All

GSE Algebra

Name: _____

Unit 8 Short Review

Date: _____ Block: _____

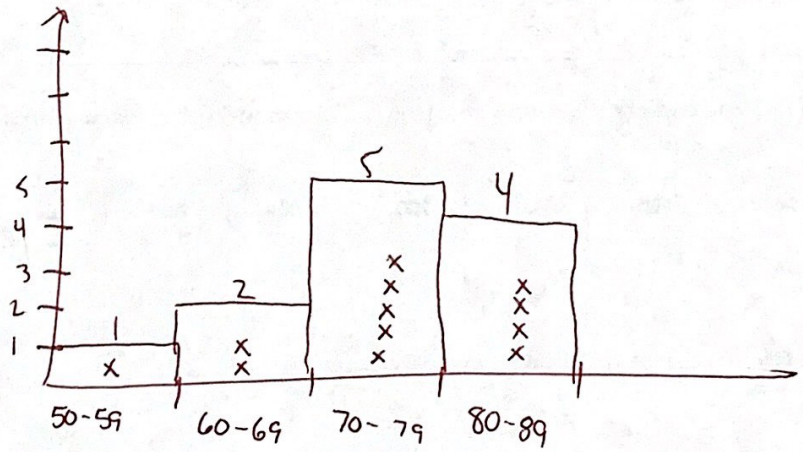
Round all answers to ONE decimal place if needed.

15, 4, 2, 8, 5, 9, 11, 8, 21

1.) Find the mean. **Answer:** 9.2	2.) Find the median. **Answer:** 8
3.) Find the mode. **Answer:** 8	4.) Find the range. **Answer:** 19
5.) Find Q1. **Answer:** 4.5	6.) Find Q3. **Answer:** 13
7.) Find the IQR. **Answer:** 8.5	8.) Find the MAD. **Answer:** 4.3

9.) Create a histogram with a bin width of 10 (50-59, 60-69, 70-79, 80-89) for the data set:

75, 84, 68, 72, 59, 88, 72, 77, 81, 84, 60, 70.



CCGPS Coordinate Algebra

Name: _____

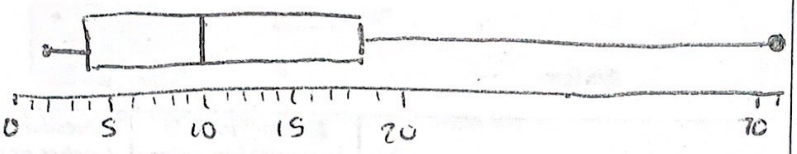
Unit 4 – Describing Data

Date: _____ Block: _____

Review

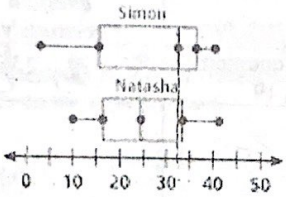
I must be able to answer this question:	*Things I need to remember in order to answer the question accurately:*	*Questions for my teacher or things I am having trouble with:*
Use the data set below to answer the questions 1 – 9: 5, 18, 6, 71, 15, 3, 2, 10, 19	2, 3, 5, 6, 10, 15, 18, 19, 71	
1.) Find the mean of the data set. $\frac{149}{9} = 16.6$		
2.) Find the median of the data set. 10		
3.) Find the mode of the data set. no mode		
4.) Find the range of the data set. $71-2 = 69$		
5.) Find the value of the first quartile (Q1) of the data set. $\frac{5+3}{2}$ 4		
6.) Find the value of the third quartile (Q3) of the data set. $\frac{19+18}{2}$ 18.5		
7.) Find the inter-quartile range (IQR) of the data set. $18.5-4$ 14.5		
8.) Find the mean absolute deviation (MAD) of the data set. 14.6, 13.6, 11.6, 10.6, 6.6, 1.6, 1.4, 2.4, 54.4 $\frac{116.8}{9} = 12.98$		
9.) Find any outliers of the data set. IQR = 18.5 − 4 = 14.5 Q1 = 4 − 21.75 = −17.75 Q3 = 18.5 + 21.75 = 40.25 −17.75 − 40.25 So 71 is an outlier		

10.) Construct a box-and-whisker plot for the data set.



5 # summary:
min, Q1, med, Q3, max
2, 4, 10, 18.5, 71

11.) The box-and-whisker plots show the scores for two players on a video game.



a.) Which player has the lower median score? Explain.

