

Instructions: You must show all work to receive full credit for the problems below. You may use Excel where appropriate. Any datasets needed will be posted on Blackboard with the quiz file, and you should submit such work along with your quiz. Round answers to two decimal places unless other instructions are given in the problem.

1. Use the data in the Excel file **154quiz13data.xlsx** on Sheet 1 and find the standard deviation and sample size. If the standard error is $SE = \frac{SD}{\sqrt{n}}$, find the standard error.
2. The standard score is $Z = \frac{X-\mu}{\sigma}$. The data on Sheet 2 shows percent of the population living in homes that they own for Alaska and Pennsylvania. Calculate the mean and standard deviation for each state. Using the values from 2014, which states was historically doing better on homeownership in that year?
3. On Sheet 3 are the genders of customers of a particular store. Find the proportion of male customers. The formula for the standard error of proportions is $SE = \sqrt{\frac{p(1-p)}{n}}$. What is the standard error for this sample?