5-Homework Using `dplyr` and `ggplot2`

BIOL 5000

You will need these libraries:

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

You will need this data:

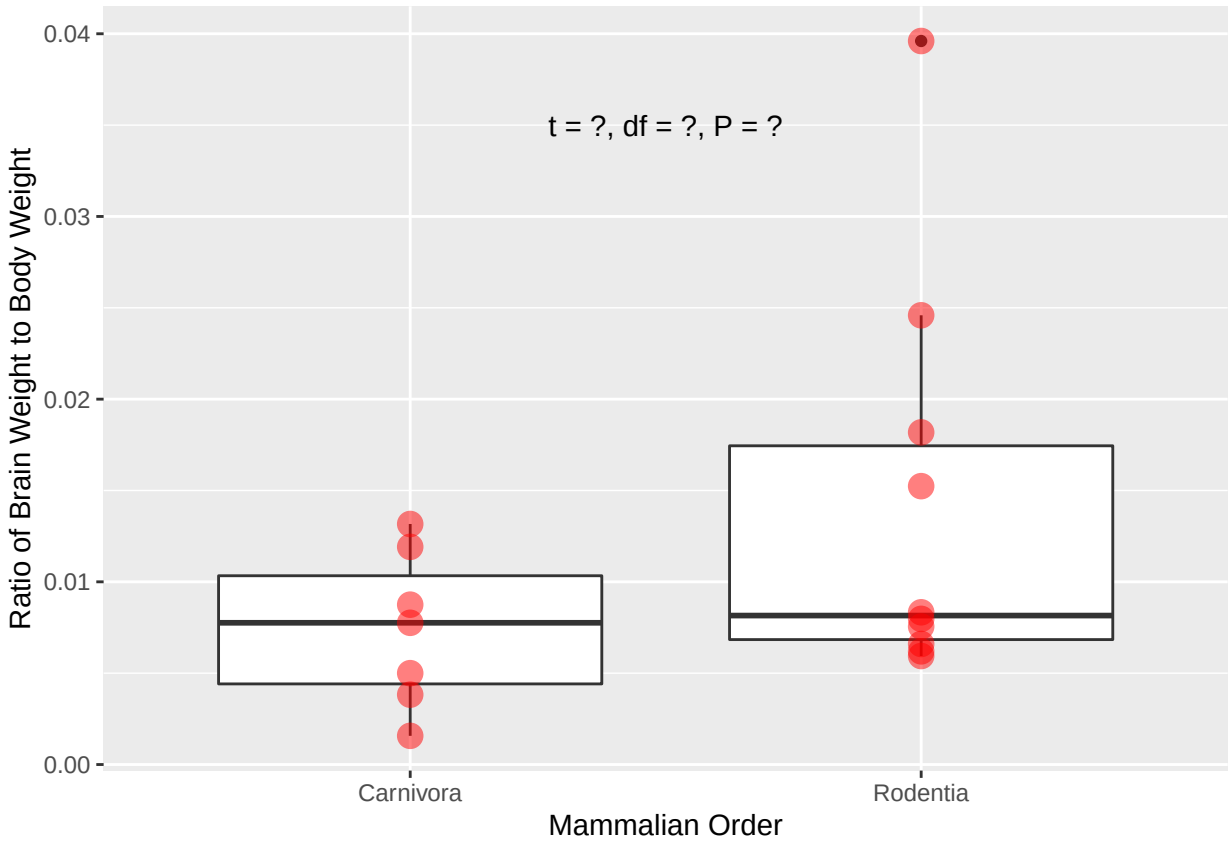
```
data(msleep)
```

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.

```
## # 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.

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 on November 2nd**. 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.