2.15: Chapter Practice

2.1 Display Data

Figure 2.15.14

14.

Construct a frequency polygon for the following:

a. Describe the relationship between the mode and the median of this distribution.

Figure 2.15.16

67.

Describe the relationship between the mean and the median of this distribution.

Figure 2.15.17

68.

Figure 2.15.18

69.

Describe the relationship between the mode and the median of this distribution.

Figure 2.15.19

70.

Are the mean and the median the exact same in this distribution? Why or why not?

Figure 2.15.20

71.

Describe the shape of this distribution.

Figure 2.15.21

72.

Describe the relationship between the mode and the median of this distribution.

Figure 2.15.22

73.

Describe the relationship between the mean and the median of this distribution.

Figure 2.15.23

74.

The mean and median for the data are the same.

3; 4; 5; 5; 6; 6; 6; 6; 7; 7; 7; 7; 7; 7; 7

Is the data perfectly symmetrical? Why or why not?

75.

Which is the greatest, the mean, the mode, or the median of the data set?

11; 11; 12; 12; 12; 12; 13; 15; 17; 22; 22; 22

76.

Which is the least, the mean, the mode, and the median of the data set?

56; 56; 56; 58; 59; 60; 62; 64; 64; 65; 67

77.

Of the three measures, which tends to reflect skewing the most, the mean, the mode, or the median? Why?

78.

In a perfectly symmetrical distribution, when would the mode be different from the mean and median?

2.7 Measures of the Spread of the Data

Use the following information to answer the next two exercises: The following data are the distances between 20 retail stores and a large distribution center. The distances are in miles.
29; 37; 38; 40; 58; 67; 68; 69; 76; 86; 87; 95; 96; 96; 99; 106; 112; 127; 145; 150

79.

Use a graphing calculator or computer to find the standard deviation and round to the nearest tenth.

80.

Find the value that is one standard deviation below the mean.

81.

Two baseball players, Fredo and Karl, on different teams wanted to find out who had the higher batting average when compared to his team. Which baseball player had the higher batting average when compared to his team?

Table 2:59 to find the value that is three standard deviations:

Baseball player	Batting average	Team batting average	Team standard deviation
Fredo	0.158	0.166	0.012
Karl	0.177	0.189	0.015

- *Find the standard deviation for the following frequency tables using the formula. Check the calculations with the TI 83/84.***83**.

  Find the standard deviation for the following frequency tables using the formula. Check the calculations with the TI 83/84.

  Table 2.15.60

  a.

Grade	Frequency
49.5–59.5	2
59.5–69.5	3
69.5–79.5	8
79.5–89.5	12
89.5–99.5	5

  Table 2.15.61

  b.

Daily low temperature	Frequency
49.5–59.5	53
59.5–69.5	32
69.5–79.5	15
79.5–89.5	1
89.5–99.5	0

Table 2.15.62

c.

Points per game	Frequency
49.5–59.5	14
59.5–69.5	32
69.5–79.5	15
79.5–89.5	23
89.5–99.5	2