**College Student Debt – Part III**

In an earlier activity, you created two confidence intervals to investigate how the average college student debt for public and private colleges compare to one other.

In this activity, you will compute a single confidence interval for comparing public and private colleges instead of two separate intervals. The data set for this activity is *CollegeStudentDebt103.csv*.

**Research Question:** How different is the average college student debt for public and private colleges?

**Discuss the Following Questions**

1. What conditions need to be met in order to create a confidence interval using the *t*-distribution approach for the *difference* in average college student debt for public and private colleges? Are they met?

* Use the statistical software of your choice (e.g., R, SAS, StatCrunch) to create a confidence interval for the *difference* in average college student debt for public and private colleges using the *t*-distribution approach.

1. What is your confidence interval?
2. Provide an interpretation of the confidence interval.
3. Provide an answer to the research question.

**EXTENSIONS**

1. Compare the two confidence intervals for public and private colleges that you computed in the *College Student Debt – Part II* activity to the confidence interval for the difference computed above. Why would you compute one over the other?
2. Create a bootstrap interval for the difference in *StatKey*. Make sure to use the same confidence level you chose for the previous interval. How does the bootstrap interval compare to the *t*-distribution confidence interval found above?