Name: _____

8.2.D2 – MEASURE OF CENTER

Past due on: _____ Period: _____
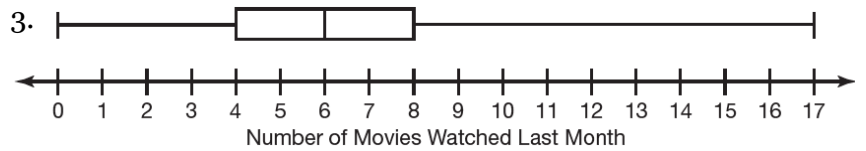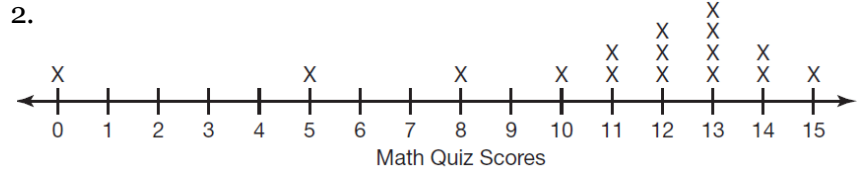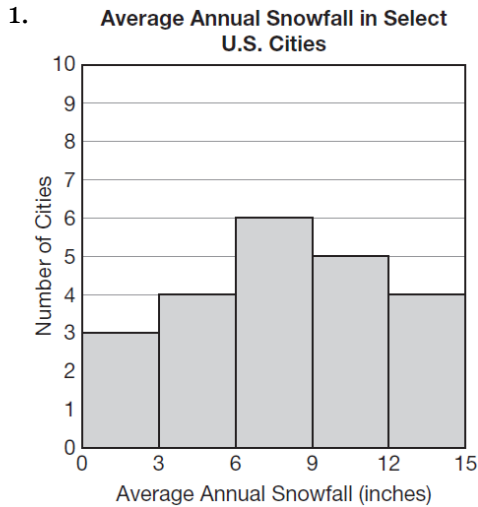
Determine which measure of center best describes the data in each given data display. Then determine the mean and median, if possible. If not possible, explain why not. *If necessary, refer to the 8.2 examples "Calculating the Mean & Median of a Data Set" and "Determining the Measure of Center which Best Represents a Data Set" in the Chapter 8 Summary.*

1.

Average Annual Snowfall in Select U.S. Cities

Number of Cities

Average Annual Snowfall (inches)

2.

Math Quiz Scores

3.

Number of Movies Watched Last Month

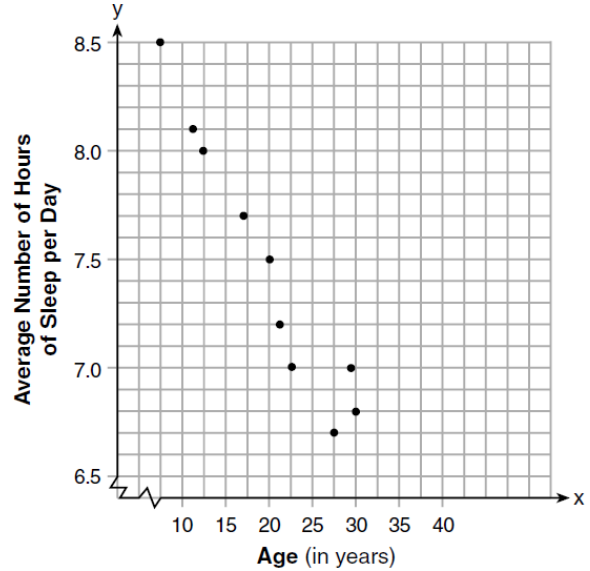George recorded how many jewels he captured in a one minute video game.

4. Estimate the *five number summary* for the number of jewels captured in eleven games. *If necessary, refer to the 8.1 example "Representing and Interpreting Data Displayed on Box-and-Whisker Plots" in the Chapter 8 Summary.*

Game	Jewel's Captured
1	105
2	101
3	102
4	99
5	110
6	90
7	100
8	100
9	108
10	120
11	32

5. Calculate the mean.

6. Estimate the five number summary for the number of jewels captured in ten games.

7. Calculate the mean.

8. What characteristic of the data set what most affected by removing the last game statistic?

9. How did removing the last game statistic affect the mean and the median?
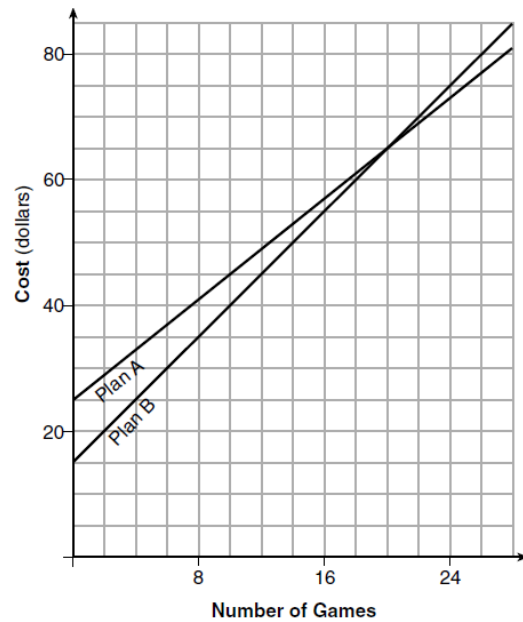
10. A student plotted the data from a sleep study as shown in the graph. The student used the equation of the line $y = -0.09x + 9.24$ to model the data. What does the rate of change represent in terms of these data?
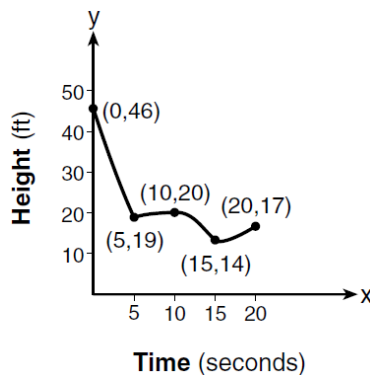
   a. The average number of hours of sleep per day increases 0.09 hour per year of age.

   b. The average number of hours of sleep per day decreases 0.09 hour per year of age.

   c. The average number of hours of sleep per day increases 9.24 hour per year of age.

   d. The average number of hours of sleep per day decreases 9.24 hour per year of age.

11. The graph models the cost of renting video games with a membership in Plan A and Plan B.

   a. Explain why Plan B is the better choice for Dylan if he only has $50 to spend on video games, including a membership fee.

   b. Bobby wants to spend $65 on video games, including a membership fee. Which plan should he choose? Explain your reasoning.

12. The graph below models the height of a remote-control helicopter over 20 seconds during flight. Over which interval does the helicopter have the *slowest* average rate of change?

   a. 0 to 5 seconds

   b. 5 to 10 second

   c. 10 to 15 seconds

   d. 15 to 20 seconds

13. Which statement is true about the quadratic functions $g(x)$, shown in the table below, and $f(x) = (x - 3)^2 + 2$?

   a. They have the same vertex.

   b. They have the same zeros.

   c. They have the same axis of symmetry.

   d. They intersect at two points.

x	g(x)
0	4
1	−1
2	−4
3	−5
4	−4
5	−1
6	4