**Instructions**

This learning activity consists of a variety of problems from Chapters 13–15. Include a title page with your assignment in current APA. Answers must be clearly labeled and appear in consecutive order. Submit your assignment (answers only) as a Word document.

* + - 1. Calculate the mean, median, mode, standard deviation, and range for the following sets of measurements:

1. 9, 7, 6, 6, 2
2. 12, 10, 9, 8, 6
3. 82, 82, 82, 82, 82
4. 12, 10, 9, 8, 6, 45
5. Answer the following questions
   1. Why is the SD in (d) so large compared to the SD in (b)?
   2. Why is the mean so much higher in (d) than in (b)?
   3. Why is the median relatively unaffected?
   4. Which measure of central tendency best represents the set of scores in (d)?
6. Fill in the blanks with the appropriate raw scores, z-scores, T-scores, and percentile ranks. Note: the Mean = 50, SD = 5.

Raw z T %ile

35

1.2

35

16

1. The Graduate Record Exam (GRE) has a combined verbal and quantitative mean of 1000 and a standard deviation of 200. Scores range from 200 to 1600 and are approximately normally distributed. For each of the following problems:
2. draw a rough sketch, darkening in the portion of the curve that relates to the answer, and
3. indicate the percentage or score called for by the problem.
   * + 1. What percentage of the persons who take the test score above 1300?
       2. What percentage score above 800?
       3. What percentage score below 1200?
       4. About what score do 20% of the test-takers score?
       5. About what score do 30% of the test-takers score?
4. For the data presented below, answer the questions that follow.

Score on political Score on current

Individual awareness test events test

1 24 23

2 16 12

3 11 11

4 9 6

5 8 13

6 14 11

7 17 16

8 19 16

9 21 21

10 25 25

11 18 11

12 13 13

13 11 14

14 6 10

15 9 10

16 12 7

a. Construct a scatterplot.

b. Draw a regression line through the data point that “fits” the data points reasonably well.

c. Enclose the data points with a ellipse.

d. Estimate the direction of the correlation.

e. Estimate the strength of the correlation coefficient.

f. Now, use only the data points associated with current event scores and lower and indicate the effects this has on the direction and strength of the correlation coefficient.

g. Explain why this is the case.

h. Explain in words what a non-truncated scatterplot means.

i. Identify how likely it is that a causal relationship has been indicated.

Submit Learning Activity 2 by 11:59 p.m. (ET) on Sunday of Module/Week 5.