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)
```