

Exercise 2

1. Create the following vectors
 - a. The names of everyone sitting at the table (**friends**).
 - b. Each calendar year since 1995 (**years**).
 - c. A sequence from 0 to 1 by 0.1 (**tenths**).
2. Consider the following vectors which contain data about countries in the Puget sound region:

```
# Name
cnty_name <- c("Jefferson", "Kitsap", "Pierce", "King", "Snohomish", "Skagit", "Whatcom",
              "San Juan", "Island")
# Population
cnty_pop <- c(30183, 255104, 835555, 2089564, 763963, 120718, 208935, 16029, 79291)
# Area (sq. miles)
cnty_area <- c(1855, 450.6, 1781, 2238.8, 2116.4, 1771.7, 2175, 254.4, 219.1)
# Life expectancy (yrs)
cnty_e0 <- c(81.3, 79.7, 78.7, 81.4, 80.2, 79.8, 81, 83.7, 81.9)
```

- a. What is the minimum and maximum life expectancy?
 - b. Which counties have populations over 100,000?
 - c. What is the mean area of counties with over 100,000?
3. Load the library (ggplot2) and the data "msleep." Assign this data to a variable name
 4. Check that msleep is a data frame
 5. Use each of the following functions to explore the data frame: head(), tail(), summary(), and View().
 6. How many rows and columns does the data frame have?
 7. What are the names of the columns? What data type is each column?
 8. Select rows where the **order** column is "Carnivora."
 9. Select rows where body weight is > 200 kg
 10. Create a new variable for the total amount of sleep in minutes and name it (**sleep_total_min**).
 11. Create a new variable for the ratio of body weight to brain weight and name it (**bdy_brn_ratio**)
 - a. What is the median body-to-brain weight ratio?
 - b. What is the variance in the body-to-brain weight ratio?
 12. Drop the **conservation**, **sleep_cycle**, and **bodywt** variables from the **msleep** object.

