

STAT 550, Fall 2009
Homework 3
due Friday October 2

Show all work.

The numbers refers to *Higgins and Keller-McNulty*, if not specified otherwise. The 2 problems use R. Some problems may have additional parts.

1. p. 26: 1.4-9

Following Computer Lab 1, use the 3 R datasets and functions `cards`, `rbern`, and `poker`. Simulate 25 hands of 5 cards each from a deck of 52 cards. To compute the empirical probability, just count the number of hands that are the events of interest of (a) and (b).

Be sure to use the R function `set.seed` so that you can reproduce your results. You should include your R code (call to functions) and output.

2. p. 33: 1.5-2 and 1.5-3. Compare the results.

To simulate two coin tosses repeatedly, you can use the R `sample` function with a character vector,

```
> sample(c("H", "T"), size=2, replace=T)
```

Simulate 25 two coin tosses. To “keep the outcomes that have at least one head”, just do not count them.

Be sure to use the R function `set.seed` so that you can reproduce your results. You should include your R code (call to functions) and output.