Name:

**Instructions:** The instructor will randomly select one copy of your worksheets from your group at the end of the lab. Make sure to answer questions completely and clearly, fully indicating your reasoning/thoughts (often writing in complete sentences is helpful). I expect the responses to **have no typos and minimal grammatical error**. You are allowed and encouraged to discuss questions with your labmates.

**A1.** Indicate your null and alternative hypotheses below.

Null:

Alternative:

**A2.** What do the standard deviations say about each of your datasets?

**A3.** After figuring out the mean, standard deviation, count, t-value, and degrees of freedom in your Excel, input all information into the table. Round to three digits after the decimal if needed, and use scientific notation if very small number.

**Table 1. Summary statistics for position 50 read quality before and after filtering in microbial DNA reads from the oral gland of a female garter snake.**

| Summary Statistics | Unfiltered | Filtered | Statistical Values | |
|---|---|---|---|---|
| Mean | | | t-value | |
| Standard Deviation | | | Degrees of freedom | |
| Count | | | | |

**A4.** Compare your observed t-value with the critical values in the t-test table (http://tiny.cc/t-table) for the appropriate degrees of freedom. Indicate the p-value range in which your observed t-value falls.

**A5.** In one sentence, indicate the calculated probability and describe what is the meaning of this probability with regards to your hypotheses. HINT: language in step A22 may be useful.

**A6.** In one sentence, communicate the answer to your research question, making sure to indicate the numerical value in parentheses at the end of the sentence.