

## Measures of Center (Section 2.1)

1. The following list gives the high temperatures in 36 US cities on July 20, 2012 (source: <http://www.nws.noaa.gov/xml/tpex/scs.php>).

CITY	HI
ABILENE TX	93
AKRON CANTON	92
ALBANY NY	94
ALBUQUERQUE	100
ALLENTOWN	95
AMARILLO	92
ANCHORAGE	60
ASHEVILLE	86
ATLANTA	88
ATLANTIC CITY	95
AUSTIN	90
BALTIMORE	98
BATON ROUGE	89
BILLINGS	73
BIRMINGHAM	87
BISMARCK	72
BOISE	82
BOSTON	97
BRIDGEPORT	92
BROWNSVILLE	87
BUFFALO	85
BURLINGTON VT	95
CARIBOU	85
CASPER	72
CHARLESTON SC	86
CHARLESTON WV	94
CHARLOTTE	93
CHATTANOOGA	91
CHEYENNE	68
CHICAGO	95
CINCINNATI	90
CLEVELAND	91
COLORADO SPGS	77
COLUMBIA SC	91
COLUMBUS GA	89
COLUMBUS OH	93

- 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, median and mode using only the remaining 35 values.
  - i. New mean:
  - ii. New median:
  - iii. New mode:

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- e. Discuss how the mean, median, and mode are affected by extreme values (high or low). Construct another (small – about 5 data points) set of data to illustrate your ideas.
  
2. Construct a data set where the mean = median = mode.
  
  
  
  
  
  
  
  
  
  
3. Construct a data set where the mean > median.
  
  
  
  
  
  
  
  
  
  
4. Make a general statement about a characteristic data would tend to have if the mean > median.
  
  
  
  
  
  
  
  
  
  
5. Most parents brag that their child is “above average”. Is it possible for say, 80% of a data set to be above the average (mean)? Construct a data set where this is so.