

Test 2 Review

Name: _____ Date: _____ Period: _____

Vocabulary—Use your notes to find the exact answer that fits each blank.

1. The main difference between a bar graph and a histogram is that a histogram deals with _____ data whereas a bar graph deals with _____ data.
2. _____ tells how far apart the data points are in a distribution.
3. In a stem plot, the ones place digit is called the _____.
4. The midpoint of the data distribution is the _____.
5. A dot plot displays _____ variables.
6. The class width can be found by subtracting the _____ from the _____ and dividing by the total number of _____.
7. A(n) _____ is a graphical display of categorical data comparing parts to the whole.
8. A histogram's shape is skewed right if the _____ of the curve is on the right.
9. A(n) _____ is clearly separated from the main body of observations.
10. If a histogram's shape looks similar to a bell curve it is classified as _____.
11. A(n) _____ is a graphical display of categorical data using bars of different heights.
12. If a histogram's shape has two defined peaks then it is said to be _____.
13. The overall pattern of a distribution is determined by these three descriptions: _____, _____, and _____.
14. If the tail of a histogram's distribution is to the left, then the shape is said to be _____.
15. The overall pattern of a data distribution is called the _____.
16. The fifth number in the five number summary is _____.
17. An equal number of values are larger than and smaller than this measure of central tendency, _____.
18. The third number in the five number summary is _____.
19. The first quartile means that _____% of data points lie below Q_1 and that _____% of data points lie above Q_1 .
20. The third quartile means that _____% of data points lie below Q_3 and that _____% of data points lie above Q_3 .
21. A method of computing a kind of arithmetic mean of a set of numbers in which some elements of the set carry more importance than others is called _____ average.
22. The first number in the five number summary is _____.

23. The central tendency that defined as the average of the set of data is called the _____.
24. The _____ is the central tendency that appears most often in a set of data
25. The second number in the five number summary is _____.
26. A _____ is a graphical depiction of groups of numerical data through their quartiles.
27. The _____ is the difference between the first and third quartiles.
28. Any data point that is more than 1.5 times the IQR above the third quartile, or 1.5 times the IQR below the first quartile is considered an _____.
29. The fourth number in the five number summary is _____.
30. _____ is defined as the average distance of the data points from the mean
31. A graph made by plotting ordered pairs in a coordinate plane to show the relationship between two sets of data is called a _____
32. A correlation coefficient that falls between ± 1 and $\pm .8$ is considered _____
33. Predicting within a range of given x-values is called _____.
34. _____ describes the direction and strength of any relationship.
35. A correlation coefficient that falls between $\pm .5$ and 0 is considered _____
36. The correlation coefficient is denoted by _____.
37. A summary of a straight line relationship between two variables is called a _____ line.
38. A scatterplot with a positive _____ has an uphill slope.
39. A correlation coefficient that falls between $\pm .8$ and $\pm .5$ is considered _____
40. Predicting outside a range of given x-values is called _____.

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Know your Vocab!!!

Bar Graph	Strong	Stem & leaf Plot	Third Quartile	Right Skewed
Pareto Chart	Moderate	Mean	Maximum	Symmetric
Time Series Graph	Weak	Median	Interquartile Range	Bimodal
Histogram	Correlation	Mode	Outliers	Standard Deviation
Class Width	Interpolation	Weighted Average	Shape	
Scatterplot	Extrapolation	Box & Whisker Plot	Center	
Direction	Regression Line	Minimum	Spread	
Strength	Dot plot	First Quartile	Left Skewed	

Short Answer—Answer the following.

- Find the mean, median, mode, and standard deviation of the following data set,
{30, 19, 51, 63, 10, 51, 23, 84, 66, 13, 5}
Mean: _____ Median: _____ Mode: _____ Standard Deviation: _____
- Find the mean, median, mode, and standard deviation of the following data set,
{0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}
Mean: _____ Median: _____ Mode: _____ Standard Deviation: _____
- Grades are often computed using a weighted average. Suppose that homework counts 20%, quizzes 30%, and tests 50%. If Sam has the following scores, what is his overall grade? **Homework: {100, 70, 100, 100, 100, 95, 100}, Quiz: {98, 100, 94, 100}, Test: {97, 90}**: Overall Grade: _____
- Grades are often computed using a weighted average. Suppose that homework counts 20%, quizzes 30%, and tests 50%. If Sam has the following scores, what is his overall grade? **Homework: {80, 70, 100, 0, 100, 100, 90, 100}, Quiz: {80, 94, 91, 85}, Test: {91, 80}**: Overall Grade: _____
- Find the 5# Summary and IQR of the following data set, {35, 45, 42, 41, 25, 36, 27, 41, 34, 73, 26, 58, 29, 20, 28, 35, 48, 43, 42, 45}. _____
- Find the 5# Summary and IQR of the following data set, {75, 80, 75, 77, 75, 80, 83, 80, 71, 70}. _____

The table shows the weight of an alligator at various times during a feeding trial.

