

Name _____

Date: _____

Statistics- Day #2 NOTES

1. Ms. McBee collected the following test scores from her 3 Algebra classes. Which class is the strongest as a group? Which class would you like to be in? Write 3-4 sentences supported by correct, well organized math calculations. (This requires you to find the mean and median, and consider the effect of extreme values)

Period 1 test scores: 29, 90, 78, 66, 83, 85, 88,
88, 92, 89, 91, 79, 75, 68, 77, 79, 89, 86, 84, 73 (20 total)

Period 2 test scores: 68, 82, 72, 80, 85, 79, 88, 76,
72, 70, 66, 71, 74, 76, 73, 69, 75, 72, 70, 78, 70, 72, 73, 68 (24 total)

Period 3 test scores: 99, 71, 65, 62, 63, 60, 80, 73,
80, 77, 100, 68, 65, 86, 76, 70, 79, 68 (18 total)

Write your sentences here:

2. The table at right shows the average monthly temperature (in degrees Fahrenheit) for two US cities.

- a. Chose one measure of center that you think is more relevant- median or mean- and calculate it for both cities.
- b. Calculate the range of temperatures (highest minus lowest) for each
- c. In which city would you rather live? Why? Write 1-2 sentences that addresses your math calculations.

	City 1	City 2
January	35	56
February	38	59
March	49	60
April	62	61
May	73	63
June	81	64
July	84	64
August	83	65
September	77	69
October	65	68
November	51	63
December	39	57

3. Generate a list of five different numbers for each of the following situations:
- Five different numbers that have a mean of 100
 - Five different numbers that have a mean of 100 but a median that is lower than 100
(Show the median)
 - Five different numbers that have a mean of 100 but a median that is above 100. (Show the median)
4. Tony's Luncheonette is open six days a week. His lunch business income for the five days this week is \$120, \$110, \$200, \$300, and \$140.
- How much money must he total for the six days if he wants to have a mean income of \$200 per day?
 - What must Tony bring in on the 6th day in order to have an average of \$200 for the six days?
5. At Charleston High School, a student needs a 93% average to earn an A. Chris has four scores in Algebra 1 of 94%, 93%, 96%, and 91%. What is the lowest score he could earn on the fifth test and still earn an A?
6. In order to pass Algebra 1 for the year, David must have a mean of 65% for the four marking periods and the final, where all five grades have equal weight. David has already earned a 67%, a 61%, and a 53% for the first three marking periods.
- What must David's final two grades average (4th marking period and final exam) so that he will pass the class?
 - What is the minimum grade David must earn on his final exam to pass the class if his fourth marking period is a 50%?

BONUS:

7. High temperatures for a five day span in May were 68, 50, and 62 degrees with the last two days being consecutive even integers. If the mean temperature for the five days is 66 degrees, find the lowest temperature of the two missing days.

Applications

1. The daily high temperatures for the month of March (which has 31 days) are given in the following table.

High Temperature (degrees F)	Number of days this temp was reached
28	2
31	2
34	5
36	11
37	5
39	4
54	1
55	1

(a) Find the mean and median temperature for this data set. Round your mean to the nearest tenth.

(b) Are there any extreme values in this data set? What effect do they have on the mean?

2. Elijah is worried about his math grade. On his last four tests he received a 48, 53, 80, and a 50. What must Eli get on the fifth test to get a 65 and pass the class? (multiple choice- must show work)

- (A) 65 (B) 58
- (C) 83 (D) 94

3. The mean of six numbers is 25. Two of the numbers are 30 and 40. The other four numbers are the same. Which of the following represents this common value? (multiple choice- must show work)

- (A) 35 (B) 20
- (C) 70 (D) 25

4. In this week's bowling tournament, Federico's average for the first four games is 208. What score must he get for the fifth game to have an average of 200?

5. The average temperature for a five-day business week was 23 degrees Fahrenheit. The temperatures for three of the days were 21, 30, and 22 degrees Fahrenheit respectively. Of the two remaining days, the warmer day is 6 degrees more than the cooler day. Determine the cooler of the two remaining temperatures.

Reasoning

6. The following data set gives the ages of six employees of a car wash:

17, 17, 17, 18, 19, 20

(a) Find the mean and the median of this data set.

(b) If the age of the manager of the car wash is thrown into the data set, the data set is now as follows:

17, 17, 17, 18, 19, 20, 46

Find the mean and median of this data set.

(c) The manager's age, 46, is definitely an extreme value. Did this value have more of an effect on the mean or the median of the data set? Explain why.

7.. The following tables provide the 20 math test scores for two students in 8th period Algebra.

Find the mean, median, and mode for each set of test scores. Then write a sentence using one or two of these measures to determine which student is testing better.

Ruby's Test scores

Test Score %	Frequency
60	3
70	3
90	2
91	4
92	2
93	2
94	2
95	2

Max's Test Scores

Test Score %	Frequency
76	3
83	3
84	2
86	4
87	3
88	2
89	2
95	1

Ruby's : Mean =

Median =

Mode =

Max's: Mean =

Median =

Mode =

Write your sentence here: