# StatsIntro

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## Importing data to table from clipboard:

First, copy the entire dataset to the clipboard, including the header row. Then run the following code to assign it to a variable: (I've commented this portion out since I will be loading from a file when running it in this notebook.)

```
#dataset <- read.table("clipboard",header=TRUE)
```

I've saved the dataset in a file in the same folder as this notebook, so I can use the read.table command from the file instead of the clipboard.

```
dataset <- read.table("dataset1.csv",
                      header=TRUE,sep=",")
```

### A note about notation (the "<-" operator, specific to R):

You can think of the "<-" operator as "=". More accurately, though, we should say the LHS "gets" or "is assigned" the value of the RHS. There are subtle differences between "<-" and "=" (I'll show one below), but "<-" is more flexible and should be used by default.

```
sum(x=1,2); exists('x')
```

```
## [1] 3
```

```
## [1] FALSE
```

```
sum((x=1),2); exists('x')
```

```
## [1] 3
```

```
## [1] TRUE
```

```
sum(y<-1,2); exists('y')
```

```
## [1] 3
```

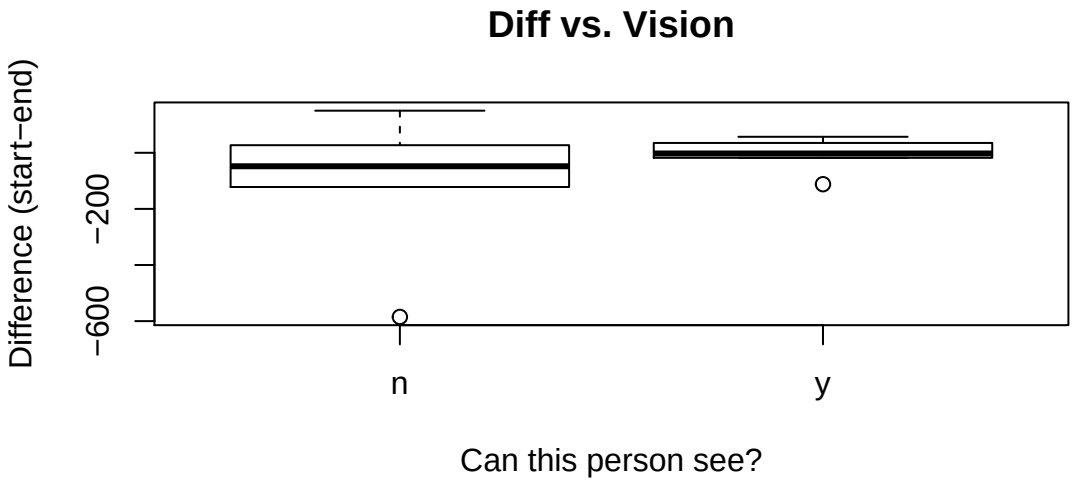
```
## [1] TRUE
```

```
rm(x,y)
#Notice the equals assignment is only stored when in perenthesis,
#whereas the y assignment need not be in perenthesis.
```

## Creating Plots of Difference (Start - End)

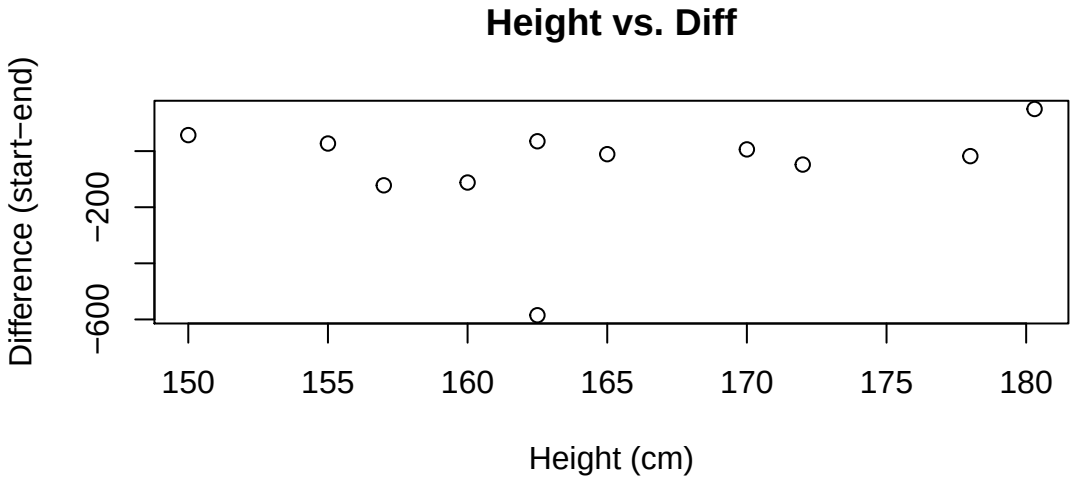
Create a bixplot for diff vs. vision:

```
boxplot(diff~Vis,data=dataset,
        main="Diff vs. Vision",
        xlab="Can this person see?",
        ylab="Difference (start-end)")
```



