R_basics_assignment

Kyra Reisenfeld

January 14, 2020

```
setwd("~/Documents")
tgpp <- read.csv("./Quant/Quant_assignments/tgpp.csv", header = TRUE)
head(tgpp)
```

```
##   plot year record_id corner scale richness easting northing slope  ph
## 1  205 1998       187     NA   100       60  727000  4080000     3 6.9
## 2  205 1998       188      1    10       36  727000  4080000     3 6.9
## 3  205 1998       189      2    10       34  727000  4080000     3 6.9
## 4  205 1998       190      3    10       37  727000  4080000     3 6.9
## 5  205 1998       191      4    10       33  727000  4080000     3 6.9
## 6  205 1998       192      1     1       21  727000  4080000     3 6.9
##   yrsslb
## 1   0.39
## 2   0.39
## 3   0.39
## 4   0.39
## 5   0.39
## 6   0.39
```

1. What are the names of the columns in this dataset? The names of the columns are "plot, year, record_id, corner, scale, richness, easting, northing, slope, ph, yrsslb"
2. How many rows and columns does this data file have? There are 11 columns and 4,080 rows in this data file.
3. What kind of object is each data column? Hint: checkout the function sapply().

```
sapply(tgpp, class)
```

```
##      plot       year  record_id     corner      scale   richness    easting
## "integer"  "integer"  "integer"  "integer"  "numeric"  "integer"  "integer"
##  northing      slope         ph     yrsslb
## "integer"  "integer"  "numeric"  "numeric"
```

4. What are the values of the the datafile for rows 1, 5, and 8 at columns 3, 7, and 10

```
tgpp[1, 3]
```

```
## [1] 187
```

```
tgpp[1,7]
```

```
## [1] 727000
```

```
tgpp[1,10]
```

```
## [1] 6.9
```

```
tgpp[5,3]
```

```
## [1] 191
```

```
tgpp[5,7]
```

```
## [1] 727000
```

```
tgpp[5,10]
```

```
## [1] 6.9
```

```
tgpp[8, 3]
```

```
## [1] 194
```

```
tgpp[8,7]
```

```
## [1] 727000
```
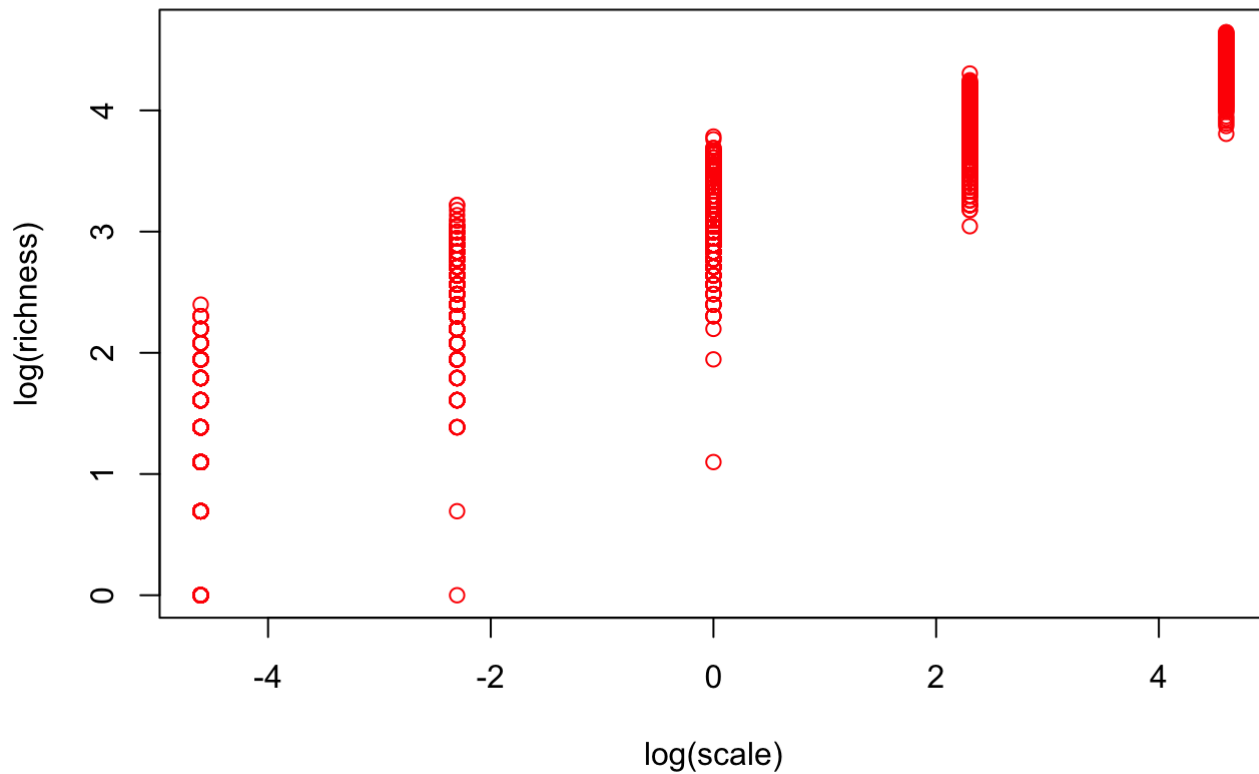
```
tgpp[8,10]
```

```
## [1] 6.9
```

OR

```
df<-c(tgpp[1, 3], tgpp[1,7], tgpp[1,10], tgpp[5,3], tgpp[5,7], tgpp[5,10], tgpp[8, 3], t
gpp[8,7], tgpp[8,10])
df
```

```
## [1]    187.0 727000.0      6.9    191.0 727000.0      6.9    194.0 727000.0
## [9]      6.9
```

5. Create a pdf of the relationship between the variables "scale" and "richness". Scale is the area in square meters of the quadrat in which richness was recorded. Be sure to label your axes clearly, and choose a color you find pleasing for the points. To get a list of available stock colors use the function colors(). Also see this link: http://research.stowers-institute.org/efg/R/Color/Chart/index.htm (http://research.stowers-institute.org/efg/R/Color/Chart/index.htm).

```
p<-plot(log(richness)~log(scale), col="red", data=tgpp)
```



```
print(p)
```

```
## NULL
```

6. What happens to your plot when you set the plot argument log equal to 'xy'. `plot(..., log='xy')`

```
plot(richness~scale, col="red", log='xy',data=tgpp)
```

```
## Warning in xy.coords(x, y, xlabel, ylabel, log): 4 y values <= 0 omitted
## from logarithmic plot
```