

[Centers of Data]

(§9.2 worksheet II)

1. The following list gives the high temperatures in 10 US cities on July 20, 2012 (source: <http://www.nws.noaa.gov/xml/tpex/scs.php>).

<u>CITY</u>	<u>HI</u>
ABILENE TX	93
AKRON CANTON	92
ALBANY NY	94
ALBUQUERQUE	100
ANCHORAGE	60
ASHEVILLE	86
ATLANTA	88
ATLANTIC CITY	92
AUSTIN	90
BALTIMORE	98

- a. Find the mean of the data:

- b. Find the median of the data:

- c. Find the mode of the data:

- d. Throw out the **lowest** value and recalculate the mean and median using only the remaining 9 values.
 - i. New mean:

 - ii. New median:

 - iii. New mode:

- e. Discuss how the mean, median and mode are affected by extreme values (high or low).

2. Construct a data set where the mean = median = mode.

3. Construct a data set where the mean > median.

4. Most parents brag that their child is “above average”. Is it possible for say, 90% of a data set to be above the average (mean)? Construct a data set where this is so.

5. Calculate the mean, median, and mode of the given sample of data below:

4, 5, 5, 8, 8, 8, 11, 12, 13

mean:

median:

mode:

Without recalculating the averages, describe what would happen to each of these measurements if the following changes to the data set were made:

a) the 13 was changed to 23:

Mean:

Median:

Mode:

b) the 4 was changed to 1 and also the 13 was changed to a 20

Mean:

Median:

Mode:

c) one of the 8's was changed to a 5

Mean:

Median:

Mode:

6. Which measure of center (mean, median, or mode) would best describe the following sets of data?

- a. The typical size of shoe sold in a store. _____
- b. The typical weights of football players on a team. _____
- c. The typical cost of homes in a community. _____
- d. The typical age of 7 people in a family if six of them are under 40 and one is 96 years old. _____
- e. The typical price of a textbook in a bookstore. _____

7. Find the mean, median and mode of the following data set:

