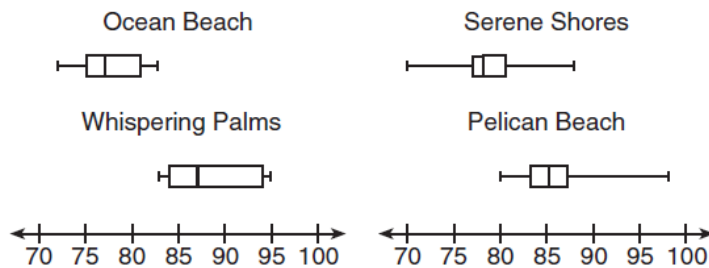


Name: _____
Date: _____
Class: _____

Algebra
Unit 11
PS

****Remember, this assignment is 15 points of your 100 point test grade. You can have this assignment checked as many times as you wish prior to the test. It is due at the beginning of class the day you take the test****

- 1) [3] Corinne is planning a beach vacation in July and is analyzing the daily high temperatures for her potential destination. She would like to choose a destination with a high median temperature and a small interquartile range. She constructed box plots shown in the diagram below.



Which destination has a median temperature above 80 degrees and the smallest interquartile range?

- 2) [3] Christopher looked at his quiz scores shown below for the first and second semester of his Algebra class.

Semester 1: 78, 91, 88, 83, 94

Semester 2: 91, 96, 80, 77, 88, 85, 92

Which statement about Christopher's performance is correct?

- (1) The interquartile range for semester 1 is greater than the interquartile range for semester 2.
- (2) The median score for semester 1 is greater than the median score for semester 2.
- (3) The mean score for semester 2 is greater than the mean score for semester 1.
- (4) The third quartile for semester 2 is greater than the third quartile for semester 1.

- 3) [3] Robin collected data on the number of hours she watched television on Sunday through Thursday nights for a period of 3 weeks. The data are shown in the table below.

	Sun	Mon	Tues	Wed	Thurs
Week 1	4	3	3.5	2	2
Week 2	4.5	5	2.5	3	1.5
Week 3	4	3	1	1.5	2.5

Using an appropriate scale on the number line below, construct a box plot for the 15 values.



- 4) [3] Isaiah collects data from two different companies, each with four employees. The results of the study, based on each worker's age and salary, are listed in the tables below.

Company 1		Company 2	
Worker's Age in Years	Salary in Dollars	Worker's Age in Years	Salary in Dollars
25	30,000	25	29,000
27	32,000	28	35,500
28	35,000	29	37,000
33	38,000	31	65,000

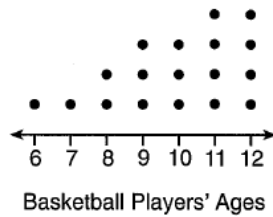
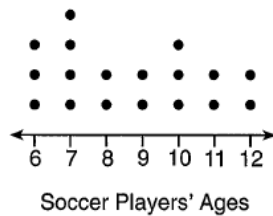
What is the median and mean salary for both companies?

- 5) [3] Find the standard deviation for each of the following sets of data:
The two sets of data below represent the number of runs scored by two different youth baseball teams over the course of a season.

Team A: 4, 8, 5, 12, 3, 9, 5, 2

Team B: 5, 9, 11, 4, 6, 11, 2, 7

- 6) [3] Noah conducted a survey on sports participation. He created the following two dot plots to represent the number of students participating, by age, in soccer and basketball.



Which statement about the given data sets is correct?

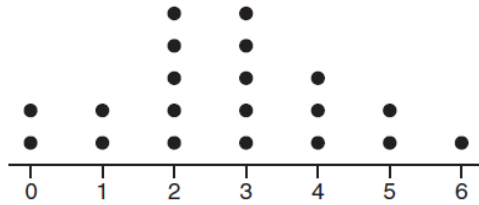
- (1) The data for soccer players are skewed right.
 - (2) The data for soccer players have less spread than the data for basketball players.
 - (3) The data for basketball players have the same median as the data for soccer players.
 - (4) The data for basketball players have a greater mean than the data for soccer players.
- 7) [3] The table below shows the annual salaries for the 24 members of a professional sports team in terms of millions of dollars.

0.5	0.5	0.6	0.7	0.75	0.8
1.0	1.0	1.1	1.25	1.3	1.4
1.4	1.8	2.5	3.7	3.8	4
4.2	4.6	5.1	6	6.3	7.2

The team signs an additional player to a contract worth 10 million dollars per year. Which statement about the median and mean is true?

