Unit 3 Pre/Post test Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A nature park has 5 hiking trails. The following table shows the names of the trails and their lengths, in miles.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Trail | Red | Yellow | Blue | Green | White |
| Length (miles) | 0.5 | 7.5 | 10 | 3 | 5 |

1.What is the mean length of the hiking trails in the nature park?

a. 26 b. 5.2 c. 5 d. 10

2. Using the information in question 1 determine the median length of the hiking trails in the nature park.

a. 26 b. 5.2 c. 5 d. 10

3. Select the letter that is not a component of a statistical question.

a. questions a specific population

b. determined from a small cluster group

c. asks interesting questions

d. anticipates variable answers

4. Which is not a statistical question?

a. Do you like to listen to music?

b. Who is room 106 favorite singer?

c. What is a 6th graders favorite type of music?

d. How many hours per week do you listen to music?

Use the following information for questions 5 and 6.

The number of miles Amy drives each week in the month of February is shown below.

10, 9, 13, 7, 11

5. What is the mean number of miles Amy drove in the month of February?

a. 50 b. 13 c. 10 d. 25

6. Using the information in question 5, what is the median number of miles Amy drove in the month of February?

a. 50 b. 13 c. 10 d. 25

7. Nancy recorded the weight of 2 litters of kittens 4 weeks after their births. The interquartile range for litter X was 2, and the interquartile range for litter Y was 6. Which of the following statements must be true?

a. the least weight of litter X is greater than the least weight of litter Y.

b. The median weight of the kittens in letter X is less than that of letter Y.

c. The weights of litter X vary less than the weights of litter Y.

d. The weights of litter X vary more than the weight of litter Y.

8. What does the mean absolute deviation tell you about a set of data?

a. How much, on average, each item in the data set differs from the mean.

b. How much, on average, each item in the data set differs from the median.

c. How far each item of data in the data set is from the mean.

d. How far each item of data in the data set is from the median.

9. In Mr. Niebling’s first hour math class, the following scores were obtained on the last math test. What would be the first and third quartiles in a box-and-whisker plot?

100, 95, 91, 89, 87, 83, 80, 76, 60

a. 95 and 75 b. 87 c. 93 and 78 d. 91 and 80

10. Shaan’s math homework scores for the semester are: 90, 85, 98, 60, 84, 78. Shaan’s teacher said she would drop the lowest homework score when calculating grades. How does the mean of his actual math score compare to the mean of the scores when the lowest is dropped?

a. The final mean is the same as the original.

b. The final mean is lower than the original.

c. The final mean is higher than the original.

d**.** The relationship cannot be determined.

11. Mrs. Nowak asked her students the following question:

If each number in a list is increased by 4, how does the mean of the new list compare with the mean of the old list?

Jim said: “The mean of the new list will be 4 times the mean of the old list.”

Kara said: “The mean of the new list will be 4 points higher than the mean of the old list.”

Ron said: “The mean of the new list will be four points lower than the mean of the old list.”

Mae said: “There is no way to find out what the mean of the new list would be.”

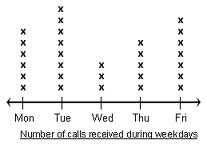
Which student answered correctly?

a. Jim b. Kara c. Ron d. Mae

12. Four friends went bowling and decided to see who was the best bowler by using their mean score of 3 games. Haley bowled games of 91, 112, and 105. J.D. bowled games of 123, 88, and 103.Which friend is the best bowler?

a. Sadie b. Robbie c. Haley d. J.D.

13. What information is displayed in the line plot below?

[](http://www.google.com/imgres?start=142&um=1&safe=active&sa=N&rls=com.microsoft:en-us:IE-SearchBox&rlz=1I7RLTB_enUS533&hl=en&biw=1024&bih=556&tbm=isch&tbnid=C4LIpDsytBpNDM:&imgrefurl=http://www.mytestbook.com/worksheet.aspx?test_id=1381&grade=8&subject=Math&topics=Probability%20and%20Statistics%20Line%20Chart,%20Line%20Plot&docid=Y2AdxdHxsHkeLM&imgurl=http://www.mytestbook.com/images/Grade8/Math/1381_13670_lineplot2.gif&w=259&h=180&ei=wGZxUq6bE4q-sQS-m4D4DQ&zoom=1&iact=rc&page=9&tbnh=138&tbnw=191&ndsp=20&ved=1t:429,r:60,s:100,i:184&tx=85&ty=84)

1. Days during the week b. People who call during the week
2. Number of calls during the week d. Number of days during the week

The number of times students could jump rope (in multiples of 10) in one minute is shown below.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Jumps | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 |
| tally | II | IIII | IIII III | II |  | IIII IIII  IIII |  |  |  |  | I |

14. Does this table have outlier(s), and if so, what kind of effect does it have on the mean?

a. no, so the outlier(s) have no effect

b. Yes, the outlier(s) decreases the mean.

c. Yes, the outlier(s) increase the mean.

d. none of the above

15. Which measure of center would be more meaningful for the set of data in the tally table?

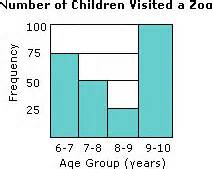
a. median b. interquartile range c. mean d. mean absolute deviation

**16.** Find the mean absolute deviation for the set below. S = {85, 90, 68, 75, 79}

**a.** 79.4 **b.** 6.4 **c.** 32.4 **d.** 79

17. Find the mean absolute deviation of the fulfilled items on Sherrie's registry. $29, $58, $15, $129,$75, $22

**a.** 196 **b.** 54.7 **c.** 114 **d.** 32.67

[](http://images.search.yahoo.com/images/view;_ylt=A0PDoKh_bEZRjyYAvMqJzbkF;_ylu=X3oDMTBlMTQ4cGxyBHNlYwNzcgRzbGsDaW1n?back=http://images.search.yahoo.com/search/images?p=histogram+graph+for+kids&sado=1&n=30&ei=utf-8&fr=fp-yie8-s&fr2=sg-gac&tab=organic&ri=1&w=212&h=169&imgurl=www.icoachmath.com/image_md/Histogram1.gif&rurl=http://www.icoachmath.com/math_dictionary/histogram.html&size=3.5+KB&name=Histogram+-+Statistics+-+Math+Dictionary&p=histogram+graph+for+kids&oid=b19326f4fca72c9205d58c967ca072b9&fr2=sg-gac&fr=fp-yie8-s&tt=Histogram+-+Statistics+-+Math+Dictionary&b=0&ni=88&no=1&ts=&tab=organic&sigr=11origmbg&sigb=145sv1k3j&sigi=11acdu640&.crumb=E/H/ETV6swA)

18. About how many children visited the zoo?

a. 75 b. 4 c. 250 d. 100

19. What type of graph is shown above?

a. bar graph b. line graph c. histogram d. box plot

|  |  |
| --- | --- |
| Test # | Score |
| 1 | 82 |
| 2 | 83 |
| 3 | 90 |
| 4 | 88 |
| 5 | 91 |
| 6 | 96 |
| 7 | 97 |

The following is a table of a student’s last 7 math tests.

20. What is the lower quartile for the set of data?

1. 82 b. 83 c. 88 d. 90

21. What is the upper quartile for the set of data?

1. 90 b. 91 c. 96 d.97

22. What is the maximum of the data set?

1. 82 b. 83 c.96 d. 97

23. What is the minimum of the data set?

1. 82 b. 83 c. 96 d. 97

24. What is the median of the data set?

a. 82 b. 90 c. 91 d. 97

25. What is the interquartile range of the data?

a. 17 b. 15 c. 13 d. 11