| 89-133         | 3             |
| 45-88          | 2             |
| 1-44           | 1             |
| 0              | 0             |

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