

True-False.

1. T F The mode of the data set 19, 30, 19, 20, 29, 19, 18, 18, 27, 30 is 19.
2. T F The data set 15, 12, 17, 18, 2, 19 has a range of 6
3. T F The mean of the data set 25, 18, 30, 29, 39, 18 is 26.5
4. T F A statistic is a characteristic or measure obtained by using data from a Population
5. T F The standard deviation is an indication of the center of a set of data
6. T F For the sample 1.3, 2.7, 8.2, 9.2, 7.3, 8.9 the median is 7.5
7. T F If the values in a data set are near the mean, the standard deviation for the data set will be large.
8. T F An example of a measure of central tendency would be the mode.
9. T F The sample standard deviation of the data 12, 8, 7, 10, 15, 11 when using the computational formula is 2.9
10. T F A deviation is defined as the difference between the mean and the variance.
11. T F If you look at the students in your classroom and determine that most of them are seniors then you are using the measure of central tendency called the median.
12. T F The measure of central tendency that is most resistant is the median
13. T F When data is skewed, the mean will slide in the direction of the skewing

14-20, Show all work for full credit.

14. Identify the outliers in the data set below. Show all work.

12, 13, 30, 22, 15, 6, 5, 18

15. What is the sample standard deviation of the given data: 18, 32, 25, 19, 40, 16, 50, 60

- A. 226.7 B. 198.4 C. 15.1 D. None of these

16. The following data were collected: 38, 50, 37, 42, 55, 32. Using the computational formula, what is the sample variance?

17. Use the following data set to determine the Interquartile Range (IQR)

5.7 7.7 7.8 8.7 8.9 9.4 9.5 9.6 9.6 9.8 10.3

18. Using the data from question 17 determine the percentile rank for 9.5.

19. Calculate the population mean and population standard deviation for the distribution that follows. **[If a calculator is used, all necessary column totals must be shown in order to earn full credit.]**

<u>Interval</u>	<u>Frequency</u>
0 – 9	31
10 – 19	39
20 – 29	17
30 – 39	6
40 – 49	4
50 – 59	2
60 – 69	1

20. According to the National Center for Health Statistics, the mean weight of a 20 to 29 year old female is 156.5 pounds, with a standard deviation of 51.2 pounds. The mean weight of a 20 to 29 year old male is 183.4 pounds, with a standard deviation of 40.0 pounds. Who is relatively heavier: a 20 to 29 year old female who weighs 160 pounds or a 20 to 29 year old male who weighs 185 pounds?
21. The weights, in grams, of a pair of kidneys in adult males between the ages of 40 and 49 has a symmetric distribution with a mean weight of 325 grams and a standard deviation of 30 grams.
- (a) Using the Empirical rule, about 95% of kidney pairs will be between what weights?
- (b) Using the Empirical rule. what percentage of kidney pairs weighs between 295 grams and 385