7. Make a scatterplot in your calculator of the table and sketch it below.

Weeks	0	9	18	27	34	43	49
Weight in pounds	6	8.6	10	13.6	15	17.2	19.8

8. Find the correlation coefficient, r . _____
9. Use your calculator to find the equation of the regression line. Write the regression equation: _____
10. Predict the weight of an alligator at week 62. _____ An example of: *interpolation* or *extrapolation*
11. Predict the weight of an alligator at week 12. _____ An example of: *interpolation* or *extrapolation*

A random sample of boarding school students was asked how many 8-ounce servings of soda they had consumed on a certain Sunday and how many hours of sleep they got that night. Their responses are displayed in the table below.

12. Make a scatterplot in your calculator of the table and sketch it here.
13. Find the correlation coefficient, r . _____
14. Use your calculator to find the equation of the regression line: _____
15. Predict the amount of sleep Charlotte would get if she drank 6 sodas. _____
An example of: *interpolation* or *extrapolation*
16. Predict the amount of sleep Charlotte would get if she drank 13 sodas. _____
An example of: *interpolation* or *extrapolation*
17. Predict the number of sodas Charlotte drank if she slept $\frac{1}{2}$ an hour. _____
An example of: *interpolation* or *extrapolation*

Soda	Sleep
0	6
0	8
1	6
1	7
2	7
3	5
3	8
4	6
5	5
6	3
6	6
7	4
7	6
8	3
10	2

Constructions—Draw the following on a separate sheet of paper if necessary

18. During June, a local theater recorded the following number of patrons per day.
- | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 102 | 116 | 113 | 132 | 128 | 117 | 156 | 182 | 183 | 171 | 168 | 179 |
| 170 | 160 | 163 | 186 | 185 | 158 | 163 | 167 | 168 | 186 | 117 | 107 |
| 171 | 173 | 161 | 163 | 168 | 182 | | | | | | |
- (a) Construct a **histogram** of the data. Use five classes.
(b) Describe the shape, center, spread, and outliers of the distribution
19. The following is a list of prices of items sold at a garage sale.
- | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|---|----|
| 34 | 2 | 11 | 30 | 4 | 29 | 5 | 24 | 8 | 10 | 5 | 10 |
| 2 | 12 | 5 | 15 | 20 | 23 | 25 | 10 | 25 | 29 | 1 | 30 |
| 8 | 6 | 30 | 15 | 5 | 26 | 32 | 17 | | | | |
- (a) Construct a **histogram** of the data. Use four classes.
(b) Describe the shape, center, spread, and outliers of the distribution
20. The ages of 22 students in a karate class are given below.
- 11, 5, 9, 13, 8, 9, 9, 11, 10, 8, 6, 7, 12, 11, 13, 12, 7, 6, 11, 12, 10, 8
- (a) Construct a **Dot Plot**
(b) Describe the shape, center, spread, and outliers of the distribution
21. The ages of 22 students in a karate class are given below.
- 11, 5, 9, 13, 8, 9, 9, 11, 10, 8, 6, 7, 12, 11, 13, 12, 7, 6, 11, 12, 10, 8
- (a) Construct a **Dot Plot** of the data.
(b) Describe the shape, center, spread, and outliers of the distribution
22. A particular company was recording the age of all of their workers.
- | | | | | | | | |
|----|----|----|----|----|----|----|----|
| 48 | 63 | 42 | 51 | 65 | 56 | 53 | 41 |
| 47 | 73 | 79 | 58 | 62 | 78 | 40 | 63 |
- (a) Construct a **Stem & Leaf Plot**
(b) Describe the shape, center, spread, and outliers of the distribution

23. The daily temperatures of the month of February were recorded.

35 45 42 41 25 36 27 41 34 73 26 58
 29 20 28 35 48 43 42 45 21 26 35 41
 47 40 39 28 19

- (a) Construct a **Stem & Leaf Plot**
- (b) Describe the shape, center, spread, and outliers of the distribution

