Data 2: Central Tendency

Long-Term Memory Review
Review 1

1. To analyze a set of data, one should remember to first put the data in _____ (from least to greatest).

2. a) The median of a set of data is the number in the _____ of an ordered set of data.
   b) If there is an even number of data points, explain how you would find the median of a set of data.

3. The _____ of a set data is the average value of all the data.

   Jack's scores on his first five exams are listed below.

Exam Scores					
Exam	**Exam 1**	**Exam 2**	**Exam 3**	**Exam 4**	**Exam 5**
Score	**85**	**101**	**89**	**78**	**90**

4. What is the range of scores?

5. What is the relationship between Jack's mean score and his median score?
   A) The mean is more than the median
   B) The mean and the median are the same amount
   C) The median is more than the mean
   D) There is no difference between the mean or median

6. What is the minimum score Jack must get on Exam 6 for a "B" average (≥ 80 average)?

Data 2: Central Tendency

Long-Term Memory Review
Review 2

1. To analyze a set of data, one should remember to first put the data in _____ (from least to greatest).

2. Explain what the median of a set of data is.

3. Is the median always exactly one of the data values? Why/Why not?

4. The mean of a set of data is described as _____.

Jill's scores on her first four tests are:

Test Scores					
Test	**Test 1**	**Test 2**	**Test 3**	**Test 4**	**Test 5**
Score	**85**	**101**	**89**	**78**	

5. If Jill's average on her first five tests was 89. What must Jill have scored on Test 5?
A) 82 B) 87 C) 89 D) 92

6. What is the minimum score (integer) Jill must get on Test 5 in order to earn an overall Test average of "A" (≥90 average)?

Data 2: Central Tendency

Long-Term Memory Review
Review 3

1. To analyze a set of data, one should remember to first put the data in _____?
   A) a line B) your notebook C) your hand D) order

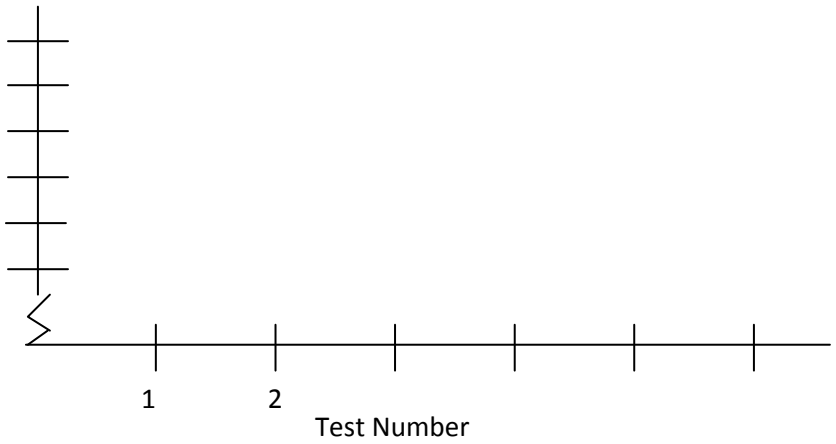
2. What are the differences between the mean and the median of a set of data?

Latoya's test scores are:

Test Scores						
Test	**Test 1**	**Test 2**	**Test 3**	**Test 4**	**Test 5**	**Test 6**
Score	**103**	**68**	**91**	**97**	**97**	**89**

3. Use data above to find the following:
   a) Range _____
   b) Mean _____
   c) Median _____
   d) Mode _____

4. Label the vertical axis of the following graph to facilitate plotting the exam scores above. Construct a line graph to show the trend of scores.



Data 2: Central Tendency

Long-Term Memory Review
Review 4

1. List and define three commonly used measured of central tendencies of data.

2. To analyze data, one should remember to first put the data in _____.

Sale prices of homes recently sold in a Las Vegas neighborhood are:

Prices of Homes					
House	**1**	**2**	**3**	**4**	**5**
Price (in thousands)	**$225**	**$300**	**$250**	**$300**	**$275**

