Name_____

SHORT ANSWER. Write your answer in the space provided or on a separate sheet of paper.

Provide an appropriate response.

1) Define the terms population, sample, parameter and statistic. How does a census compare to a sample?

2) Distinguish between categorical and quantitative data. Give an example for each.

Identify the sample and population. Also, determine whether the sample is likely to be representative of the population.

3) An employee at the local ice cream parlor asks three customers if they like chocolate ice cream.

4) 100,000 randomly selected adults were asked whether they drink at least 48 oz of water each day and only 45% said yes.

Provide an appropriate response.

5) Histograms and Pareto charts are both bar charts. What is the significant difference between the two?

6) Suppose you are comparing frequency data for two different groups, 25 managers and 150 blue collar workers. Why would a relative frequency distribution be better than a frequency distribution?

7) Describe at least two advantages to using stemplots rather than frequency distributions.

8) The median of a data set is always/sometimes/never (select one) one of the data points in a set of data. Explain your answer with brief examples.

9) A company advertises an average of 42,000 miles for one of its new tires. In the manufacturing process there is some variation around that average. Would the company want a process that provides a large or a small variance? Justify your answer.

10) Marla scored 85% on her last unit exam in her statistics class. When Marla took the SAT exam, she scored at the 85 percentile in mathematics. Explain the difference in these two scores.

Solve the problem.

11) A student earned grades of A, C, A, A, and B. Those courses had these corresponding numbers of credit hours: 2, 5, 3, 2, 3. The grading system assigns quality points to letter grades as follows: A = 4, B = 3, C = 2, D = 1, and F = 0. Compute the grade point average (GPA) and round the result to two decimal places.

12) The mean salary of the female employees of one company is $29,525. The mean salary of the male employees of the same company is $33,470. Can the mean salary of all employees of the company be obtained by finding the mean of $29,525 and $33,470? Explain your thinking. Under what conditions would the mean of $29,525 and $33,470 yield the mean salary of all employees of the company?

Use the empirical rule to solve the problem.

13) The amount of Jen's monthly phone bill is normally distributed with a mean of $59 and a standard deviation of $8. What percentage of her phone bills are between $35 and $83?

Solve the problem.

14) If the standard deviation of a set of data is zero, what can you conclude about the set of values?

15) The data set below consists of the scores of 15 students on a quiz. For this data set, which measure of variation do you think is more appropriate, the range or the standard deviation? Explain your thinking.

90	90	91	91	89
90	89	91	91	90
60	90	89	90	91