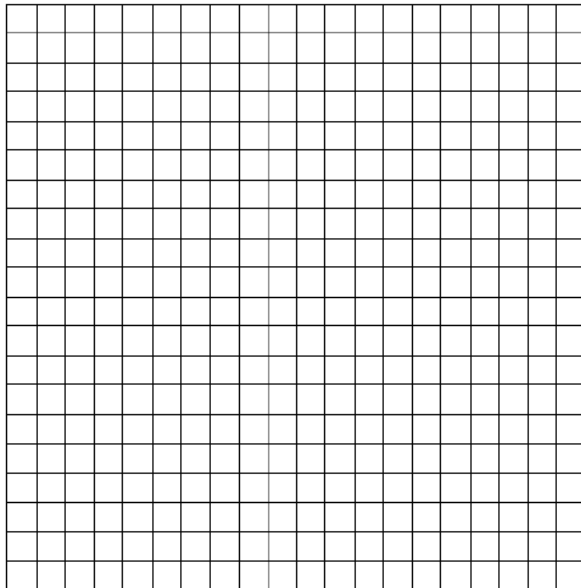
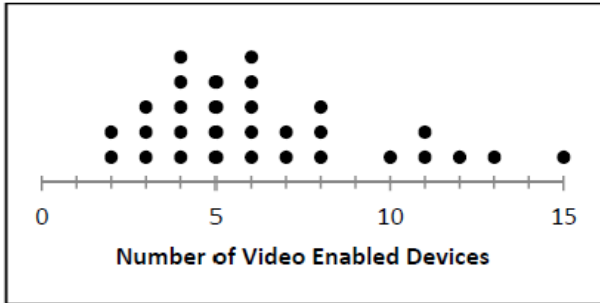
- (1) Both will increase.
- (2) Only the median will increase.
- (3) Only the mean will increase.
- (4) Neither will change.

8) [3] The dot plot shown below represents the number of pets owned by students in a class.



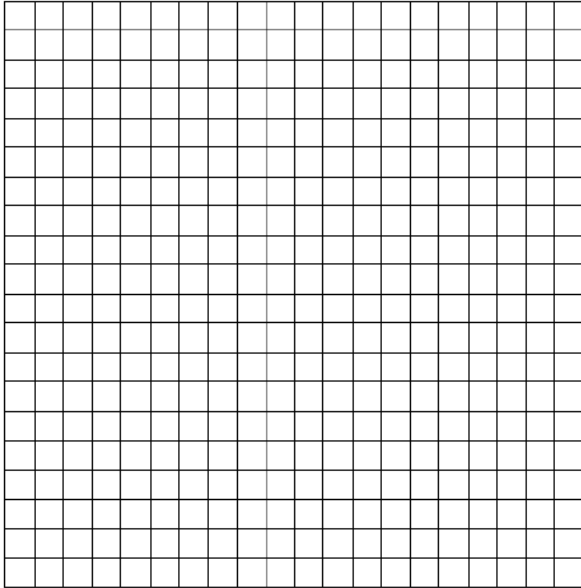
Which statement about the data is *not* true?

- (1) The median is 3.
 - (2) The interquartile range is 2.
 - (3) The mean is 3.
 - (4) The data contain no outliers.
- 9) [4] Construct a histogram for the following data with intervals that are 3 numbers wide:



10) [4] Construct a cumulative frequency histogram for the following grades (use intervals starting with 50-59).

52, 60, 66, 66, 68, 72, 72, 73, 74, 75, 80, 82, 84, 91, 92, 98



11) [2] Using the data in number 10, what would the % rank of a score of 75 be?

12) [2] Using the data in number 10, what score would 75% of the people have scored at or below?

13) [3] Tim's average in English class is dependent only on his test grades. So far this year he has an 86, 80, 92, 88, and 89 on his tests. He has one test left and wants to get an average of 90 for the year. Can he accomplish this goal?

14) [3] Jimmy's class finds the average height of the 10th grade is 5 feet 8 inches tall. In Homeroom 105, he notices that 2 students are both over 6 feet. He concludes that the average height of Homeroom 105 must be greater than 5 feet 8 inches. Is this a reasonable or unreasonable conclusion?

15) [3] 3 students are taking the same class together which they are not very interested in. They rarely do their homework and even less frequently study. They use their averages to determine what they think the mean score for students in the class would be. Is this a fair or unfair survey?