Name: _____ **Date:** _____ **Algebra 1**

Chapter 10 Test Review

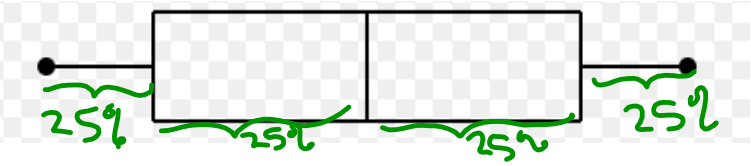
1. Explain why the question is biased. Then rewrite it so that it is not.

Don't you agree that it is better to offer two hot lunches on the menu rather than a cold lunch and a hot lunch?

Should schools offer 2 hot lunches or a cold and a hot lunch.

2. Find the mean, median, mode, and standard deviation of the data set. 161, 200, 239, 252, 278, 317, 382, 395, 900

3. Label what percent of the data falls in each section of a box and whisker plot below.



4. Find the range of data set B and the mean of data set A.

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

Key: 4 | 1 = 4.1

62.3 / 11

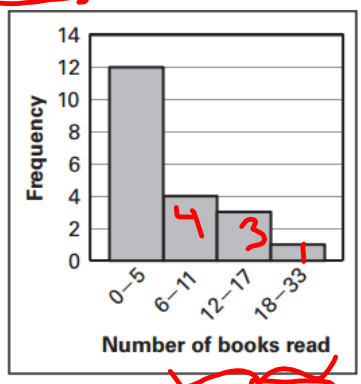
5.66 mean A

4.0 + 4.2 + 4.3 . . . . .

8.3 − 4.1

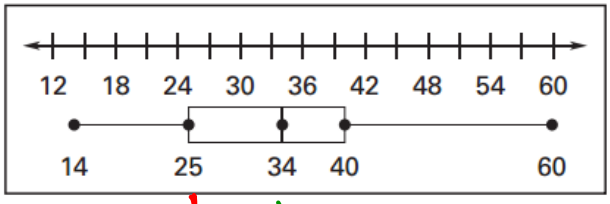
range = 4.2

5. How many students read more than 5 books in the histogram to the right?



4 + 3 + 1 = 8

6. Answer the questions about the box and whisker plot below.



a) About what percent of the data are greater than 25? 75%

b) About what percent of the data are less than 34? 50%

7. Answer the questions using table below.

	Cheese	Pepperoni	Sausage	Veggie	Total
Deep-dish	27	61	25	11	124
Thin crust	35	47	19	33	134
Total	62	108	44	44	258

a. Which topping appears to be most popular? Pepperoni

b. Which toppings appear to have the same popularity? Sausage & veggie

c. If a customer is going to order a slice of cheese pizza, is it likely to be deep-dish or thin crust? Thin Crust

8. Identify the population and sample.

Your school's administrators want to know where students want to go on the class trip at the end of the year. The administrators randomly survey 30 freshmen, 30 sophomores, 30 juniors, and 30 seniors.

Pop = all students @ school

Sample = 120 students surveyed

9. Make a stem and leaf plot of the data: 114, 141, 105, 159, 120, 159, 183, 174, 138, 147

10	5
11	4
12	0
13	8
14	1 7
15	9 9
16	
17	4
18	3

10. Complete the two-way table below.

number of swimming pools sold.

	Rectangular	Round	Oval	Total
Above-Ground	9	58	11	78
In-Ground	47	10	24	81
Total	56	68	35	159

11. The stem and leaf plot below shows class scores for the last Algebra 1 test.

Math Test Scores	
Stem	**Leaf**
6	8
7	
8	0 3 5 5 5 5 5 8 9 7
9	1 1 3 3 5 5 8 8
10	0 0

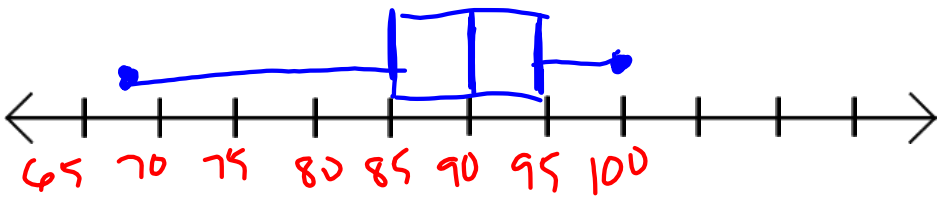
8| 5 = 85%

a) Calculate the following:

Mean: 88.35 Median: 90 Mode: 85 Range: 32

Q1: 85 Q3: 95 Max: 100 Min: 68 IQR: 10

b) Make a box-and-whisker plot of the data.



c) About what percent of students scored above a 90%? 50%

d) Is the score of 68% considered an outlier? Explain.

1.5 x 10 = 15

Q1 - 15 → 85 - 15 = 70

Q3 + 15 → 95 + 15 = 110

70 to 110

68 is an outlier b/c it isn't between 70 & 110.

AIR PRACTICE

1. The population of the 8 largest cities in Florida are:

907,529 479,009 394,507 290,553 269,645 235,081 196,890 193,078

Q3 Q1

The population of the 8 smallest cities in Texas are:

12,623 12,863 12,978 12,915 12,986 13,022 13,129 13,130

Florida

median 280,099 280,099

Q3=434,758 Q1=215985.5

IQR=220,772.5

IQR=159,426

Texas

12955.75 12982.17

	Increases	Decreases	Stays the Same
Interquartile Range of Florida	☐	☒	☐
Mean of Texas	☒	☐	☐
Median of Florida	☐	☐	☒
Standard Deviation of Texas	☐	☒	☐

If the smallest and largest populations from each list are eliminated, how will the following measures of data change?

2. A high school drama teacher organizes a musical production. He wants to record the number of students involved in each part of the production. He uses a two-way table to display the data.

The drama teacher knows that approximately 55% more girls participate in the production as actors than as stage crew members.

Complete the two-way table to show a possible breakdown of students.

51(.55) = 28

51 − 28 = 23

38 + 28

	Actors	Musicians	Stage Crew	Total
Boys	17	16	20	53
Girls	28	22	23	73
Total	45	38	43	126

17 + 28 = 45

126 − 88 = 38

43 − 23 = 20