Name: Key Test on March 14th, 2017 STUDY GUIDE (1)

***Questions are inserted. These are part of the study guide.**

EVERYTHING SHOULD HAVE WORK SHOWN, NOT JUST ANSWER.

1. Which of the following questions is a statistical question?

   A. How much money is my pocket?

   B. How many students take the bus to school?

   C. What is my house number?

   D. How many pets does each student in your class have?

2. In its first 5 games, a football team scored 14, 10, 17, 13, and 21 points. What is the football team's mean score?

   A. 11

   B. 14

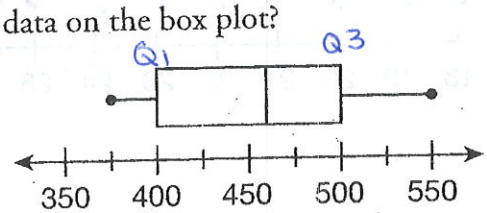
   C. 15

   D. 17

   10 13 14 17 21 → 75 ÷ 5 = 15

*What is the range? 11 What is the IQR? 15

3. What is the interquartile range for the data on the box plot?



   A. 100

   B. 150

   C. 175

   D. 200

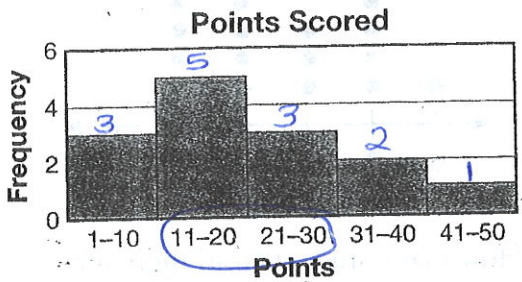
   500 − 400 = 100

*What percent is the interquartile range? 50%

*What percent is between 400 and 550? 75%

Use the histogram for questions 4 and 5.

The histogram shows the number of points that the Panthers football team scored in each game this season.



(14)

4. In how many games did the Panthers score from 11 to 30 points?

   A. 6

   B. 8

   C. 9

   D. 10

   5 + 3 = 8

5. The Panthers won every time they scored at least 21 points. They won half of their other games. How many games did the Panthers win?

   A. 8

   B. 10

   C. 12

   D. 14

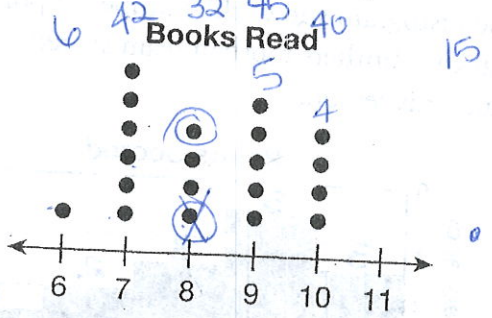
   3 + 2 + 1 + 4

   6 + 4

   10

Use the dot plot for questions 6 and 7.

The dot plot shows the number of books that the students in Ms. Wilson's class read independently during the school year.



6. How many students read more than 8 books independently?

   A. 9
   B. 11
   C. 13
   D. 19

*Is the mean or median greater? mean

7. Which statement is **not** true?

   A. The data clusters from 7 to 10 books.
   B. The mode is 7 books.
   C. There are 20 students in Ms. Wilson's class.
   D. There is a gap in the data.

*Is there an outlier? no

*If a new student arrived and read 15 books independently, what would the mean, median, and mode be?

mean → 8.57
median → 8
mode → 7

*Which measure of center did the outlier affect the most? mean!

8. For which set of data would the mean **not** be best to describe the data?

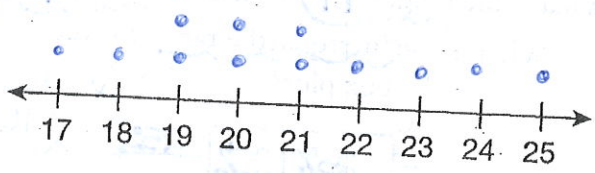
   A. the incomes of families in a city
   B. the selling price of a gallon of milk
   C. the sizes of sweaters sold in a store
   D. the miles per gallon of all the models made by a car company

9. The following data set shows the number of seashells collected on the beach by a group of friends.

   25, 17, 20, 19, 21, 24,
   22, 18, 21, 19, 20, 23

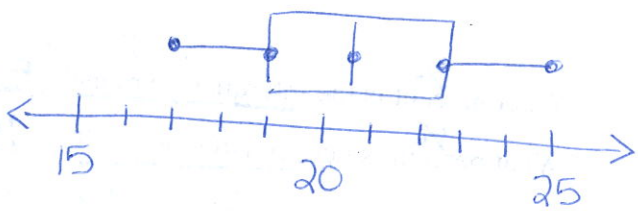
Make a dot plot of the data.

Seashells Collected



*Make a box and whisker plot.

17, 18, 19, 19, 20, 20, 21, 21, 22, 23, 24, 25
19 | 20.5 | 22.5



*Tracy has an 88% average in math class. She has had five quizzes. Four of the quizzes were as follows: 80%, 90%, 70%, and 85%. What was the fifth quiz grade?

No!

$$\frac{\overbrace{80 + 90 + 70 + 85}^{325} + \boxed{X}}{5} = 88$$

115% ← Is this realistic? Ha

$440 - 325 = 115$

$88 \times 5 = 440$

$$\frac{\overbrace{92, 37, 86, 93, 99, 69}^{476}, X}{7} = 72\%$$

88% ↓ X = average.

$72 \times 7 = 504$

64 68 70 71 72

66 (Q1) 70 (Q2) 71.5 (Q3)

10. The high temperatures for five days last week were 64°F, 71°F, 70°F, 68°F, and 72°F.

A. Find the interquartile range of the data set. Show your work.

IQR = Q3 − Q1

71.5 − 66 = 5.5

*Find the range? max − min = 72 − 64 = 8

*How would the IQR be affected if the temperature each day was 5° colder?

IQR = 5.5 Stays the same

*Name all three measures of center? mean, median, mode

*What are the two ways to measure variability? Range, Interquartile Range

64 65 66 67 68 69 70 71 72

59 ~~60 61 62~~ 63 ~~64~~ 65 66 67

61 66.5