# STA 210: HW 2

*Your Name*

*Date*

## Question 1: Ex. #5.14

```
avg <- c(14.62,34.12,33.61,29.1,27,26.97,26.8)
sd <- c(5.039,11.942,6.582,4.593,3.818,9.010,5.969)
n <- c(9,5,6,9,2,6,9)
judges <- bind_cols(avg=avg,sd=sd,n=n)
```

**a**

**b**

## Question 2: Ex. #5.17

```
#values provided by book
dfw <- 24 #DF within
dft <- 31 #DF total
ssw <- 35088 #Sum of squares within
sst <- 70907 #Sum of squares total
```

```
#fill in equations to calculate remaning values
dfb <-  #DF between
ssb <-  #Sum of squares between
msb <-  #Mean square between
msw <-  #Mean square within
f_stat <- #F -statistic
p_val <- # p-value
```

```
# create each column of the ANOVA table
#Each column must have same number of rows,
#Use NA to hold a space for the blank parts of the ANOVA table
source <- c("Between Groups", "Within Groups", "Total")
df <- c(dfb, dfw,dft)
ss <- c(ssb, ssw, sst)
ms <- c(msb, msw,NA)
f.statistic <- c(f_stat, NA, NA)
p.value <- c(p_val,NA,NA)
```

```r
# combine the columns to make a table called "anova"
anova <- bind_cols("Source"=source,"df"=df,"Sum of squares"=ss,
            "Mean square"=ms,"F-statistic"=f.statistic,"p-value"=p.value)

# print the table
kable(anova)
```

## Question 3: Ex. #5.23