Summarization I - Nunavut Exercise

---

1. Load the `PG008_original.xlsx` file into a data.frame object and answer the following questions.

    a. How many fish were collected from each year?

    b. What percent of all fish collected were from each year? [*Show results as a table rounded to one decimal place and as a figure.*]

    c. Construct a table that shows the percentage (to one decimal) of females (and males) collected by year.

    d. Construct a table that shows the number in each maturity stage collected by year and sex.

2. Isolate the Arctic Charr captured in 2013. Use these data to answer the questions below.

    a. Construct a length frequency graphic. [*Experiment with different bin widths*]

    b. Summarize (numerically) the length measurements.

    c. Construct a table from which you can easily find the percentage of fish longer than 450 mm.

    d. Construct a table from which you can easily find the percentage of fish shorter than 700 mm.

    e. Summarize the weight measurements.

    f. Examine the weight-length relationship.

    g. Examine (graphically and numerically) the log-log transformed weight-length relationship.

3. Isolate Arctic Charr captured from a single year where age was estimated for a large number of fish. [*Hint: Make a frequency table of* `age` *by* `year`.] Use these data to answer the questions below.

    a. Summarize the age distribution.

    b. Construct a table from which you can easily find the percentage of fish older than age-8.

    c. Construct a table from which you can easily find the percentage of fish younger than age-15.

    d. Examine the length-age relationship.
