Assignment 1

R Programming Assignment - DS 710

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1.0 Open R. The first line of text in the console window tells you which version of R you are running (this should be version 3.1.2). Copy this line of text into a document, to verify that you've installed the correct version.

```
R version 3.1.2 (2014-10-31) - "Pumpkin Helmet"
```

1.1 Calculate the cube root of 2015:

```
2015^(1/3)
```

```
## [1] 12.63063
```

1.2 Find the absolute value of 5.7 minus 6.8 divided by 0.58:

```
abs(5.7-6.8)/.58
```

```
## [1] 1.896552
```

1.3 Create a list of integers from 1 to 12 and call it "a":

```
a = 1:12
a
```

```
##  [1]  1  2  3  4  5  6  7  8  9 10 11 12
```

1.4 Create a sequence of odd numbers from 1 to 11:

```
b = c(1, 3, 5, 7, 9, 11)
b
```

```
## [1]  1  3  5  7  9 11
```

1.5 Create the same sequence in another way:

```
c = seq(1,11, 2)
c
```

```
## [1]  1  3  5  7  9 11
```

1.6 Compute the $\ln a$. (Note that this is done to the entire "vector" called a.)

```
ln.a = log(a)
ln.a
```

```
##  [1] 0.0000000 0.6931472 1.0986123 1.3862944 1.6094379 1.7917595 1.9459101
##  [8] 2.0794415 2.1972246 2.3025851 2.3978953 2.4849066
```

1.7 Compute the squares of the odd numbers from 1 to 11.

```
sq.c = c^2
sq.c
```

```
## [1]   1   9  25  49  81 121
```

1.8 Use **?sd** to view the help file for the **sd** function. What does it do?

```
?sd
```

1.9 Create a variable Name that contains your first name.

```
Name = "Tyler"
paste("My name is", Name)
```

```
## [1] "My name is Tyler"
```

1.10 When you shut down R, R will ask if you want to save the workspace image. Always choose no. (Saving the workspace image means saving in memory any variables you have defined. It does not save the code you wrote—you need to save your code in a .r file, or script, for this. Saving your variables can be confusing: If you later write another function that's supposed to use, say, the name of a company, stored in the variable Name, but forget to initialize it, normally R would give you an error message that you could use to figure out your mistake. But if you save the workspace image, then R won't give an error message. It will just use the stored value of Name—but that's your name, not the company name. This produces a bug that can be much harder to track down.)