24. {20, 30, 10, 20, 10, 80, 60, 40, 50, 40, 70}

- (a) Construct a **Box & Whisker Plot**.
- (b) Describe the shape, center, spread, and outliers of the distribution

25. {11, 14, 16, 29, 30, 28, 48, 20, 27, 15, 60}

- (a) Construct a **Box & Whisker Plot**.
- (b) Describe the shape, center, spread, and outliers of the distribution

26. {20, 25, 27, 30, 34, 40, 50, 52, 59, 60, 60}

- (a) Construct a **Box & Whisker Plot**.
- (b) Describe the shape, center, spread, and outliers of the distribution

27. A survey of 350 local families asked the question, "Where are you planning to vacation this summer?"

Construct a **Bar Graph** from the following results.

Area	# Vacationing
Tennessee	32
New York	85
California	125
Florida	46
Hawaii	62

28. Construct a **PARETO CHART** using the same data.

29. Construct a **double bar graph** based on the following table.

Jeff	Peter	John	Mary
50	95	85	80
80	97	79	80

30. The following table shows the number of pets treated in one week at the local veterinarian clinic. Construct a **bar graph** to display this information. Be sure to label properly.

Dogs	Cats	Ferrets	Birds	Hamsters	Lizards
17	12	4	5	8	2

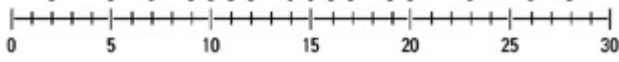
31. Construct a **PARETO CHART** using the same data.

32. The following table shows the amount of rainfall for the following number of hours. Make a **time series graph**.

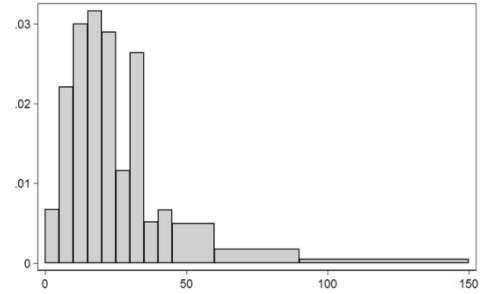
Rainfall (mL)	Time (hr)
5	1
2	2
12	3
7	4
4	5
8	6
2	7
1	8
6	9
3	10

Overall Pattern—Describe the SCSO of each of these graphical displays.

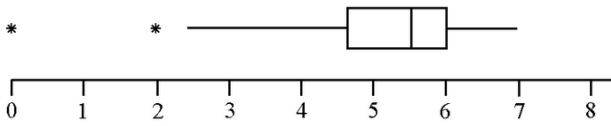
32.



36.



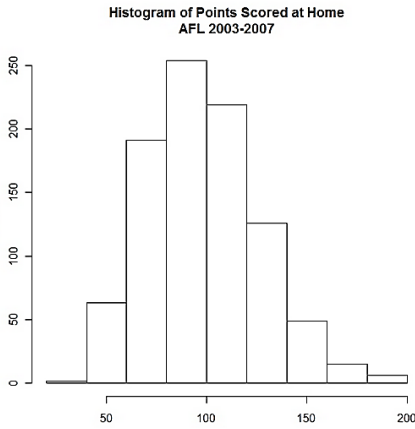
33.



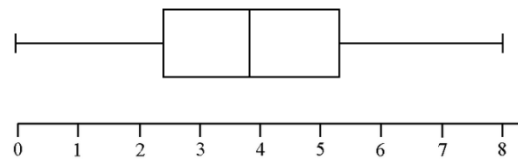
37.

Stem	Leaf
1	0, 8, 9
2	
3	0, 3, 6, 6, 7, 8, 9, 9
4	1, 1, 8, 9
5	0, 1, 1, 2, 3, 6, 7, 7
6	0, 1

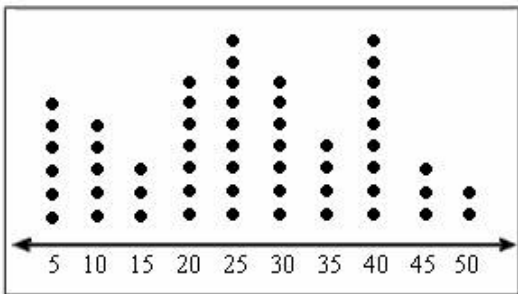
34.



38.



35.



39.

2	
3	3 6 6 8 9
4	0 1 3 4 7
5	5 8
6	6
7	
8	
9	
10	
11	6
12	7