**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. A sample of 50 people is taken, and the mean is determined to be 30.2, with a standard deviation of 7.6. If the standard error is $SE = \frac{SD}{\sqrt{n}}$, find the standard error.

   $$1.0748$$

2. The standard score is $Z = \frac{X - \mu}{\sigma}$. Two friends are comparing their exam results in the same course on exams given by different instructors. Rashida's class has a mean of 203 points with a standard deviation of 23 points. Jeremiah's class has a mean of 73 with a standard deviation of 12. Rashida got a 221, and Jeremiah got an 84. Which student did <u>better</u> on the exam?

   Jeremiah did. his z-score is higher.

3. A sample of 1120 is taken and the proportion of those who have heard of the test product is 32%. The formula for the standard error of proportions is $SE = \sqrt{\frac{p(1-p)}{n}}$. What is the standard error for this sample?

   $$1.39\%$$

   or $0.0139$