The sections for today’s reading assignment focus mostly (though not exclusively) on inference in 1-sample (quantitative) settings, offering some “fixes” when the assumptions of a 1-sample t test seem not to be met. The assumptions themselves were the subject of an earlier reading question, and are found on p. 270.

1. At first issue is just how to check the assumptions. What kinds of plots might be used to check that the population seems to be normally distributed? You should be able to come up with two different answers, one of which is new and found in the reading. For each answer, state what it is you would look for on your plot as confirmation of normality.

2. A log transformation is one suggested way of fixing a seeming violation of the “normal population” assumption of 1-sample t procedures. I refer to it as a “seeming violation,” because our only evidence comes from the sample, which is subject to sampling error and so it may not accurately reflect the distribution of the underlying population. Based on what this sample shows, the hope behind a log transformation is that, if we considered the logarithm of all values in the population instead of the values themselves, the resulting (new) population of numbers would satisfy the normality assumption. Again, we want visual evidence to help confirm that the normality assumption holds for this transformed population, so we look at the log-values in the sample to see how they are distributed.

**The question here:** In what situations (i.e., what should be the appearance of the original data) is a log transformation reasonably likely to succeed?

3. Identify one item (a concept, a step in an example, a statement, etc.) from this reading assignment you found difficult or confusing.