Third homework assignment, 10/06/2020 (due 10/13/2020).

The one-sample *t* test.

Identify a situation from your daily life for which a one-sample *t* test would provide an interesting answer. Important note: do *not* construct an elaborate procedure involving human participants. Once you have your idea, clear it with Jack or Sonja before you use it for this assignment.

Here's an example (but you should develop your own): Wikipedia has an article that claims a head of cabbage weighs "about 1/2 pound." That does not match my experience; I believe that cabbage typically weighs more than 1/2 pound. I stop at Raley's on my way home, weigh as many cabbages as I can before I start getting too many strange looks, and record the results. (Because of Covid 19, you may need to come up with something that you can do in your own home, or find relevant data on the internet.)

Once you have collected suitable data, do the following:

- State a null hypothesis.
- Use a combination of graphics and descriptive statistics to describe the distribution.
- Test the null hypothesis, using an alpha level of .05.
- State your conclusion.

After discussing your hypothesis test:

- Investigate and comment on the assumptions that need to be met in order for your test to be valid.
- Include an effect size, interpret it, and justify your choice of effect size.
- Calculate and interpret a 95% confidence interval for the mean.
- Calculate and interpret a bootstrapped 95% confidence interval.
- Compare and choose which style of confidence interval works better for your sample.