**Algebra 3-4 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Unit 8 Test – Statistics**

For problems 1-4, find the mean, median, mode and range of the data set. Round to 1 decimal place. [L2]

**2, 10, 6, 9, 1, 15, 11, 10, 15, 13, 15**

1. Mean: 2. Median:

3. Mode: 4. Range:

5. Use the following data to identify the key points outlined below, and make a box-and-whisker plot on the given number line. [L2]

**24, 18, 29, 21, 16, 23, 13, 11**

Min = \_\_\_\_\_\_\_\_\_\_\_\_\_ Max = \_\_\_\_\_\_\_\_\_\_\_\_\_ Median = \_\_\_\_\_\_\_\_\_\_\_\_\_

Lower Quartile= \_\_\_\_\_\_\_\_\_\_\_\_\_ Upper Quartile = \_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

6. Susan keeps track of the number of tickets sold for each play presented at The Community Theater. Show your work to indicate within how many standard deviations from the mean do all the values fall? [L3]

**135, 71, 69, 80, 158, 152, 161, 96, 122, 118, 87, 85**

6. \_\_\_\_\_\_\_\_\_\_\_\_\_

For problems 7-10, given that the scores on an exam are normally distributed, with a mean of 74 and a standard deviation of 7. Create a normal distribution curve, and answer the following. [L3]

Draw the Normal Distribution Curve here:

7. What percent of the scores are between 60 and 88? 7. \_\_\_\_\_\_\_\_\_\_\_\_\_

8. What percent of the scores are less than 81? 8. \_\_\_\_\_\_\_\_\_\_\_\_\_

9. What percent of scores are between 67 and 95? 9. \_\_\_\_\_\_\_\_\_\_\_\_\_

10. What percent of scores are between 81 and 95? 10. \_\_\_\_\_\_\_\_\_\_\_\_\_

11. The high temperatures for a 7-day week in July for Omaha were 100°, 99°, 101°, 101°, 85°, 98°, and 97°. Jim Flowers described the temperature for the week using the mean, 97°, Bill Randby used the median, 99°, and Rusty Lord used the mode, 101°. *Hint: Is there an outlier, and does that matter?* [**L4**]

1. Which meteorologist chose the measure of central tendency that *best* describes the data? Explain.

B. Explain why the other two meteorologists did not choose the best representation of the data.