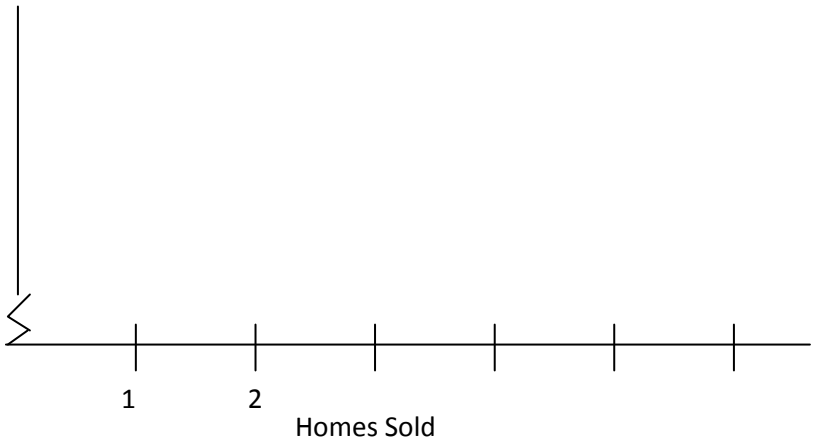
3. What is the recent mean sale price (*in thousands of dollars*)?
   A) $249 B) $270 C) $277 D) $288

4. How would you find the median sale price (*in thousands of dollars*)?

5) If your neighbor with the corner lot and custom pool with waterfall sells his home for $630,000, how does it affect the mean and median of the above sales prices?
   A) It increases the mean more than the median
   B) It increases the median more than the mean
   C) It increases the mean and the median by the same amount
   D) There is no change in the mean or median

6. What is the best indicator of the prices of homes in a particular area of a city?
   A) mean B) median C) mode D) range

7. Label the vertical axis of the following graph to facilitate plotting the home prices above. Construct a line graph to show the trend of prices (include the home that sold for $630,000).



Data 2: Central Tendency

Long-Term Memory Review
Quiz

1. Why should a set of data be put in order before beginning to analyze it?

Sale prices of homes recently sold in a Las Vegas neighborhood are:

Prices of Homes					
House	**1**	**2**	**3**	**4**	**5**
Price (in thousands)	**$260**	**$300**	**$270**	**$300**	**$270**

2. What is the mean sale price (*in thousands of dollars*)?
   A) $249 B) $271 C) $277 D) $280

3. How would you find the median sale price (*in thousands of dollars*)?

4. If you are selling your home and you want to get the most for the price of your home. Would it be better to advertise the median or mean values of houses in your area? Remember, you are the seller and you want to get the most out of your house. Explain your reasoning.

5. What is the best indicator of the prices of homes in a particular area of a city?
   A) mean B) median C) mode D) range

Jill's scores on her first four tests are:

Test Scores					
Test	**Test 1**	**Test 2**	**Test 3**	**Test 4**	**Test 5**
Score	**85**	**101**	**89**	**78**	

6. If Jill's average on her first five tests was 87. What must Jill have scored on Test 5?
   A) 82 B) 87 C) 89 D) 92

Data 2: Central Tendency

Long-Term Memory Review

ANSWERS

Review 1 – Answers

1. numeric order
2. a) middle/center
   b) find the average of the two middle numbers
3. mean
4. 83 (The ordered list is 78, 85, 89, 90, 101)
5. C. The median is 89 and the mean is 88.6
6. 37 ; $\left(\frac{78+85+89+90+101+x)}{6}=80\right)$

Review 2 – Answers

1. numeric order
2. the middle value of an ordered set of data
3. no; if there is an even amount of numbers, you must average the two middle numbers
4. the average. (add all numbers and divide by the number of numbers)
5. D. 92; $\left(\frac{85+101+89+78+x)}{5}=89\right)$
6. 97: $\left(\frac{85+101+89+78+x)}{5}=89\right)$

Review 3 – Answers

1. D. order
2. mean is the average; median is the middle value
3. a) Range 35
   b) Mean 98.83
   c) Median 94
   d) Mode 97
4.

Review 4 – Answers

1. mean – average of the scores
   median – middle score
   mode – most frequent score
2. numerical order
3. B. $270
4. Put them in order and choose the middle price (the 3rd price from the bottom or from the top)
5. A. It increases the mean more than the median
6. B. median
7.

Quiz – Answers

1. The scores need to be in order to determine the median, and it is helpful to have them in order to determine the range.
2. D. $280 (thousand)
3. Put them in order and choose the middle price (the 3rd price from the bottom or from the top)
4.
5.
6.