

Math 6 Practice Test: Statistics and Probability

Name:

Date:

1. Define and give an example.
 - A. *frequency table.*

 - B. *box and whisker plot.*

2. Describe how you find each of the following for a data set:
 - A. mean

 - B. median

 - C. mode

 - D. upper quartile range

 - E. interquartile range

 - F. Mean Absolute Deviation (MAD)

3. Read each question below, determine if it is statistical or non-statistical. If non-statistical cross it out.
 - A. How many homeruns did you make in Friday's baseball game?
 - B. What scores did each student in period 3 get on the Unit 5 test?
 - C. What grade are you in?
 - D. How many cities have you lived in?
 - E. What distance does each student at this school travel to school each day?

4. Find the mean, median, and mode of the data set.

Number of pets owned	1	3	1	1	4	2
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mean: _____

median: _____

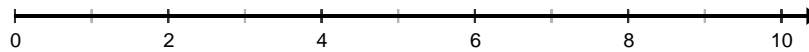
mode: _____

5. If the mean is 7, find the missing value for the set of numbers 4, 5, 7, , 10.
6. Which value will change the most when 18 is added to the data set 0, 2, 1, 1, 3, 4, 1?
A mean
B median
C mode
D plot
7. Which value is ALWAYS a number in the data set it represents?
A mean
B median
C mode
D range
8. Which measure is NOT used to find a measure of center?
A mean
B median
C mode
D interquartile range
9. In the last six basketball games John scored the following points: 35, 42, 41, 29, 9, 31.
What is the outlier for the data set?
10. A box plot provides information about the variability in a set of data. However, a box plot does not provide all information regarding a set of data. Which information does a box plot NOT provide?
A. the number of observations in a data set
B. the mean of a data set
C. the mode of a data set
D. all of the above

11. The students in one social studies class were asked how many siblings (brothers and sisters) they each have. The data is listed below.

0	0	2	4	2	3	2	5	8	1
1	3	2	2	0	1	1	1	3	3
0	2	4	10	3	2	1	4	5	2

- A. Create a dot plot using the data given above.



- B. Using the dot plot, complete three questions below.

1. How many of the students have no siblings?
2. How many of the students have exactly 4 siblings?
3. How many of the students have three or more siblings?

- C. Using the dot plot you created above, describe the data. (For example, center, spread, overall shape, outliers, clusters, etc.)

12. The total points scored by a basketball player in each of his 10 games this season is as follows: 44, 31, 12, 14, 17, 17, 21, 34, 28, and 22. Create a stem-and-leaf for the information.

Use the following set of data for problems 13 -18.

Ages of People Who Attended the Party:

10	11	14	12	42	13	14	12	16	6
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13. Identify the “outlier” in the data set. How does it affect the mean?
14. Create a box and whisker plot using the data set above.
15. Interquartile range is found by subtracting the _____ from the _____.
What is the interquartile range of the data set above?
16. What is the mean absolute deviation (MAD) of the set of data? Show your work.
17. Is the MAD affected by the outlier? If so, in what way?
18. Is the mode affected by the outlier? If so, in what way?

19. The ages of all the people in attendance at a meeting are shown in the stem-and-leaf . Based on the plot, how many **more** members are under age 26 than are over age 26?

- A 3 members
- B 6 members
- C 9 members
- D 12 members

Ages of Members

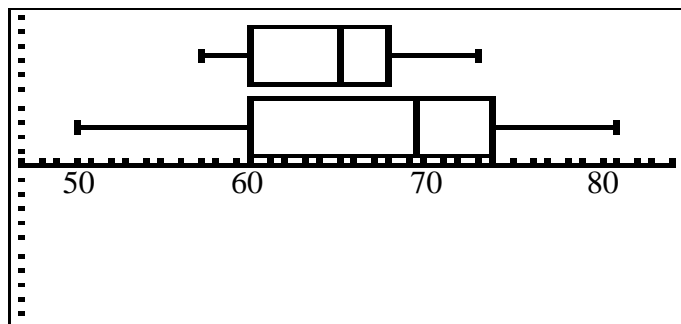
1	1 2 3 4 4 6 8
2	0 1 3 5 5 7
3	2 6 9
4	0 1 2 3 4

Key: $3|1 = 31$

20. Thomasina draws 5 cards simultaneously from a traditional deck of 52 cards. Using the information given below, what are the 5 cards? Explain your thinking.

- The mean value of the cards is 5.8.
- The median value is 6.
- The unique mode is 7.
- The range is 3.

21. The box and whisker plots shown below represent temperatures in Las Vegas in 2014. The top plot represents the actual daily high temperatures in January of 2014. The bottom plot represents the actual daily high temperatures in February of 2014.



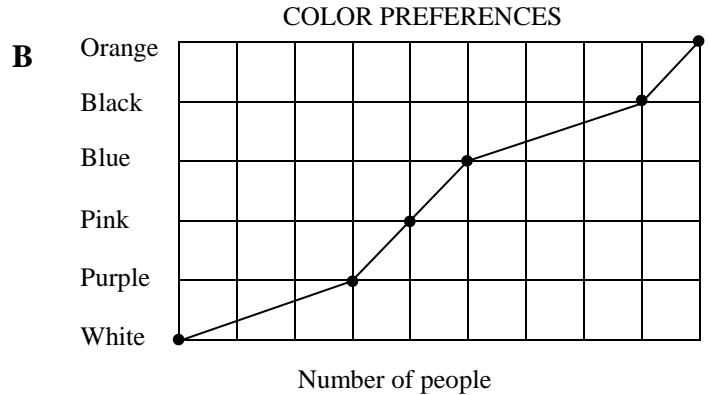
Write 3 different true statements that you can conclude comparing the two box plots.

- 1.
- 2.
- 3.

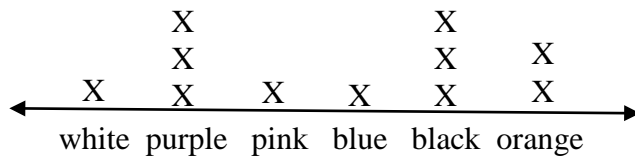
22. Karla and Yuri conducted a survey of ten friends to find out favorite colors. The responses were as follows: white, purple, pink, purple, blue, black, purple, black, orange, black. Which format presents Karla's and Yuri's data most appropriately?

A

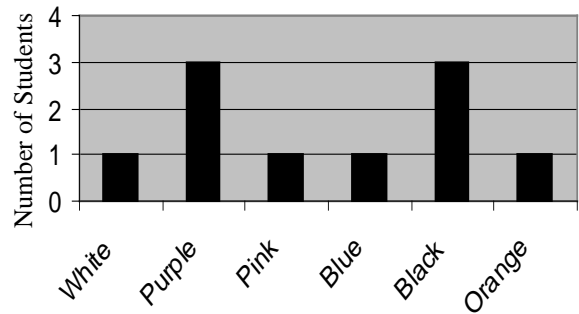
Color	Number
white	
purple	
pink	
blue	
black	
orange	



C COLOR PREFERENCES



D COLOR PREFERENCES



Long Term Memory Review

23. A. $3\frac{2}{5} + 4\frac{5}{6} =$ B. $7\frac{1}{2} - 4\frac{5}{7} =$ C. $\frac{9}{10} \div \frac{3}{4} =$ D. $.68 \overline{)13.8516}$

24. Write 36 as the product of prime numbers.

25. What percent of 48 is 40?