Name: Selected Answers Period: _____

Score: _____/_____

HW 7-3 HONORS: Outliers

1. Over the past month, lightning strikes were counted in cities in Utah County. The numbers reported are found below, as well as the five-number summary.

Number of lightning strikes: 23, 30, 26, 37, 29, 34, 27, 45, 47, 37, 32, 41, 54, 35, 34, 29, 25, 31
Min: 23 Q1: 29 Med: 33 Q3: 37 Max: 54

a. What is the upper limit for outliers in this data set?

49

b. What is the lower limit for outliers in this data set?

17

c. Which of the numbers in the data set would be considered outliers?

d. Describe the distribution of the data, is it normal, skew left or skew right? (Hint: you can calculate the mean)

Normal Med = 33 & $\bar{x}$ = 34.2

2. The average age of residents of communities around Utah was gathered. The numbers reported are found below, as well as the five-number summary.

Age of residents: 41, 50, 29, 28, 35, 28, 23, 31, 44, 38, 36, 28, 27, 32, 37
Min: 23 Q1: 28 Med: 32 Q3: 38 Max: 50

a. What is the upper limit for outliers in this data set?

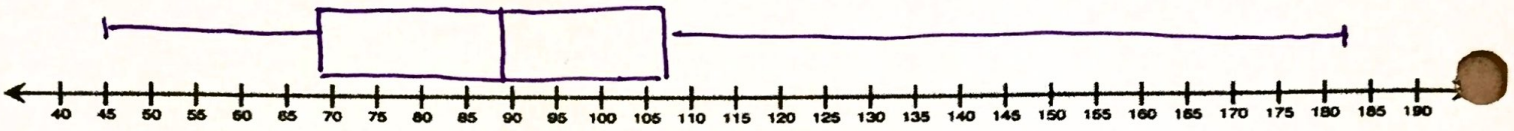
b. What is the lower limit for outliers in this data set?

c. Which of the numbers in the data set would be considered outliers?

d. Describe the distribution of the data, normal, skew left or skew right?

3. Draw a Box and Whisker Plot using the Five Number Summary below and answer the following questions.

Min: 45 Q1: 69 Med: 89 Q3: 107.5 Max: 182



Price of Printers at Office Depot

a. Were you able to include outliers in your Box and Whisker Plot? Why or why not?

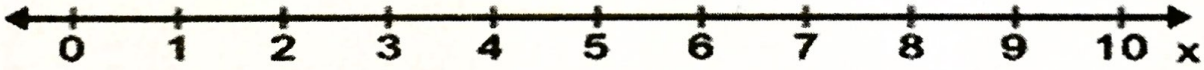
b. Suppose the number 73 was added to this data set. How do you think it would affect the median?

c. Would the number 165 be considered an outlier in the original data set? Justify your response.

d. Describe the distribution of the data set, is it skewed one direction? Explain how you can tell without knowing the mean?

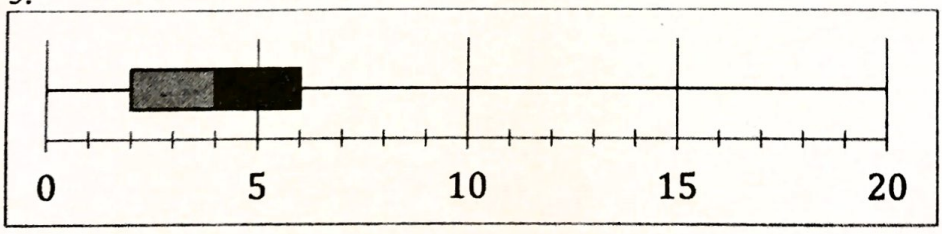
4. Below are the numbers of touchdowns scored by the BYU football team offensive players in the 2013 season. Create a Box and Whisker Plot from the data set **by hand.**

4 2 1 1 0 10 3 1 2 7 1 5 4 1 3 1



Describe the distribution of the following box and whisker plots.

5.



skew right

6.