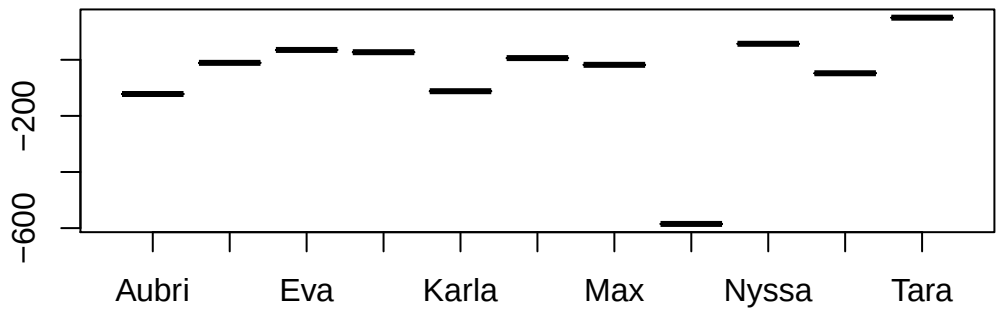

Create a scatterplot for diff vs. height:

```
plot(x=dataset$Height,y=dataset$diff,
     main="Height vs. Diff",
     xlab="Height (cm)",
     ylab="Difference (start-end)")
```




Create a plot of diff vs. person, an easy way to visualize the distribution of differences among individuals:

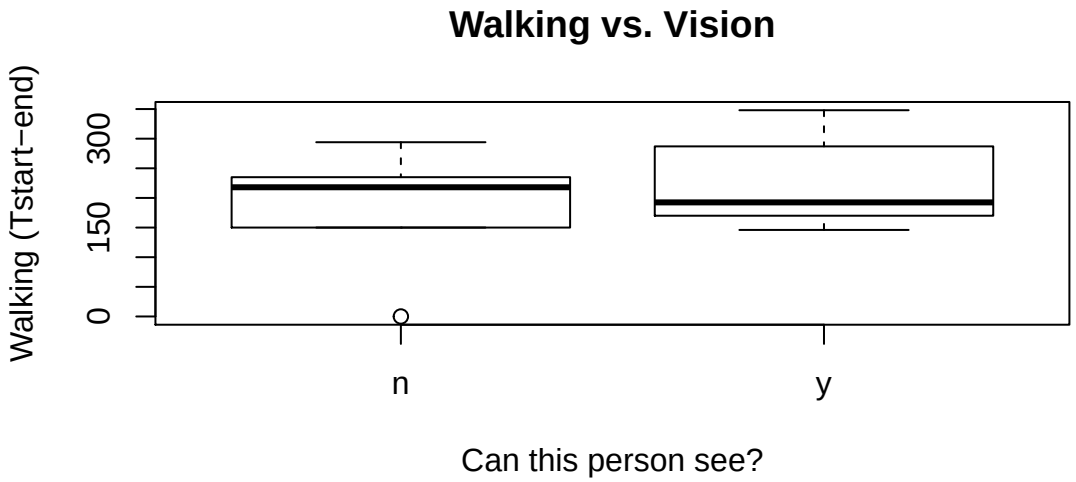
```
plot(x=dataset$Person,y=dataset$diff)
```




## Create Plots of Walking (Tstart-End)

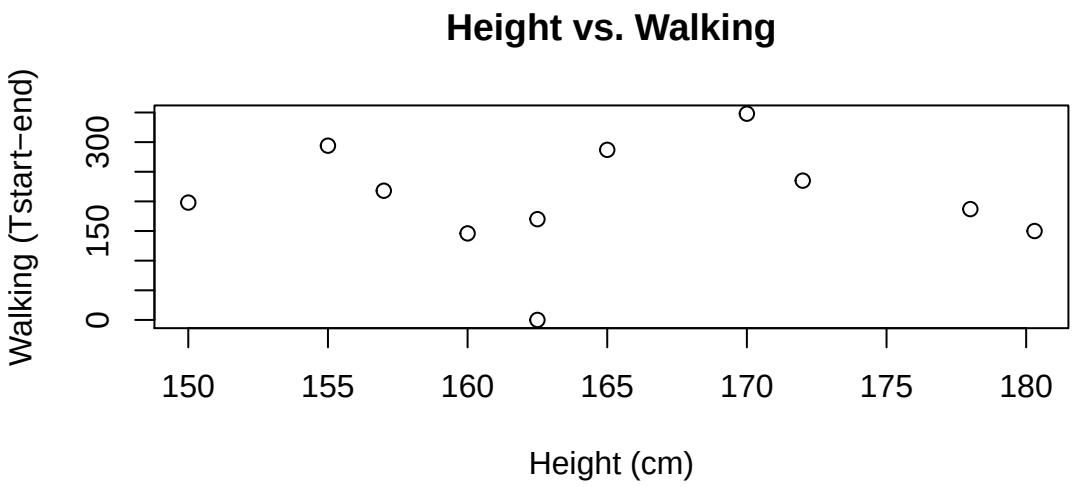
Create a bixplot for walking vs. vision:

```
boxplot(Walking~Vis,data=dataset,
        main="Walking vs. Vision",
        xlab="Can this person see?",
        ylab="Walking (Tstart-end)")
```




Create a scatterplot for walking vs. height:

```
plot(x=dataset$Height,y=dataset$Walking,
     main="Height vs. Walking",
     xlab="Height (cm)",
     ylab="Walking (Tstart-end)")
```


Height vs. Walking
Walking (Tstart−end)
0
150
300
150
155
160
165
170
175
180
Height (cm)