Natasha, her median is 24 & Simon's is 32

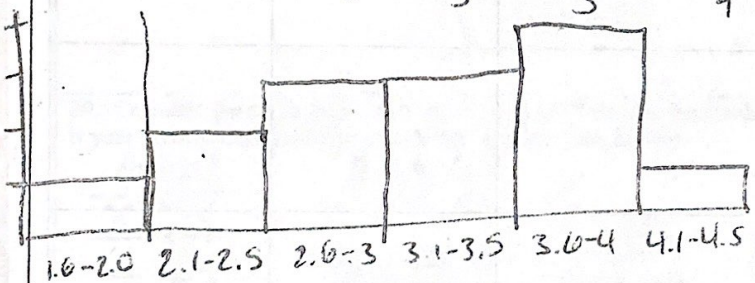
b.) Which player scored the highest amount of point? Estimate this score.

Natasha, 42

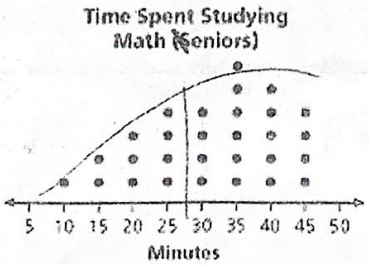
12.) The overall GPA's of several high school students are given below. Create a histogram of the data.

~~3.6~~ ~~2.9~~ ~~3~~ ~~3.1~~ ~~3.3~~ ~~2.6~~ ~~2.5~~
1.75 ~~2.3~~ ~~3.2~~ ~~4.0~~ ~~4.1~~ ~~3.7~~ ~~3.85~~

1.6-2.0, 2.1-2.5, 2.6-3, 3.1-3.5, 3.6-4, 4.1-4.5
1 2 3 3 4 1



13.) The dot plot below shows the average amount of time, in minutes, Seniors spent studying math.



a.) How many Seniors spent less than 30 minutes studying?

10

b.) Describe the distribution of the data.

Skewed slightly left

	Fiction	Nonfiction
Hardcover	28	52
Paperback	94	36

210

a.) Make a table of the joint relative frequencies and the marginal relative frequencies.

	fiction	NF	
hardcover	.13	.25	.38
paper	.45	.17	.62
	.58	.42	1

b.) What percentage were nonfiction paperback books?

17%.

15.) The classes at a dance academy include ballet and tap dancing. Enrollment in these classes is show in the table below.

	Ballet: Yes	Ballet: No	
Tap: Yes	38	52	90
Tap: No	86	24	110
	124	76	

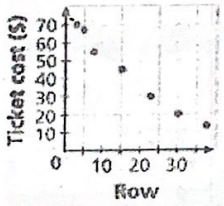
a.) Given a student takes ballet, what is the probability that the student does not take tap (conditional relative frequency)?

$\frac{86}{124} = .69$ (69%.)

b.) Given a student takes tap, what is the probability that the student also takes ballet?

$\frac{38}{90} = .42$ (42%)

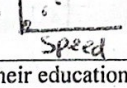
16.) a.) Describe the correlation in the graph below. Explain your answer.



strong negative correlation

b.) Describe the correlation between the speed of a runner and the distance she can cover in 10 minutes. Explain your answer.

positive

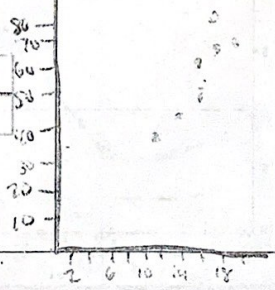


the faster she runs, the more distance she can cover

17.) Eight adults were surveyed about their education and earnings. Discuss the correlation and causation for the table below:

Years of Education	12	16	20	14	18	16	16	18
Earnings Last Year (thousand $)	40	65	75	44	70	50	54	86

fairly strong positive correlation



16.) Eight adults were surveyed about their education and earnings. Discuss the correlation and causation for the table below:

Years of Education	12	16	20	14	18	16	16	18
Earnings Last Year (thousand $)	40	65	75	44	70	50	54	86

$y = 5.6x - 30.3$ $r = .86$

17.) The table below shows the number of customers at a coffee and the number of cookies sold for several days.

Customers	10	12	25	27	40	55	67	109
Cookies Sold	2	6	5	9	10	11	20	22

a.) Using a calculator, find the line of best fit for the data set.

$y = .2x + 2.$

b.) Determine the correlation coefficient. What does that mean about the data set?

$r = .93$

18.) The table below shows the amount of time an adult has been out of high school and their quiz grade over information learned in high school.

Time Out of School (yr)	1	1	1	2	2	3	5	7	10	10	14	25
Quiz Score	85	94	98	75	80	77	63	56	45	50	34	33

a.) Using a calculator, find the line of best fit for the data set.

$y = -2.7x + 84.3$

b.) Determine the correlation coefficient. What does that mean about the data set?

$r = -.88$