Abalone Report 1

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## Take a look at the abalone dataset

Using the head() function, let’s look ta the top 10 rows of the abalone dataset

# take a look at top 10 rows of abalone dataset  
head(abalone, 10)

| id | sex | length | diameter | height | wholeWeight | shuckedWeight | visceraWeight | shellWeight | rings |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | M | 0.455 | 0.365 | 0.095 | 0.5140 | 0.2245 | 0.1010 | 0.150 | 15 |
| 2 | M | 0.350 | 0.265 | 0.090 | 0.2255 | 0.0995 | 0.0485 | 0.070 | 7 |
| 3 | F | 0.530 | 0.420 | 0.135 | 0.6770 | 0.2565 | 0.1415 | 0.210 | 9 |
| 4 | M | 0.440 | 0.365 | 0.125 | 0.5160 | 0.2155 | 0.1140 | 0.155 | 10 |
| 5 | I | 0.330 | 0.255 | 0.080 | 0.2050 | 0.0895 | 0.0395 | 0.055 | 7 |
| 6 | I | 0.425 | 0.300 | 0.095 | 0.3515 | 0.1410 | 0.0775 | 0.120 | 8 |
| 7 | F | 0.530 | 0.415 | 0.150 | 0.7775 | 0.2370 | 0.1415 | 0.330 | 20 |
| 8 | F | 0.545 | 0.425 | 0.125 | 0.7680 | 0.2940 | 0.1495 | 0.260 | 16 |
| 9 | M | 0.475 | 0.370 | 0.125 | 0.5095 | 0.2165 | 0.1125 | 0.165 | 9 |
| 10 | F | 0.550 | 0.440 | 0.150 | 0.8945 | 0.3145 | 0.1510 | 0.320 | 19 |

## Abalone sex frequencies

We’ll use the table() function to get the counts of the abalone sex

# get frequency of sex  
table(abalone$sex)

| F | I | M |
| --- | --- | --- |
| 1307 | 1342 | 1528 |

## Get some summary stats

Get the mean and standard deviation of abalone lengths

# get mean and sd of length  
mean(abalone$length)

## [1] 0.5239921

sd(abalone$length)

## [1] 0.1200929

## Plot of abalone weights and number of rings

Basic plot of abalone whole weights on the x-axis and the number of rings on the y-axis. We’ll add colors for the sex of the abalones.

# create colors for each sex  
# use ifelse() function  
# set M to blue  
# set F to red  
# set I to green  
abalone$sexColor <-  
 ifelse(  
 abalone$sex == "M",  
 "blue",  
 ifelse(  
 abalone$sex == "F",  
 "red",  
 "green"  
 ))  
  
# make plot of x=wholeWeight, y=rings  
# color by sex  
plot(x=abalone$wholeWeight,   
 y=abalone$rings,   
 pch=16,  
 col = abalone$sexColor)

