

# Instructions: Descriptive Statistics Quiz Online

## Useful information:

The last row in the spreadsheet is row 1127. There are 1126 rows of data. The name of the table in this spreadsheet is Sales.

You will be updating this spreadsheet according to instructions given here. Save your spreadsheet frequently while you are working. When you are done, attach your updated Excel Workbook to the next question.

## Specific Instructions:

We are going to be using Column F (Revenue) frequently. In a prior assignment, you have learned how to name tables and ranges. In this assignment, the work of defining tables and ranges has been done for you. The name of the table is Sales. The already-defined range name for the Revenue data in Column F is Revenue.

1. You have previously installed the Excel Data Analysis Pack. Use it to run descriptive statistics on the Revenue column. Put the results on a separate sheet.
2. Find a place on the Sales sheet to put bin information (Try M2). Use the min and max information that you generated with descriptive statistics to create 5 bins.
3. Run a frequency count (Using Descriptive Statistics / Histogram) on Revenue using the data analysis pack and your bin information. Put the results on a separate sheet. A Sales Manager looking at your results might decide to create a special incentive program to bring in sales of more than \$30,000
4. On that same sheet, use Insert / Recommended Charts to create a histogram. Some Sales Managers might find it easier to look at your histogram rather than your frequency count.
5. The Sales Manager might want to see the information at a lower level of detail to refine a sales incentive program. Double the number of bins as shown in the video.
6. Repeat steps 3 and 4 and put your new frequency counts and histogram on a new sheet. When interacting with users such as the Sales Manager, you might need to continue to experiment with the number and size of the bins.
7. The Percentile.inc and Quartile.inc functions are useful, for example, in finding the minimum GPA required to be in the top 10% or the top 25% of the class.

8. Use PERCENTILE.INC(array, k) to find the 90th percentile of Revenue. Put the result on sheet Sales in cell J2 and a description in I2.
9. Use PERCENTILE.INC(array, k) to find the 10th percentile of Revenue. Put the result on sheet Sales in cell J3 and a description in I3.
10. Use QUARTILE.INC(array, quart) to find the 1st quartile of Revenue. Put the result on sheet sales in cell J4 and a description in cell I4
11. Use QUARTILE.INC(array, quart) to find the 4thth quartile of Revenue. Put the result on sheet sales in cell J5 and a description in cell I5.
12. Using Excel, calculate the variance and standard deviation of the Revenue column. Put the variance formula in cell J15 and the standard deviation calculation in cell J16. Put labels in I15 and I16. Hint:  $SD = \sqrt{VAR}$ . Note: This is not covered in the video. You are on your own to find the Excel formula for Variance.
13. Before going further, save your spreadsheet and attach it to Canvas.
14. Replace just one of the revenue numbers with a huge number such as 1,000,000. Run descriptive statistics again. In Canvas, write the name(s) of the statistic(s) that did not change.
15. Now, submit your quiz to Canvas.