5-Homework Using `dplyr` and `ggplot2`
BIOL 5000

You will need these libraries:

```
library(ggplot2)
library(dplyr)
library(tidyr)
```

You will need this data:

```
data(msleep)
```

Question 1. Use `dplyr` to recreate the summary table below using the `msleep` dataset (built into ggplot). You will need to use several of the `dplyr` verbs (functions) we have learned in class. Your full table should have 17 rows (although fewer rows may be displayed by default).

```
## # A tibble: 17 x 5
##     name                          order     brainwt  bodywt   ratio
##     <chr>                         <chr>       <dbl>   <dbl>   <dbl>
##  1 Jaguar                        Carnivora 0.157    100     0.00157
##  2 Gray seal                     Carnivora 0.325    85      0.00382
##  3 Dog                           Carnivora 0.07     14      0.005
##  4 Red fox                       Carnivora 0.0504    4.23   0.0119
##  5 Arctic fox                    Carnivora 0.0445    3.38   0.0132
##  6 Domestic cat                  Carnivora 0.0256    3.3    0.00776
##  7 Genet                         Carnivora 0.0175    2      0.00875
##  8 African giant pouched rat     Rodentia  0.0066    1      0.0066
##  9 Arctic ground squirrel        Rodentia  0.0057    0.92   0.00620
## 10 Guinea pig                    Rodentia  0.0055    0.728  0.00755
## 11 Chinchilla                    Rodentia  0.0064    0.42   0.0152
## 12 Laboratory rat                Rodentia  0.0019    0.32   0.00594
## 13 Cotton rat                    Rodentia  0.00118   0.148  0.00797
## 14 Mole rat                      Rodentia  0.003     0.122  0.0246
## 15 Golden hamster                Rodentia  0.001     0.12   0.00833
## 16 Thirteen-lined ground squirrel Rodentia 0.004    0.101  0.0396
## 17 House mouse                   Rodentia  0.0004    0.022  0.0182
```

Question 2. Use a t-test to compare the two mammal orders, Rodentia and Carnivora, in their ratio of brain weight to body weight. Format your answer as you would see in the results section of a scientific journal article.

Question 3. Using `ggplot2`, replicate the following figure. Fill in the values from your t-test (Question 2).
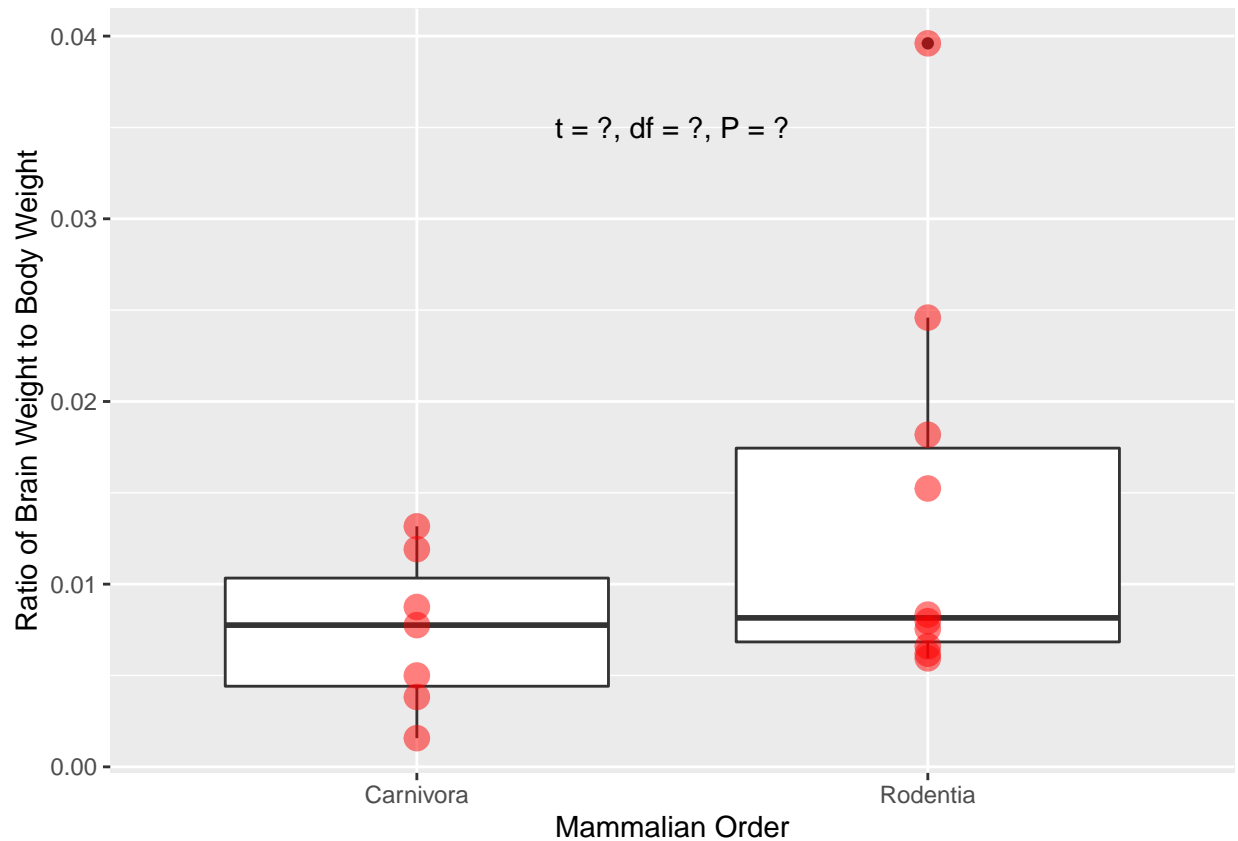
Question 4. Save the plot to your Rproject folder for this exercise as a 6" X 6" .jpg file.

Homework (folder containing .rproj file and all associated input/output files) is due to the D2L Assignments dropbox **before class one week from today**. As before, make each of your 'answers' an object. (e.g.) Answer_3 <- ggplot(data_summary, aes(x = …….. and 'print' the name of the object below the specified code (e.g. Answer_3). Each object is then displayed automatically in the console (if a model or table) or plot viewer (if its a graph) without having to click on anything.