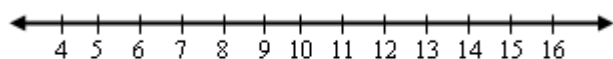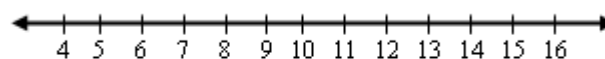Name: _____ Date: _____

Performance Task: The Basketball Star - Is Bob or Alan a Basketball Star?

| 8, 15, 10, 10, 10, 15, 7, 8, 10, 9, 12, 11, 11, 13, 7, 8, 9, 9, 8, 10, 11, 14, 11, 10, 9, 12, 14, 14, 12, 13, 5, 13, 9, 11, 12, 13, 10, 8, 7, 8 | **Bob's Points per Game** |

1. Bob believes he is a basketball star and so does his friend Alan. Create a dot plot and box plot of Bob's points for the last 40 games.
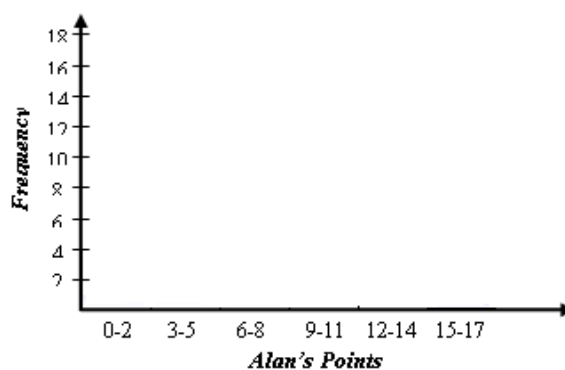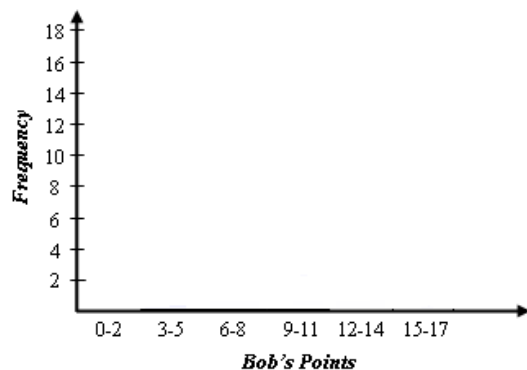

Bob's Points

Bob's Points

2. Describe Bob's data in terms of center, spread, and shape.

| 1, 3, 0, 2, 4, 5, 7, 7, 8, 10, 4, 4, 3, 2, 5, 6, 6, 6, 8, 8, 10, 11, 11, 10, 12, 12, 5, 6, 8, 9, 10, 15, 10, 12, 11, 11, 6, 7, 7, 8 | **Alan's Points per Game** |

3. Create a histogram of both Bob's and Alan's data.

Bob's Points

Alan's Points

4. Describe the shape of the two histograms from problem #3.

5. Use summary statistics to compare Bob and Alan's points per game.

	Min	Quartile 1 (Q1)	Median (Q2)	Quartile 3 (Q3)	Max	Mean	Range	IQR
Bob								
Alan								

6. Which graphical representation best displayed Bob's and Alan's data?

7. Based on the summary statistics is either friend a basketball star? Justify your answer.

Central Tendency and Spread Homework

1. Your scores on the first 4 tests in Algebra were 85, 80, 90, and 93. What do you need to make on the 5th test to have a 90 average in the class?

2. Which measure of central tendency is MOST EASILY affected by outliers?

3. The table below shows the running times for science-fiction movies. Find the Mean Absolute Deviation of the data.

Running Times for Movies (min)					
98	87	93	88	126	108

4. The summary statistics for all of the workers at a steel factory are shown. Three sample groups were taken from each of the three shifts. For which sample group is the mean deviation greater than that of the population?

Steel Factory Workers Ages

Mean Deviation: 11.23

Shift 1	Shift 2	Shift 3
23	19	21
19	22	23
50	24	25
49	40	40
67	45	35
34	29	19
30	33	70
59	29	40
40	39	22
33	59	23