MTH 154, Quiz #6, Spring 2023   Name _____KEY_____
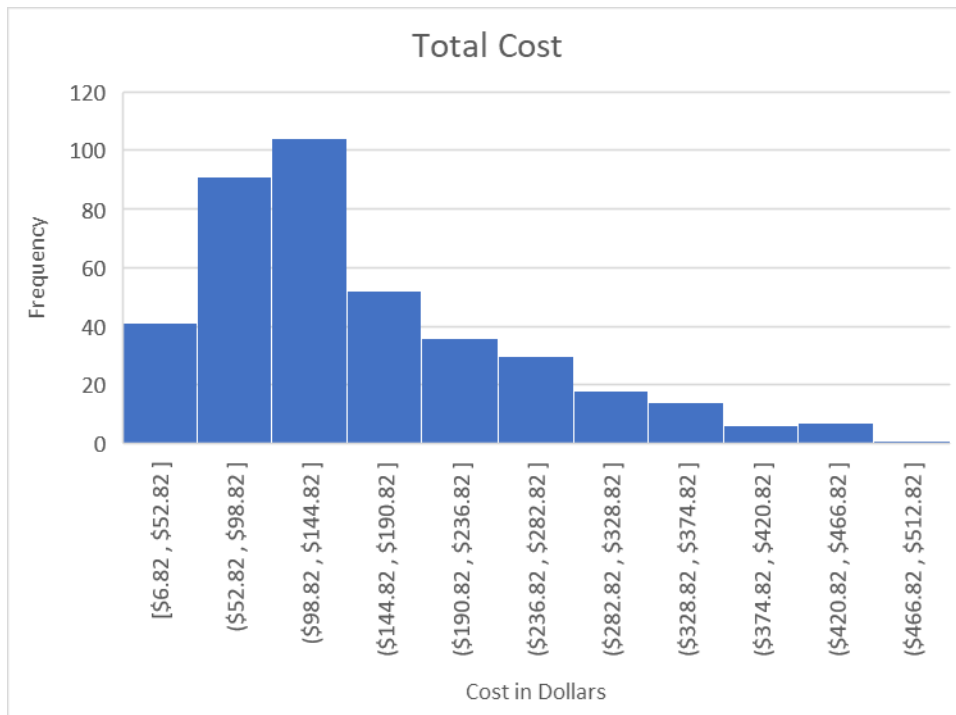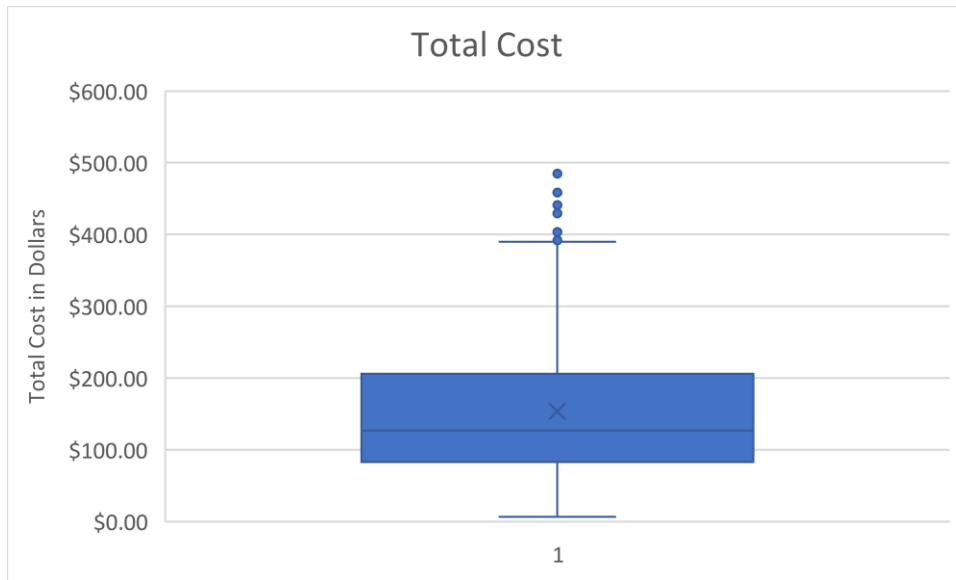
Instructions: You must show all work to receive full credit for the problems below. You may use Excel where appropriate. Any datasets needed will be posted on Canvas with the quiz file, and you should submit such work along with your quiz. Round answers to two decimal places unless other instructions are given in the problem. Do not say "see Excel". Paste your answers into the quiz.

1. Using the data in the file **154quiz6data.xlsx**, make a histogram of the data. Appropriately label your graph and give it a descriptive title. Describe the shape of the distribution as roughly symmetric, left skewed, right skewed or other.

Right-skewed

2. Using the same data, make a boxplot of the same data. Does it agree with the shape described above? Why or why not?

Total Cost

Yes, it does agree. All the outlier values are in the larger dollar amounts.

3. A 5''x 8'' sign is to be rescaled so that it covers 120 square feet. How much does each dimension need to be scaled to achieve this?

Current area: (5/12)(8/12) = 5/18 square feet

120/(5/18)=432 for the area, but area is a squared unit, so take the square root to get the linear scaling factor:

$$\sqrt{432} = 12\sqrt{3} \approx 20.78\ldots$$